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No.

バングラディシュ人民共和国
建設事情資料集

昭和60年6月

国際協力事業団

無償設

バングラディシュ人民共和国
建設事情資料集

昭和60年６月

国際協力事業団

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面会者リスト

今回の資料収集について、以下の人々よりインフォメーションを受けた。

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１．自然条件

１－１　気象条件

１）　気候圏、気候区

バングラデシュ国は、一般的に、亜熱帯モンスーン気候であると言われ、夏、冬、そしてモンスーン季（雨季）の３季節に分けられる。冬は、１１月から２月まで、夏は３月より５月まで、そして６月よりモンスーンが始まり、１０月まで続く。そして、このモンスーンの時期に年間雨量の８０％が集中している。降雨量は、一般的にチッタゴン、シルヘット地区なで東部地区に多く、西部地区は少ない。

ダッカ地区における最高温度は、４月の３５．０６℃で最低は、１１．７２℃である。湿度については、年間を通して高湿度であるが、特にモンスーン季において、平均８０％を越える。

２）温度　(TABLE-1, TABLE-3)

３）湿度　(TABLE-1, TABLE-9)

４）雨量　(TABLE-2)

５）風向、風速　(TABLE-6, TABLE-7)

６）日照、日射　(TABLE-4, TABLE-5, TABLE-8)

以上の資料は、1983-1984 STATISTICAL YEARBOOK OF BANGLADESHによる。

１－２　地勢、地質

１）一般的な地勢、地質　(TABLE-10, TABLE-11)

バングラデシュ国は、インド亜大陸の東端に位置し、国土の大部分は、河川で占め、支流、分流が入り込む典型的なデルタ地帯の地質は、シルト質の軟弱層である。

２）面積　(TABLE-12)

3）緯度・経度

バングラデシュ国は、西はインドのウエストベンガル、北はアッサム及びメハラヤ、東は同トリプランゾラムのインド諸州に続き、南東部チッタゴン地区の山岳地域でビルマに接し、南はベンガル湾となっており、北緯20° 34′～26° 38′、東緯88° 01′～92° 41′の範囲にある。

以上の資料は、1983-84 STATISTICAL YEARBOOK OF BANGLADESH並びに、TABLE-11は、BANGLADESH IN MAPS UNIVERSITY OF DACCAによる。

4）高低差 (TABLE-13)

5）河川・山岳等の状況 (TABLE-14, TABLE-15)

以上の資料は、BANGLADESH IN MAPS UNIVERSITY OF DACCAによる。

1－3 災害

1）災害の歴史

バングラデシュ国は、雨季における河川の氾濫による被害、サイクロンによる被害が最も多く、毎年のように繰返されている。又、逆に、かんばつによる凶作にも、たびたびみまわれている。

その他の自然現象による被害はあまりない。

2）地震

過去における地震についてのデーターはない。地震における被害は、無かったものと思われる。

3）風水害 (TABLE-16, TABLE-17, TABLE-18, TABLE-19)

4）雷、たつまき

雷の発生は、全国的に特に夏季が多いが、統計資料は無い。

5）その他

乾季から夏季への変り目に時々、卵大のヒョウにみまわれ、被害を出している。

以上の資料は、BANGLADESH IN MAP UNIVERSITY OF DACCA 並びにTABLE-19 は、1983-84 STATISTICAL YEARBOOK OF BANGLADESHによる。

２．建築活動に関する条件

２－１　建築活動に関する統計等

１）建築着工量、除却量

バングラデシュ国においては、建築確認申請義務が有り、例えばダッカ市においては、D.I.T.(DHAKA INPROOVEMENT TRAST)また、地方においては、URAZIL OFFICE（郡庁）に申請するが、年間の申請数量については、全国的な数量は、確認出来なかった。

２）建築費の推移（Ｐ１７～Ｐ２１参照）

１９８０年から１９８４年までの統計では、一般労務者については、年間、約１０％前後の値上率で８３年から上昇率が高くなってきているのに対して、技術労働者では、８３年から上昇率が低くなっている。これは、８０年からの上昇率が、中近東における仕事が増え、売り手（技術労働者）にとって、有利になったのに対して、近年、（１９８３年頃から）中近東における仕事のだぶつきに対して、買い手（コントラクター）が有利となり、国内においても技術労働者が、あまりはじめた為と思われる。一般労務者の８３年頃からの値上りは、国内の仕事が増えたのと、政府による最低賃金とインフレによるものと思われる。職種別にみると、大工、鉄筋工、電工など、海外でも、同程度の技術で働け、高い賃金を取れる職種の賃上が激しい。しかし、これらの混乱も、今年までで無くなってきたと見れるのではないか。

資材についての値上率は、まちまちで、政府公定価格の有るセメントなど、余り値上の無いものから、同じ公定価格のあるものでも鉄筋など激しい値上率など、各種で有る。また、レンガについても最近同国産の天然ガスによる、レンガ焼成などは、燃料代の価格安定などによって、値動きのないものもある。砂などは、輸送費（輸送は、船よる小舟での人件費が大半）の高騰によるなど、各アイテムごとに注意しなければならない。

輸送費については、ガソリン代（１ℓ→16.5 TAKA 約160 円）などによる高騰と交通規則の強化（今までは５トン積トラックに７トン～９トン積んでいたのに対し、重量バカリによる規則）などにより、さらに高まるものと思われる。

１９８４年１２月末までの予想としては、（８４年５月現在）人件費については、一般労働者の高騰、またこれにより、全体的に資材関係も値上（１０％以上）が予想される。輸送費についても、予断はゆるせないと思われる。

資材、労務単価、輸送費　INDEX (TABLE-20)

資材単価　(TABLE-21)

労務単価　(TABLE-22, TABLE-23)

輸送費　　(TABLE-24)

3）建設労務

建設関連の労務人口　(TABLE-25)

海外流出技術者　　(TABLE-26)

4）主要な資材の需給状況

主要資材生産費　　(TABLE-27)

以上の資料は、TABLE-25は、1983-84 STATISTICAL YEARBOOK OF BANGLADESH, TABLE-27は、DIRECTORY OF SELECTED INDUSTRIAL PRODUCTS (MINISTRY OF INDUSTRIES & COMMERCE)他は、JANUARY 1985 MONTHLY STATISTICAL BULLETIN OF BANGLADESH)による。

２－２　建築に関する教育・訓練

１）技術教育の状況　（TABLE-28，TABLE-29）

政治関係の技術者制度　（TABLE-30）

２）学会などの状況

バングラデシュ国には、エンジニア協会と建築家協会が有り、会員数は、エンジニア協会約５０００人、建築家協会が約３００人である。エンジニア協会の入会規定は、大学卒業後、カンディダート・メンバーになれ、その後実務５～７年後、アソシエイツ・メンバー、そして３５才以上経験１５年以上でフェローになれる。建築家協会の入会規定も同様であるが、カンティタートとメンバーの２種類に分けられる。ちなみに１９８５年４月の調査時では、入会金６０TAKA年会費１２０TAKAである。両協会とも国会認定（チャーターテッド）を推し進めている。

建築家協会会長　A. K. M. NURUZZAMAN

C/O INDEX ARCHITECTS LTD.

AHMED MANSION DHANMONDI ROAD NO:1

建築家協会　INSTITUTE OF ARCHITECTS BANGLADESH

CARE: DEPARTMENT OF ARCHITECTURE

BANGLADESH UNIVERSITY OF ENGINEERING & TECHNOLOGY

PALASSY DHAKA POB:CPO DHAKA NO:3281

以上の資料は、TABLE-29、1983-84 STATISTICAL YEARBOOK OF BANGLADESH　他は、エンジニア協会

２－３　建築に関する行政

１．建築物の規制

BUILDING ACT（建築基準法）が有り、ダッカの場合、DIT（DAHKA IMPROVEMENT TRAST)が担当の役所となる。ちなみに、ダッカの場合、商業地域、住居地域、工業地域にグリーンゾーンに分けられた都市計画地域が有り、それぞれが敷地に対する建物のセットバック規制が異なる。

確認申請については、申請書類は図面並びにDIT シートによる、申請受理後の検査は、着工後に１度図面との確認の為、現地検査があるが、竣工検査は無い。

DIT によると４階までの建物の申請は、オーナーで良く、構造その他のチェックは無いが、４階以上の建物になるとDIT で指定したエンジニヤのチェックが必要となる。

確認申請図	(Table-31)	
確認申請シート	(Table-32)	英訳
DIT シート	(Table-33)	
ウパズィラシート	(Table-34)	

２．建築技術者の規制

現在、国家認定が無い。

３．建設業の規制

ライセンスとしては、TRADE LISCENSE，REGISTER OF JOINTSTOCK COP.が必要で政府又は、それらの関係機関の仕事をする為には、PWD（公共営繕）、WASA（水資源開発）などの役所に対する指名願いが必要で有る。ちなみに、PWD の場合は、スペシャルクラスⅠ、Ⅱ、Ⅲ、Ⅳクラスに別れており、どのクラスに指名参加出来るかは、技術者数とその経歴、社会実績、会社情況、自社手持工事機械などにより分けられる。

２－４　公共営繕

１．公共営繕の組織

公共事業の立案計画は、計画省(MINISTRY OF PLANNING)で行われる。設計、入札書作成及び監理などは、担当の省、又は公団からコンサルタントへ発注されるが、多くは、公共事業局(PWD) で行う。

２．設計・施工

施工については、PWD で資料を管理し、労務だけの入札を行う場合もある。又、PWD 所有の建築重機のレンタル・リース等をやっている。

公共事業局(PWD) の重機レンタル表　(Table-35)

２－５　建築活動の体制

１．建築設計機構

設計契約は、R.I.B.A.（英国王立建築協会）の設計契約書を多く使用している。フィーについてフィー・スケールを持っていないが、マン・マンス、又は、パーセンテージとなる。ちなみに、約１億円の建設費に対して、プレコントラクト業務（入札エヴァルエーション込）までで設備、構造、積算込みで２～３％の設計料そして、ポストコントラクトで２％の監理料となっている。ようするに１億円に対して、設計・監理４～５００万円となる。

今回調査した、INDEX ARCHITECTS LTD．では、８０％が国の仕事２０％が民間物件との事だったが、各国のグラント・プロジェクトのカウンターパートとして仕事を多数、手がけている。

仕様書に関しては現在、アメリカ・スタンダード（ASTMなど）を多く使用してSPECを作成しているが、B.S.もよく使用しているとの事である。

又、構造計算基準については、援助国により異なるが、カナダ基準よく使用し、その地震荷重も使っている。

CONDITIONS OF CONTRACT（建設約款）は、英国のJCT を使用している。

以上のように、設計事務所の能力は高く、非常にインターナショナルで有る。

INDEX ARCHITECTS LTD.　(Table-36)

２．施工体制

バングラデシュ国における主な業者を表に示した。CONCORD は、シンガポールにも支店を持ち、受注はコンサルタント名にしている。政府の仕事は少ないが、大統領から直接指名の仕事などをしている。RANAは、やはり大手の一社であるが、民間、政府ともこなしている。THE ENGINEERS は、歴史の有る業者でやはりそれなりの評価を受けている。

現地業者リスト　(Table-37)

２－６　建築活動に関する契約書

１．発注方式

バングラデシュ国の公共事業は全て、入札によって業者決定がなされる。入札は、公開入札方式が多く、新聞紙上に記載されるが、入札不調で、第２・３回の入札の広告が載ったりしている。資格は、指名業者願いでクラス別けされる。

入札図書は、指示された日までに例えば、PWD に行き、図面は見るだけで、持って帰る事は、出来ず、その場でチェックだけする。入札図書は基本的にFORMS OF TENDER （契約書式）、CONDITIONS OF CONTRACT （契約約款）、B.Q.（数量調書）からなり、B.Q.には単価、数量、それらの合算が、一本で示され、コントラクターは、この金額に対して、パーセンテージで入札する。つまり、一本金額が1000TKだとすると、それに対してプラス１０％と合計金額は1100TKとなる。そして、このプラス１０％は、各アイテム単価の１０％アップとなる。

但し、この契約金額は、あくまでも暫定金額で有り、最終金額は、工事後、数量査定（リメジャー）により、決定される。これらの方式は、英国のそれと同じで有る。

新聞の公開入札公告　(Table-38)

PWD の入札図書一式　(Table-39)

２．契約方式

バングラデシュフォームNo.2911 のCONDITIONS OF CONTRACT（契約約款）によっている。

BANGLADESH FORM No.2911　(Table-40)

３．積算

SMM(STANDARD METHOD OF MEASUREMENT)（数量拾い基準）は、英国、SMM の初期のFORMで現在ではインドのINDIAN STANDARD METHOD OF MEASUREMENT (I.S. 1200)に近い形になっている。

複合単価方式がとられ、入札時にB.Q.（数量調書）が契約図書としてついている公開数量調書で有る。

単価については、B.Q.に明記され、コントラクターは、一本金額について、パーセンテージで入札する。

実施段階で数量は、メジャーメントされ、リメジャー形式になっている。リメジャーされた数量が、B.Q.数量より±１０％を超える場合は、契約金額が変更される。

設計変更については、B.Q.のUNITE RATEが入札の％でプラス又は、マイナスされ使用される。

ＰＷＤ歩掛り

ＰＷＤ８３年１２月労務単価　(Table-42)

ＰＷＤ８３年１２月資材単価　(Table-43)

ＰＷＤ８３年１２月輸送費　(Table-44)

ＰＷＤ８３年１２月復合単価　(Table-45)

４．標準工期

入札広告、入札図書に明記されている。そして、CONDITIONS OF CONTRACTに明記されているが、雨季などで内部仕上げの一部しか、工事が出来ない場合がある。

２－７　建築資材

１．建築資材の生産体制

主要資材生産量に関しては、Table-27(DIRECTORY OF SELECTED INDUSTRIAL PRODUCTS)参照の事。

２．建築資材の流通体制

輸入資材については、輸入禁止品が多く有り、輸入税とともに、よく変わる為、注意を要する。

輸入税については、BANGLADESH CUSTOMS, EXCISE AND SALES TAX TARIFF参照。　(Table-46)
(MINISTRY OF FINANCE AND PLANNING)

輸入禁止品については、THE BANGLADESH GAZETTEを参照の事。(Table-47)

３．建築資材の価格

建築資料の価格については、Table-21並びにＰＷＤ８３年１２月資料単価Table-39参照の事。

４．その他

資材については、バングラデシュ国ローカルコントラクターからの調査は、以下の点が解明された。

・セメント

セメントは、公定価格であり、輸入品、国産品も価格は、ほとんど変わらない。ローカルセメントとはいっても国内産石灰石から生産されるセメントは、約１０％程度で有り、７０％を輸入クリンカーで国内でセメントにし、残り２０％はセメントを直接輸入している。ローカルセメントは、自国産の麻袋入りの為に、湿気に気をつけなければならない。又、輸送途中に麻袋からの抜取りが多々有り、公称１バック１１０lbで有るが、実質は５～１０％減る事が多い。

・鉄筋

公社工場が国内にあり、丸鋼は、店頭売りもある。現在、異形鋼についても生産されているが、注文生産となっている。鉄筋は、公定価格であるが、１９８４年に価格改定がなされ、値上率は高い。

品質については、バラツキが多いといわれているが、低層家屋の場合、問題は無い。５ton トラック輸送の為、長尺物は、施工時曲げ等の引伸し作業が必要で有る。

・骨材

種類としては、砕石（玉石を人力にして砕く）、川砂利（１部はやはり人力にて砕く）JHAMA レンガチップが有る。骨材の種類によるコンクリート強度は、砕石　FC=240kg/cm²以上、川砂利 FC=210 ～240 kg/cm²、JHAMA レンガチップによる施工が多い。但し、レンガ自身も地域により品質の違いが有る為、良くチェックする必要が有る。

・砂

種類としては、SYLHET産のSUNAMGANJ SAND(F.M.-2.5)、BEST LOCAL SAND(F.M.-2.00) と(F.M.-1.5)とに分けられ、SYLHET産は、コンクリート用、BEST LOCAL SANDは左官用、レンガ積用にそしてさらに細かいものについては押戻し用に使用される。供給は、雨季の水かさが増す時は、ストップする事も有るが、価格については、水上の輸送費（ほとんど人件費のみ）だけで左右されるので、他の材料に比べて上昇が鈍い。

・木材

木材は、全て、落葉樹である。家具、内装材として使用出来るのは、チーク材だけで、他は、材質が悪く使用出来ない。価格の変動が大きく、最近、高価になっている。

２－８　建築物の維持管理

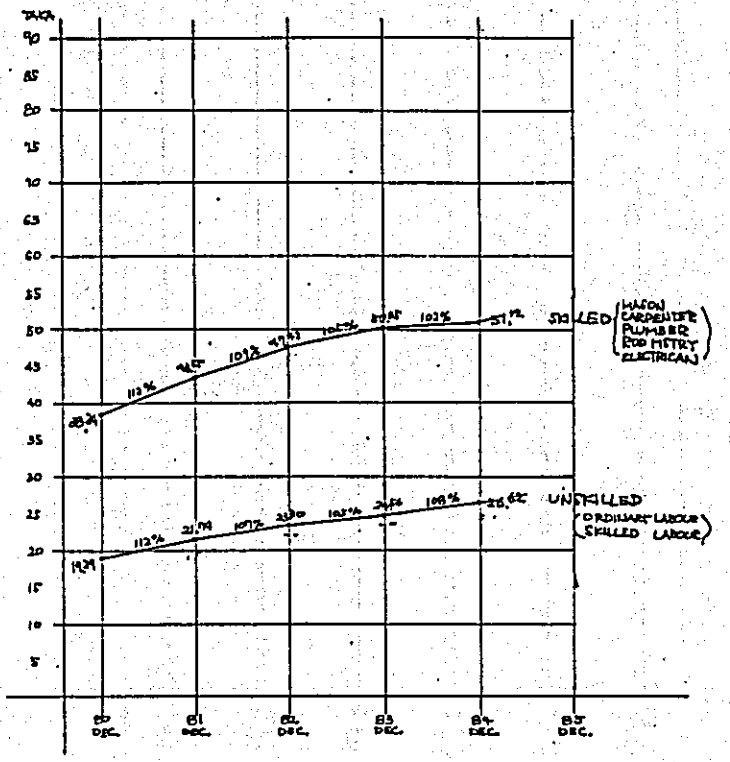
今回調査では、数量的な資料は調査出来ず。

２－９　建築物あるいは建築活動に関する社会的慣習

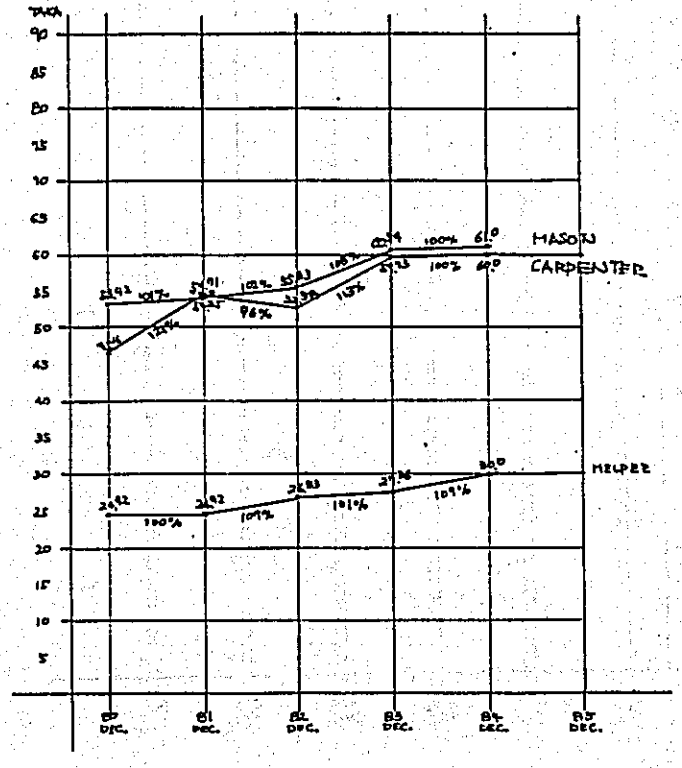
１．宗教上避けるべき事項

便器の方向をイスラム教の聖地が西方のため、東西方向に配置する事を避ける。男性、女性専用の建物配置などイスラム教の基づく基本的配慮が必要である。

AVERAGE OF DAILY WAGE RATES IN BANGLADESH CONSTRUCTION
SKILLED/UNSKILLED
LABOUR RATE TAKA/PER DAY

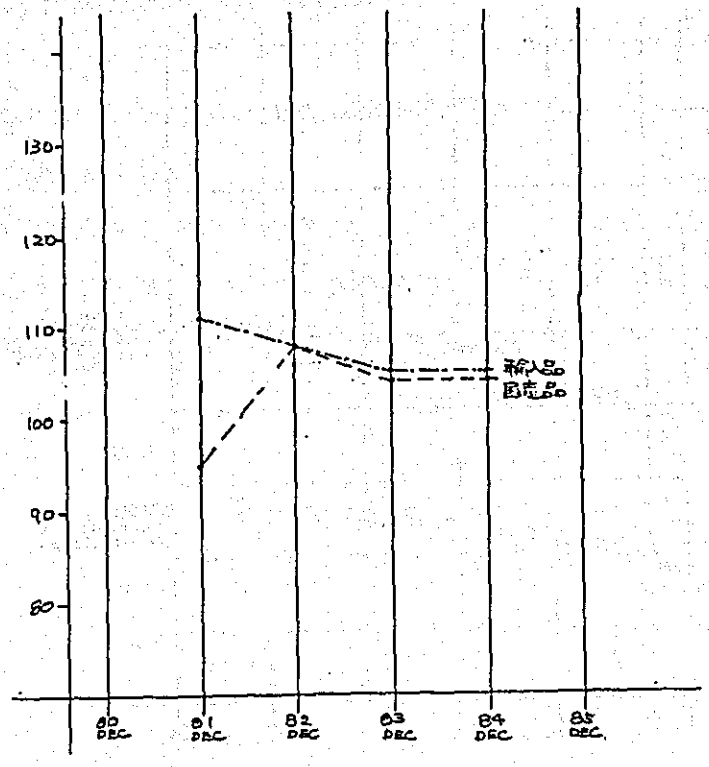


AVERAGE DAILY WAGE RATES OF CONSTRUCTION LABOUR BY TYPE AT DHAKA
MANSON/HELPER/CARPENTER
LABOUR RATE TAKA/PER DAY



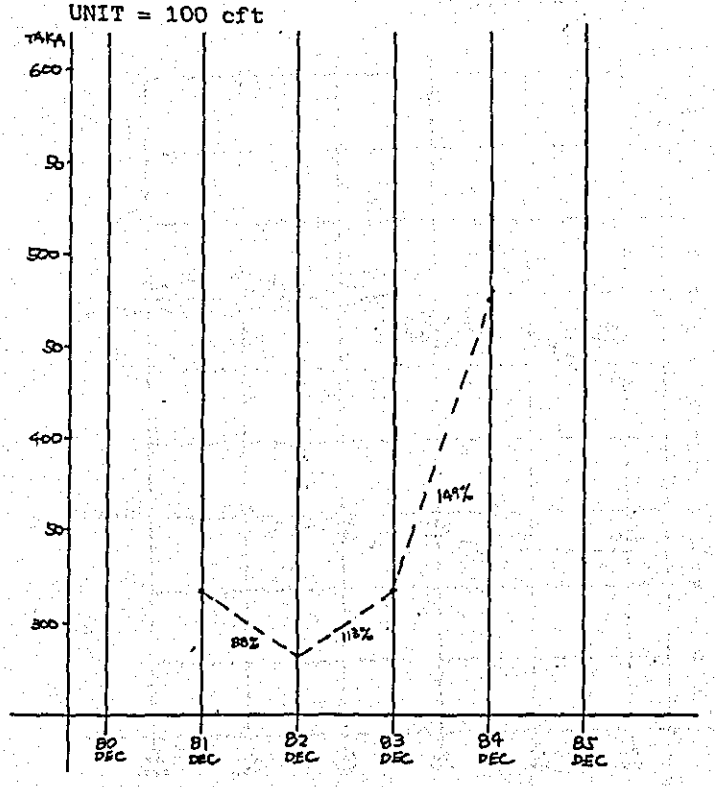
ISSUE RATE OF MATERIALS
CEMENT

UNIT =1 BAG

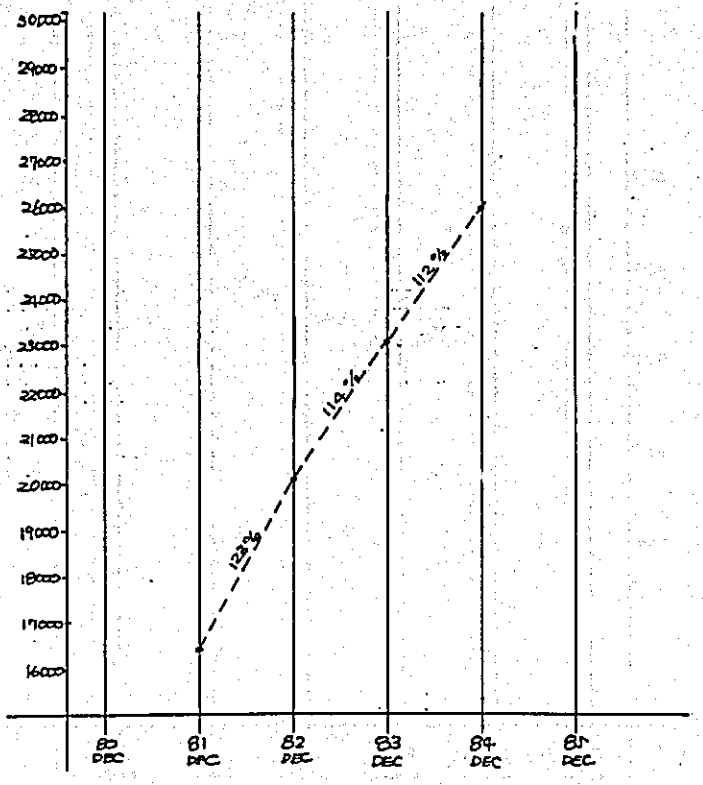


ISSUE RATE OF MATERIALS
BEST LOCAL SAND

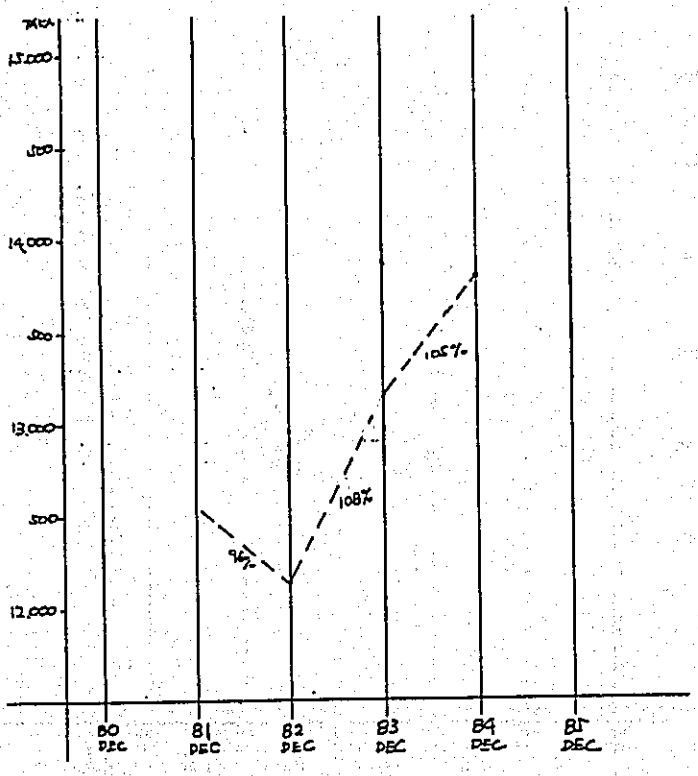
UNIT = 100 cft



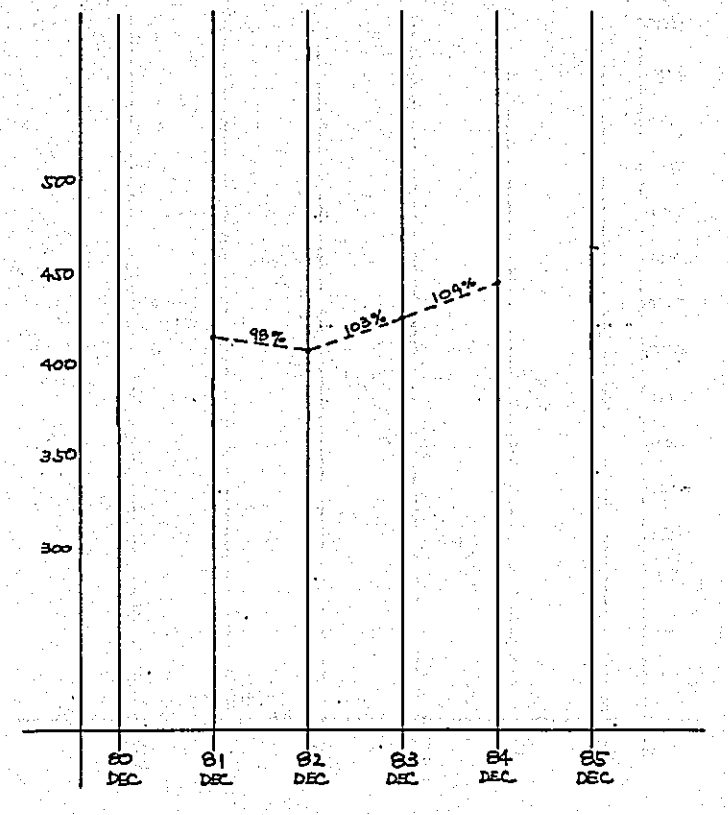
ISSUE RATES OF MATERIALS
C.I. SHEET
UNIT = 1 TON



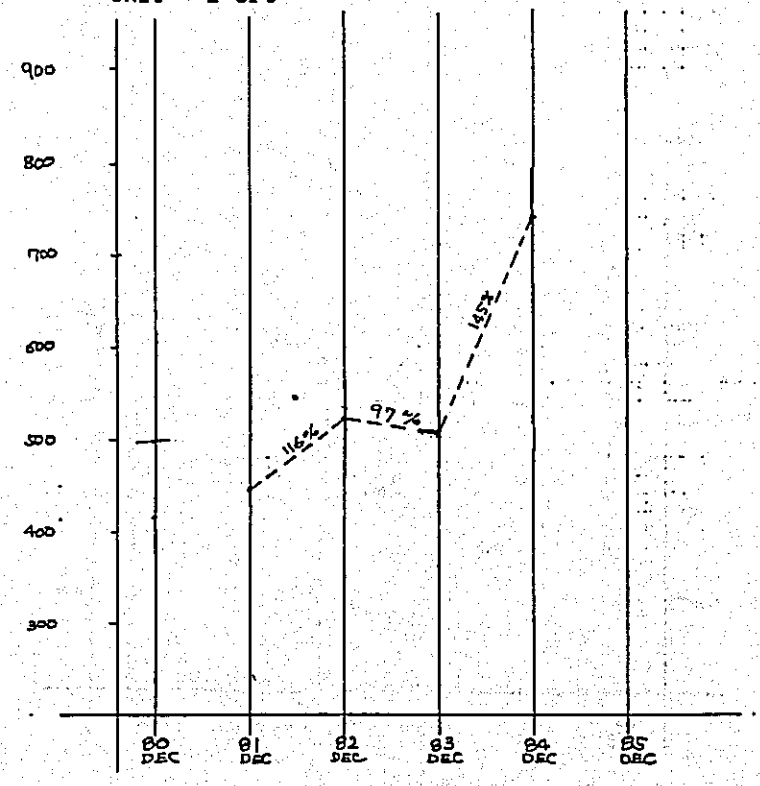
ISSUE RATES OF MATERIALS
IRON RODS'
UNIT = TON



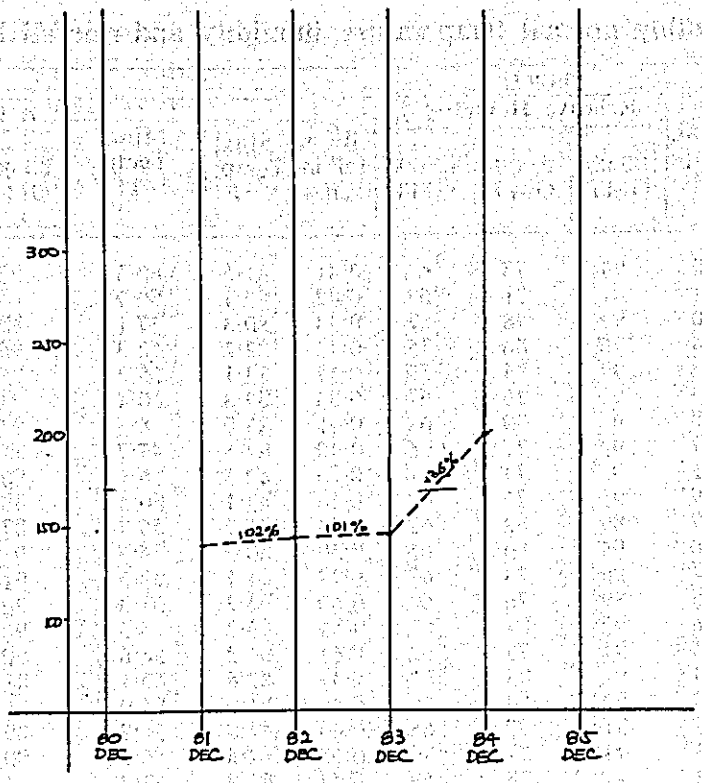
ISSUE RATES OF MATERIALS
PAINTS (SYNTHETIC)
UNIT = 1 GALLON



ISSUE RATES OF MATERIALS
TIMER CTG. TEAK WOOD
UNIT = 1 cft



ISSUE RATES OF MATERIAL
TIMBER BEAM
UNIT=1 cft



ISSUE RATES OF MATERIALS
MACHINE MADE BRICKS 10 HOLES
UNIT=1000 NOS.

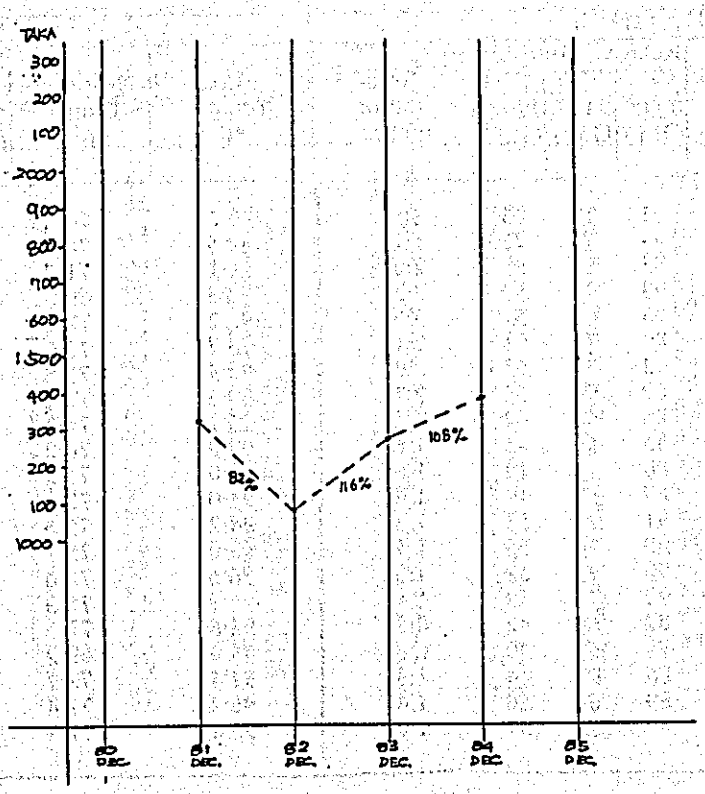


Table 1

Monthly normal temperature, humidity and rainfall by station.

Station	January						February					
	Max. Temp. °F	Mini. Temp. °F	Relative Humidity % 00·00 GMT	03·00 GMT	12·00 GMT	Rainfall in inches	Max. Temp. °F	Mini. Temp. °F	Relative Humidity % 00·00 GMT	03·00 GMT	12·00 GMT	Rainfall in inches
Chittagong	78·7	56·8	93	78	63	0·41	81·5	60·5	92	75	69	0·30
Cox's Bazar	79·8	56·1	—	71	68	0·42	82·1	50·7	—	70	68	0·48
Sylhet	77·1	55·0	93	78	67	0·94	80·3	57·1	88	75	57	1·65
Srimangal	78·5	47·4	96	86	75	0·43	82·2	52·3	95	80	62	1·29
Rangamati	79·7	50·3	99	84	59	0·57	84·1	55·2	95	75	50	2·43
Maijdee Court	78·2	55·3	92	76	67	0·83	82·3	60·4	91	75	52	0·59
Comilla	79·5	53·8	95	80	61	0·41	83·0	58·5	94	75	54	1·73
Brahmanbaria	78·4	54·1	93	77	66	0·40	82·5	47·7	91	72	56	0·97
Dhaka	77·9	53·1	93	74	61	0·70	82·5	56·1	90	65	48	1·23
Narayanganj	79·5	55·9	91	75	60	0·56	83·1	60·3	88	71	52	1·12
Mymensingh	77·5	52·7	89	82	62	0·45	81·7	56·7	87	77	54	0·72
Faridpur	75·7	52·8	94	80	65	0·50	80·9	56·7	92	74	60	1·04
Khulna	79·3	56·4	90	73	62	0·47	84·1	60·5	91	71	55	0·56
Barisal	78·7	56·5	89	76	60	0·60	82·9	61·3	90	74	56	0·73
Jessore	77·9	50·6	92	81	67	0·54	83·2	55·5	92	77	59	0·85
Satkhira	79·8	53·5	91	77	62	0·61	84·2	58·6	90	74	58	0·77
Rangpur	75·9	51·9	92	83	67	0·49	80·6	55·1	89	75	54	0·58
Dinajpur	76·9	58·4	92	80	59	0·40	81·0	54·0	86	70	48	0·52
Pabna	78·3	52·7	91	77	68	0·43	82·9	56·7	89	71	55	0·81
Serajganj	76·8	53·5	91	77	76	0·53	82·4	56·2	90	69	60	0·65
Bogra	77·0	52·8	—	78	59	0·54	81·7	55·7	—	72	48	0·65

March						April					
Max. Temp. °F	Mini. Temp. °F	Relative Hum. % 00.00 GMT	03.00 GMT	12.00 GMT	Rainfall in inches	Max. Temp. °F	Mini. Temp. °F	Relative Hum. % 00.00 GMT	03.00 GMT	12.00 GMT	Rainfall in inches
86·8	68·3	91	78	73	3·50	89·6	74·3	91	75	76	2·67
86·8	67·2	—	73	73	1·27	89·5	74·0	—	73	75	3·15
87·1	63·4	83	63	51	2·60	91·1	71·2	87	70	63	7·57
89·7	61·9	93	75	57	3·29	92·3	69·8	92	76	65	9·00
88·7	62·3	95	69	51	3·09	95·2	72·9	91	68	53	0·22
88·1	67·4	89	72	61	2·11	90·7	75·6	90	73	69	3·51
90·6	67·5	93	74	55	2·07	92·4	73·8	93	75	65	6·24
89·9	66·3	89	72	53	2·75	93·3	72·6	91	73	62	5·55
90·5	65·9	88	64	44	2·29	95·1	74·2	91	70	54	4·04
91·1	68·8	85	69	45	1·81	93·0	74·2	85	73	62	6·46
89·8	64·6	86	73	49	1·66	93·0	71·5	88	76	56	5·30
90·4	64·6	89	68	49	1·43	94·0	73·1	90	73	58	5·04
91·9	69·1	91	73	53	1·35	94·2	75·5	93	76	65	3·56
90·5	69·8	90	74	56	1·49	93·0	75·7	91	74	66	3·94
92·3	65·2	90	72	52	1·36	96·6	73·6	91	75	57	3·47
93·0	68·4	92	74	53	1·40	96·3	75·3	91	75	61	2·60
88·1	61·4	82	60	42	0·89	94·6	71·3	83	67	47	3·31
92·2	61·7	78	57	36	0·63	96·0	69·9	75	60	39	1·86
92·2	64·7	86	67	44	1·39	97·4	72·7	87	71	41	2·17
90·1	64·5	89	64	50	1·45	96·4	72·4	89	68	50	3·44
91·4	63·3	—	63	37	1·07	96·4	71·7	—	67	42	2·49

Monthly normal temperature, humidity and rainfall by station.

Station	May						June					
	Max. Temp. °F	Mini. Temp. °F	Relative Humidity % 00·00 GMT	03·00 GMT	12·00 GMT	Rainfall in inches	Max. Temp. °F	Mini. Temp. °F	Relative Humidity % 00·00 GMT	03·00 GMT	12·00 GMT	Rainfall in inches
Chittagong	89·7	76·9	93	77	79	11·17	87·9	77·4	93	83	85	22·41
Cox's Bazar	90·0	76·6	—	76	79	11·52	86·8	76·8	—	85	86	30·34
Sylhet	87·9	72·3	93	84	79	27·41	87·5	76·3	96	85	82	53·93
Srimangal	90·0	73·8	93	81	77	17·26	89·3	76·0	94	87	85	20·36
Rangamati	94·5	76·1	89	71	67	8·53	89·7	76·3	93	81	82	16·51
Maijdee Court	89·7	77·9	89	77	76	12·96	87·2	77·8	92	85	83	28·27
Comilla	91·1	76·4	92	79	75	12·45	88·3	77·8	94	84	83	18·84
Brahmanbaria	91·3	75·0	91	78	75	11·16	89·2	76·7	93	84	84	14·60
Dhaka	92·7	77·7	98	78	75	7·65	89·1	78·6	95	84	81	12·67
Narayanganj	91·7	76·9	89	76	74	9·47	89·9	78·5	91	82	80	13·71
Mymensingh	90·3	74·1	90	82	74	12·32	88·3	76·9	93	87	82	17·84
Faridpur	91·5	75·6	93	77	75	10·66	88·9	77·5	95	85	84	13·58
Khulna	93·4	77·8	93	78	74	7·25	90·8	78·9	94	83	82	12·20
Barisal	92·1	78·2	91	74	74	9·16	89·4	78·8	92	83	82	16·58
Jessore	95·0	76·6	91	79	71	7·44	91·3	78·0	95	85	82	10·81
Satkhira	95·3	77·9	90	76	70	7·40	91·8	78·7	93	84	79	11·59
Rangpur	92·5	74·4	90	78	65	11·93	89·5	76·3	95	86	81	20·44
Dinajpur	92·8	74·6	85	76	63	7·37	90·0	77·4	92	84	77	13·61
Pabna	95·2	76·3	91	79	61	7·12	91·8	78·0	95	85	81	11·52
Serajganj	92·5	76·2	93	80	71	9·27	88·9	77·9	96	87	86	12·98
Bogra	92·9	75·2	—	78	67	7·68	90·3	77·8	—	86	82	13·00

July						August					
Max. Temp. °F	Mini. Temp. °F	Relative Hum. % 00·00 GMT	03.00 GMT	12·00 GMT	Rainfall in inches	Max. Temp. °F	Mini. Temp. °F	Relative Hum. % 00·00 GMT	03·00 GMT	12·00 GMT	Rainfall in inches
86.9	76.7	94	84	86	24.57	86.4	76.6	95	85	86	22.23
85.5	76.5	—	88	88	36.75	85.5	76.4	—	89	88	30.71
88.1	77.6	97	86	83	23.37	88.9	77.6	95	85	84	20.91
89.7	76.8	94	87	85	13.26	89.3	76.6	95	88	86	13.52
87.7	76.5	95	86	89	26.75	88.8	76.9	95	81	85	15.65
85.9	77.8	93	87	83	25.32	86.4	78.1	93	87	84	22.15
87.6	77.6	94	86	84	15.91	87.9	77.6	95	86	83	16.43
88.5	77.6	92	83	83	12.01	88.6	77.9	92	84	82	11.58
87.3	78.8	95	87	82	17.20	87.9	79.1	94	86	83	12.00
88.5	79.0	91	84	80	13.66	88.6	79.1	90	83	79	14.36
88.4	78.2	94	87	81	14.82	88.5	78.1	94	88	81	15.97
87.2	78.2	96	87	85	13.31	87.2	78.9	93	86	84	12.30
88.1	79.1	95	86	84	14.95	88.4	79.0	95	85	84	11.76
87.1	78.5	94	87	83	18.54	87.5	78.5	94	85	83	17.03
88.5	78.1	96	86	86	12.38	88.9	78.2	96	88	87	12.09
88.6	78.6	96	87	84	14.05	88.6	78.4	95	88	84	12.33
89.2	79.0	95	85	81	16.96	89.1	79.3	95	86	82	13.67
88.9	78.8	93	86	79	15.35	89.3	78.7	93	85	80	13.93
89.3	78.7	96	86	85	10.52	89.2	79.1	95	85	84	11.37
87.3	78.9	95	87	85	12.29	87.4	79.5	94	86	86	12.64
88.6	79.0	—	86	81	12.50	88·8	78.9	—	87	82	13.80

Table 1

Monthly normal temperature, humidity and rainfall by station.

(Station)	September						October					
	Max. Temp. °F	Mini. Temp. °F	Relative Humidity% 00·00 GMT	03·00 GMT	12·00 GMT	Rain-fall in inches	Max. Temp. °F	Mini. Temp. °F	Relative Hum.% 00·00 GMT	03·00 GMT	12·00 GMT	Rain-fall in inches
Chittagong	87.7	77.0	95	83	85	12.04	87.4	74.6	96	82	82	11.45
Cox's Bazar	86.6	76.3	—	85	85	17.45	87.6	74.4	—	78	80	10.83
Sylhet	87.5	76.3	95	86	85	25.80	86.4	72.4	96	85	84	10.80
Srimangal	89.6	76.0	96	87	87	11.01	87.9	71.0	95	85	88	7.57
Rangamati	88.7	76.3	97	83	87	11.09	88.3	74.7	97	85	83	10.45
Maijdee Court	87.3	77.9	93	85	82	17.52	87.1	75.6	95	82	81	10.04
Comilla	88.9	75.5	95	84	82	13.27	88.1	74.6	86	80	80	8.89
Brahmanbaria	89.3	87.1	92	83	82	9.06	88.0	75.3	93	79	81	6.89
Dhaka	88.2	87.5	95	84	83	9.28	87.7	74.7	95	78	79	6.64
Narayanganj	89.7	79.2	90	81	79	9.57	89.4	75.9	92	76	75	5.78
Mymensingh	88.8	77.8	94	85	82	13.42	87.5	74.1	93	83	79	7.81
Faridpur	88.1	78.7	94	83	83	9.64	87.3	74.7	95	79	81	7.09
Khulna	89.2	78.7	95	83	83	8.78	88.2	75.6	94	78	78	6.01
Barisal	88.6	78.6	94	83	82	12.27	88.2	75.8	94	79	77	7.72
Jessore	89.8	77.6	96	87	86	7.40	88.9	73.1	95	84	83	5.35
Satkhira	89.4	78.1	95	84	84	9.14	89.3	74.5	96	80	80	5.84
Rangpur	89.0	78.2	95	84	82	12.03	87.4	72.8	93	83	77	6.53
Dinajpur	89.6	77.8	92	84	81	11.81	88.4	72.2	93	80	75	5.41
Pabna	90.2	78.6	95	84	85	9.24	89.4	74.0	95	79	81	6.64
Sirajganj	88.2	78.8	94	85	85	9.36	87.4	74.7	95	80	84	5.86
Bogra	89.4	78.5	—	85	82	10.83	87.8	73.8	—	81	76	7.07

(Station)	November						December					
	Max. Temp. °F	Mini. Temp. °F	Relative Hum.% 00·00 GMT	03·00 GMT	12·00 GMT	Rain-fall in inches	Max. Temp. °F	Mini. Temp. °F	Relative Hum.% 00·00 GMT	03·00 GMT	12·00 GMT	Rain-fall in inches
Chittagong	84·5	65·9	95	79	76	1·97	79·4	59·7	95	83	73	0·41
Cox's Bazar	85.0	66·9	—	75	71	2·49	86·0	59·9	—	74	70	1·29
Sylhet	83·7	62·8	93	74	75	0·28	79·5	57·4	95	79	73	0·22
Srimangal	84·0	59·8	96	84	86	1·69	79·6	50·8	97	87	83	0·12
Rangamati	84·1	61·9	99	90	69	0·84	80·7	56·1	99	91	67	0·93
Maijdee Court	82·8	66.0	93	76	79	1·80	79·2	57·9	93	77	73	0·01
Comilla	84·6	65·0	95	77	75	1·77	80·3	56·8	95	80	70	0·10
Brahmanbaria	84·2	66·3	93	76	76	1·33	79·8	57·8	94	79	72	0·11
Dhaka	83·6	63·6	94	73	71	1·00	79·3	54·9	95	78	70	0·09
Narayanganj	85·6	66·6	91	73	69	1·21	80·9	58·6	91	76	66	0·08
Mymensingh	83·9	64.6	90	81	73	0·65	79·7	56·3	91	84	67	0·10
Faridpur	82·4	64·4	94	77	76	1·15	77·3	55·7	94	80	75	0·07
Khulna	84·2	66·2	91	72	69	1·28	80·0	58·4	91	72	67	0·09
Barisal	84·0	66·7	91	75	69	1·63	79·6	58·7	89	78	64	0·13
Jessore	84·4	61·5	95	80	74	0·88	79·7	52·3	93	82	74	0·06
Satkhira	84·5	63·6	93	75	70	1·23	80·2	55·6	92	77	66	0·09
Rangpur	83·5	61·7	93	80	74	0·44	77·9	55·5	94	86	77	0·08
Dinajpur	84·0	60·8	91	74	68	0·45	78·9	52·9	82	77	64	0·04
Pabna	84·8	63·3	94	75	76	0·74	79·8	55·1	95	76	75	0·06
Sirajganj	83·3	63·9	95	76	82	0·82	79·5	56·9	95	77	80	0·02
Bogra	83·5	63·5	—	78	69	0·53	78·5	55·6	—	79	65	0.08

Note : Based on data for 1931-1960

Source : Bangladesh Meteorological Department.

Table 2

Annual rainfall at selected stations of Bangladesh.

(In Millimetre)

Meteorological station	1974	1975	1976	1977	1978	1979	1980	1980-81 (a)	1981-82 (a)	1982-83 (a)	1983-84
Dhaka	M	M	2238	2115	2251	1943	1902	2408	1033	1514	2669
Mymensingh	849(6)	11(4)	831(7)	2847	1927	M	2345	1995	1142	—	2198
Faridpur	2209	1902	1925	2092(11)	1384	1818	2043	2375	1518	1385	2443
Chittagong M.M.O.	3741	2598	2628(11)	2484(11)	2517	2863	3375	2676	1918	2799	4041
Rangamati	1924(10)	2469	3030	2548	2373	1136	2318	2359	1391	2314	3042
Maijdee court	2924	2871	M	M	531(4)	1963	2591	1550	2138	705	3487
Comilla	2745	1818	1965	2125	M	1317	1387	2662	1181	1610	2272
Sylhet	5460	3444(10)	4387	3943	3396	5909(11)	5630	2911	3689	2735	3002
Rajshahi	1730	1154	1443	1919	1736	1923	M	1649	2152	774	1687
Dinajpur	M	M	M	M	M	M	M	—	—	—	1529
Rangpur	M	1767	1895	1993(9)	2133	1479	2063	1913	1479	965	3300
Bogra	1779	1940	1882	936(6)	1871(9)	2228	3293	1144	1357	1659	1965
Ishurdi	1365(11)	1505	2609	2755	1134(11)	1267	1381	1869	1518	1386	1601
Khulna	2679(11)	M	M	1048(8)	1987	3294	3991	2034	1009	961	2490
Barisal	2375	1450(9)	1847	1857	2503	3012	3711	2595	1771	1842	2859
Jessore	1640	1243	1179	1500	M	2529	3259	1775	3036	957	2070
Patuakhali	M	2019	M	1378(10)	3125	2033	M	3036	2573	2868	3026
Cox's Bazar	4319	3775	2449(11)	3946	3181(11)	2712	3636	...	—	—	—

Notes : Figure in the bracket indicates total months recorded in the year.
(a) Approximate (M) Indicates missing.

Source : Bangladesh Meteorological Department.

Table 3

Maximum and minimum temperature at selected stations of Bangladesh.

(°F)

Met. Station	1976		1977		1978-79		1979-80		1980-81		1981-82		1982-83	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Dhaka ...	104	47	96	47	105	48	103	48	96	50	100	52	102	53
Mymensingh ...	104	49	95	45	101	48	104	48	101	51	100	50	99	50
Faridpur ...	103	50	97	46	106	41	103	48	98	48	96	47	97	48
Chittagong ...	95	52	93	52	99	53	99	52	101	51	102	53	101	54
Rangamati ...	98	56	96	59	103	51	99	36	101	54	100	52	100	50
Maijdee Court ...	95	53	100	53	105	51	...	...	...	...	...	...	98	49
Comilla ...	97	48	96	50	103	50	103	50	97	46	95	48	97	45
Sylhet ...	95	49	97	53	103	50	95	50	94	45	96	48	102	50
Rajshahi ...	108	49	101	47	111	48	97	44	95	47	97	48	100	52
Dinajpur ...	...	...	...	...	...	...	...	...	...	...	...	...	n.a.	n.a.
Rangpur ...	105	46	99	46	104	45	104	46	99	50	98	48	101	49
Bogra ...	104	46	98	50	109	51	106	46	98	45	99	47	100	50
Pabna (Ishurdi) ...	...	...	...	...	111	47	111	44	99	46	95	44	96	47
Khulna ...	103	52	100	53	106	52	99	48	95	48	94	46	99	49
Barisal ...	99	47	95	51	105	48	104	48	98	47	99	48	100	51
Jessore ...	105	45	102	47	109	48	106	46	98	44	100	51	102	54
Patuakhali ...	97(b)	53(b)	96	50	93	...	...	...	...	...	...	...	99	50

Notes : (a) Figures for March to May and Dec. are not available.
(b) Data for eight months.
(c) From 1978-79 onwards data have been shown on July-June basis.

Source : Bangladesh Meteorological Department.

Table 4

Average monthly cloud free days at selected stations of Bangladesh.

Met. Station	Jan	Feb	March	April	May	June	July	August	Sept.	Oct.	Nov	Dec
1. Barisal	20.3	15.5	13.1	5.6	3.0	0.2	0.2	0.0	0.5	5.7	19.5	19.9
2. Bogra	21.7	19.3	14.1	8.9	4.7	0.2	0.1	0.2	0.7	10.6	18.2	20.2
3. Bhola	16.8	18.6	13.4	6.9	6.9	0.4	0.0	0.0	1.5	11.5	17.9	21.3
4. Brahmanbaria	20.8	17.7	13.3	5.7	3.6	0.1	0.0	0.0	0.2	6.6	17.1	19.5
5. Chittagong	17.9	15.4	9.5	2.0	0.6	0.1	0.0	0.0	0.0	1.4	8.4	14.7
6. Chandpur	23.2	21.5	17.5	16.3	13.2	2.8	1.6	1.4	3.7	15.9	24.5	28.5
7. Comilla	22.0	19.3	13.8	8.6	6.3	2.1	1.3	1.4	3.7	14.1	21.4	20.7
8. Cox's Bazar	16.5	16.8	11.3	3.5	1.2	0.0	0.0	0.0	0.0	1.7	9.0	13.5
9. Dhaka	18.4	15.3	10.9	3.6	1.8	0.2	0.0	0.0	0.1	4.2	11.5	15.8
10. Dinajpur	24.7	22.0	22.1	17.0	11.3	2.3	1.0	0.8	6.0	18.0	2.30	25.2
11. Faridpur	21.0	18.9	15.2	7.8	4.3	0.5	0.1	0.1	0.7	8.3	18.6	21.2
12. Hatiya	17.6	17.3	10.2	6.2	4.7	0.3	0.0	0.1	0.7	10.2	18.1	19.1
13. Ishurdi	19.2	18.2	14.8	7.7	4.1	0.1	0.1	0.0	4.0	8.0	12.5	15.2
14. Jamalpur	26.0	24.2	21.5	14.0	13.2	8.2	6.9	3.1	7.4	17.7	24.7	24.4
15. Jessore	16.8	16.8	13.1	6.6	5.3	0.3	0.0	0.0	0.5	6.9	13.5	16.4
16. Kaptai	5.4	6.2	2.1	0.1	0.0	0.0	0.0	0.0	1.8	5.1	8.5	4.1
17. Khulna	23.2	19.1	15.9	10.0	10.5	2.4	2.0	2.3	1.5	7.7	17.9	21.0
18. Lalmanirhat	20.5	19.3	15.0	8.7	5.8	1.2	0.8	1.2	2.8	12.5	18.3	22.7
19. Maijdee Court	24.6	20.0	17.0	8.6	6.2	0.7	0.4	0.1	1.0	8.7	22.1	26.6
20. Mymensingh	23.8	18.9	17.5	8.4	5 5	0.4	0.1	0.0	1.5	11.6	22.1	24.6
21. Narayanganj	21.6	19.0	13.7	5.0	3.1	0.2	0.0	0.1	0.4	7.0	17.0	21.5
22. Rangamati	9.6	13.3	9.6	5.0	1.8	0.1	0.0	0.0	0.0	0.6	2.2	4.7
23. Rangpur	21.9	18.3	17.5	11.6	4.3	0.5	0.1	0.1	0.5	7.8	15.1	20.8
24. Rajshahi	21.2	21.0	18.4	12.7	10.3	2.2	0.2	0.4	1.1	10.7	18.1	20.6
25. Rooppur	20.7	22.7	17.0	12.7	4.7	0.3	0.1	0.8	1.8	9.4	16.0	15.0
26. Satkhira	21.3	18.9	15.5	10.7	3.9	0.3	0.0	0.0	0.0	4.4	18.3	22.3
27. Sandwip	24.5	19.5	8.2	9.0	0.7	2.2	2.3	1.5	3.3	12.0	21.0	39.3
28. Serajganj	25.0	23.0	22.5	14.2	10.0	2.6	0.5	0.6	4.0	15.3	24.1	25.2
29. Srimangal	23.2	15.7	14.7	8.1	4.6	1.7	1.8	1.4	4.3	10.4	18.2	20.9
30. Sylhet	15.6	14.1	9.9	3.4	1.0	0.0	0.0	0.0	0.0	2.8	0.8	14.2

Notes: Data show average number of cloud-free days observed at 00.00 G.M.T., 03.00 G.M.T. and 12.00 G.M.T. and these are based on 1961-1970 data

Source: Bangladesh Meteorological Department.

Table 5

Average number of cloudy hours at Dhaka.

Year	Cloudy hours			
	6 a.m.	9. a.m.	6 p.m.	Average
1968-69	293	289	292	291
1969-70	293	293	315	300
1970-71	237	236	206	226
1971-72	250	249	247	249
1972-73	273	268	248	263
1973-74	267	255	265	262
1974-75	273	271	300	281
1975-76	n.a.	n.a.	n.a.	n.a.
1976-77	272	267	280	273
1977-78	261	263	274	226
1978-79	263	265	265	264
1979-80	268	271	276	272
1980-81	259	272	276	266
1981-82	251	249	268	256
1982-83	310	94	310	238

Notes: Observations were taken at three different hours i.e. 6 a.m., 9 a.m. and 6 p.m. (local time) in a day.
Source: Bangladesh Meteorological Department.

Maximum wind speed in knots with direction.

Year/ Station/Month	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1977												
Barisal ...	n/nw05	w/sw07	s10	sw15	e15	s12	sc10	e15	e90	sc05	e05	n05
Bogra ...	w05	nw07	se07	e15	n15	ne12	e10	e/se07	e07	v03	w06	v04
Chittagong ...	nw22	v13	s25	v25	sc25	s/se19	sc25	se/s19	sc19	se13	se13	nw09
Comilla ...	n/nw14	s15	s25	s35	s/sw25	se25	s/sc19	s16	s17	nc10	n08	nw10
Cox's Bazar ...	n12	nw09	n10	s12	se16	s13	s16	s12	s11	s07	v03	ne07
Dinajpur ...	...	...	...	...	...	...	...	...	...	...	...	...
Faridpur ...	n05	s05	s05	e10	e25	s15	s05	e04	se07	s02	s02	n/ne02
Ishurdi ...	w13	nw12	ssw13	e40	nne18	se15	e15	e20	e20	s12	nne06	v05
Jessore ...	v12	n/se/sw13	s15	s23	s15	sse18	e18	e/se15	se15	e11	sw10	n13
Maijdee Court ...	sw12	s25	ssw10	s17	nw19	sw19	se19	s13	s09	n09	s05	sw01
Mymensingh ...	...	nw02	v02	nw04	ne04	se02	sc02	se02	se02	xxx	sw02	...
Rajshahi ...	n02	w03	wsw05	...	...	...	se12	e13	e12	s05	n05	nw03
Rangamati ...	n13	s09	s13	s19	s19	s19	s99	s13	s13	nw15	s09	w09
Rangpur ...	sw03	w03	w05	e05	nc07	se03	se05	se05	e02	e03	e05	ne02
Sylhet ...	sc09	e10	e09	nc09	nc15	e07	sc06	s12	ne05	ne08	e08	ne05
Khulna ...	nw09	sw10	s10	s17	sw14	se12	c09	e10	se08	s06	se06	ne/e05

Table 6

Maximum wind speed in knots with direction.

Year/ Sation/Month	Jan	Feb	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978												
Barisal	n05	ne05	n/se05	nw15	ne12	v05	se09	se10	sw06	se09	sw05	n/nw03
Bogra	n05	n05	w07	xxx	e16	e06	s/e07	e06	ene09	ne09	w03	nw04
Chittagong	n09	ne07	ne12	sw09	s15	s16	s09	se10	se09	se12	n07	n05
Comilla	se07	n12	se06	s09	se19	s/se5	—s17	s18	s/sw12	se13	s/se5	n07
Cox's Bazar	n14	nw12	n09	w09	s14	s10	s12	s10	s07	se10	nw07	n07
Dinajpur	...	...	...	...	...	...	...	...	...	...	...	...
Faridpur	n02	ne03	n05	w05	v05	s05	v05	se05	e/se04	e/s04	ne02	v02
Ishurdi	n10	nw10	nw12	ese18	e15	ssw15	e15	e15	ese20	e18	v05	nw12
Jessore	nw07	n07	sw16	nne40	s21	ssw15	ese15	se16	se13	s15	sw07	v05
Maijdee Court	n05	n05	sw13	s15	s19	se27	s27	s22	s07	se13	n05	nw05
Mymensingh	nw07	nw09	e12	ne10	e11	ese12	s16	e11	se18	se09	e07	ne/e06
Rajshahi	nw09	ne08	n09	s19	s19	xxx	e15	e19	se17	e12	nw09	n09
Rangamati	nw09	n09	n13	s/nw09	e13	s13	n/sw09	s13	s13	s09	n/s09	n/nw05
Rangpur	v02	v02	e05	e/w13	se09	e13	se09	se05	ne/se09	ne09	v05	e09
Sylhet	e/ne07	ne08	ne09	w09	s06	s06	s06	s08	ne07	ne09	e07	ne99
Khulna	n05	n05	se07	v05	se12	s05	sw07	e08	se10	s06	n04	n04
1979												
Barisal	n05	v05	sw09	sw09	nw40	sw20	se09	e23	se10	s07	n05	ne05
Bogra	sse09	w21	w16	w25	w17	e16	sw07	e12	e05	se03	ne03	n03
Chittagong	w17	nw19	nw24	s25	v19	s35	sw25	sw40	se15	sse20	w09	n05
comilla	nnw12	13	s 16	v13	s19	s18	s22	e20	s04	se07	se05	no03
Cox's Bazar	n12	nw09	n16	s10	s07	s38	ssw12	sw28	s09	v15	nw08	n07
Dinajpur	...	...	...	...	...	...	...	...	...	...	...	...
Faridpur	ne05	ne05	s16	e15	sw09	sw15	sw09	e08		s03	n02	n02
Ishurdi	nw15	w18	sw18	nly60	sse20	ws24	ws20	e16	e18	ssw10	wnw20	nnw10
Jessore	s38	wnw13	sw13	e30	ese20	wnw40	se15	ne32	se12	n27	n05	nne05
Maijdeecourt	n07	nnw05	s09	v07	s06	s12	's16	se17	s15	s05	s05	n03
Mymensingh	nw02	nw02	nw04	—	—	—	—	—	—	—	—	—
Rajshahi	nly16	v07	nly36	v14	w42	w17	ws17	ws23	ws13	ws17	ws07	sw07
Rangamati	n05	nnw05	s09	s09	s07	s21	v07	s20	s10	s17	s10	s10
Rangpur	w13	nnw25	wsw25	e13	sw25	e17	s10	se10	se10	ne09	ne05	ne07
Sylhet	e07	w09	wsw09	se18	w09	s06	sw04	e09	s05	—	..	...
Khulna	n03	nw04	v05	w12	s12	sw15	sw08	e14	se03	se03	n07	ne04
Dhaka	v05	nw21	sw40	nw65	w50	e/sw25	se/s19	se25	se/s09	se/s13	n/ne13	nw05
1980												
Barisal	n05	sw05	sw05	sw14	s10	se07	se13	e10	se07	e07	n03	n03
Bogra	sw05	sw04	e09	ne10	s07	e06	se08	e12	se03	ssw06	nw04	nw04
Chittagong	ne16	ssw15	sw17	ne45	w35	sse44	s23	se25	sse22	s16	nw09	nw09
Comilla	n08	nw15	nw12	s20	n25	se14	se18	se16	e05	se13	n05	nw05
Cox's Bazar	n07	nw07	s12	s12	se12	s17	s19	s25	se16	e13	e08	n11
Dinajpur	...	...	...	...	...	...	...	...	...	...	...	...
Faridpur	n02	sw03	sw05	e15	n21	se13	w15	e13	e13	ne08	n03	n08
Ishurdi	nw10	sw20	s20	s15	e30	e25	e25	e18	e24	nw15	nw15	nw15
Jessore	n12	n40	s32	s50	s60	s25	ws30	ws25	se22	s25	ne10	ne12
Maijdeecourt	n07	ne12	s05	s24	s20	se09	se16	se15	s12	e05	n03	n03
Mymensingh	ne06	se15	sw09	sse13	ene12	se12	se13	se12	se13	e05	ne03	e05
Rajshahi	ws07	ws09	ws18	ws18	ws54	ws36	ws18	ws14	e12	ws10	ws09	ws04
Rangamati	s06	s06	s07	s13	s13	s13	s13	s13	s09	s05	n05	—
Rangpur	w04	w16	ne09	s12	s07	e10	se11	e10	se;06	ne10	ne04	ne02
Sylhet	e05	e07	sw06	e08	se06	ne05	ne09	se06	sw04	sw08	e07	e07
Khulna	n05	se05	e05	s10	s10	se09	sw08	ws12	e07	ne05	nw03	ne05
Dhaka	nw05	ne/e45	se/sw52	s/nw74	se95	se/s38	se/s38	se15	se09	e15	n/nw05	nw05

Table 6

Maximum wind speed in knots with direction.

Year/ Station/Month	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1981												
Barisal	nw08	no9	nw012	nw014	n022	n.a	n.a	se012	se015	nw03	nw05	e018
Bogra	sw06	wo13	sw014	se014	e016	se017	e012	e015	se07	w05	n04	ne017
Chittagong	n.a	n.a	n.a	n.a	n034	ssw022	ssw019	s022	s017	nw018	ene015	n.a
Comilla	n.a	n.a	n015	s020	e015	sw015	s015	se018	s010	s09	ne04	s035
Cox' Bazar	n.a	n.a	n030	nw027	nw015	s013	se017	n.a	n.a	n.a	n.a	n.a
Dinajpur	no10	wo12	sw014	ne012	w012	s08	e08	w06	w06	w04	ne07	ne023
Faridpur	so12	wnw09	so12	se012	ee018	sw018	se016	e017	ne025	ne010	ne09	se021
Ishurdi	nnw020	e015	e018	wsw035	se030	n020	se020	e028	se022	n010	n010	ne025
Jessore	n018	nne015	ne018	ne030	se018	e018	s018	se018	e025	s010	w010	ne030
Maijdee Court	n05	n03	nw015	s012	s013	n.a	s012	se017	s07	nnw05	n05	s022
Mymensingh	ne09	e08	w018	e018	e018	se022	se013	se016	se015	e08	n.a	n.a
Rajshahi	ne012	w010	nw018	ne014	e012	se046	e014	e018	se020	n04	n010	ne018
Rangamati	n.a	n.a	n.a	ne05	nne03	nne07	s05	s013	s013	n09	n05	sw019
Rangpur	ne012	w013	sw021	e014	se018	se09	n.a	n.a	n.a	n07	ne09	ne014
Sylhet	sw08	sw08	e010	e012	sw09	s09	sw07	w08	e012	e07	e012	e012
Khulna	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Dhaka	no15	sw013	nw019	se019	nw019	se020	s013	se013	se013	n09	w09	sw044
1982												
Barisal	nw05	ne07	s07	sw07	nw010	e015	s07	se010	se012	ne05	ne07	nw07
Bogra	nw07	w06	w014	sw018	nw010	e08	e014	e015	sw09	n06	nw04	nw05
Chittagong	n.a	n.a	n.a	n.a	n023	sw025	ssw019	e036	se030	nw010	n011	n.a
Comilla	n04	n07	n015	s020	se015	s09	s015	s018	se015	w012	nw07	s08
Cox's Bazar	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Dinajpur	w05	w010	n.a	se017	e07	ne015	e05	n021	nw05	w03	nw05	w05
Faridpur	n06	w04	sw013	sw020	s017	se08	s012	sw014	se013	s010	e05	w09
Ishurdi	n09	w010	n010	e020	n035	s070	e015	ese015	se015	n010	nw010	w010
Jessore	ne09	e015	n019	sw024	n020	s016	ssw018	ese020	ese020	wsw017	nne08	nw08
Maijdee Court	n02	s018	nw08	s023	e08	s07	s015	se015	se08	s06	nw05	n.a
Mymensingh	n.a	n.a	n.a	n.a	n.a	n a	n.a	n.a	n.a	n.a	n.a	n.a
Rajshahi	n06	w06	wsw08	nw08	se020	n.a	n.a	e010	se010	se012	w08	n09
Rangamati	n09	sw05	n018	sw023	s030	s018	n013	s017	s022	nw07	n.a	s07
Rangpur	e09	w015	w016	w026	s08	s08	e08	e030	s06	e08	ne05	sw06
Sylhet	e06	e06	w014	w010	se09	ne08	w010	s012	s010	sw05	n04	n.a
Khulna	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Dhaka	nw010	w09	n013	w019	n019	se013	s018	s019	s09	sw09	e05	w09

Table 6

Maximum wind speed in knots with direction.

Station	January	February	March	April	May	June
1983						
Barisal	NW 8	N 18	S 12	SW 15	SSE 31	SW 12
Bogra	N/W 7	SW 15	W 21	E 20	E 15	SE 12
Chittagong M.M.O. ...	NW/SW 10	SW 20	NW 28	N 38	SE 32	SW 25
Chittagong P.B.O.	NE 15	NNE 36	S 20	N 45	SE 12	S 15
Comilla	NW 08	N 12	S 15	W 15	SW 36	S 15
Cox's Bazar	N 13	N 18	S 18	ESE/SE 22	SE 18	NW 15
Dinajpur	NW 05	SW 08	W 10	W 15	E 5	E 7
Dhaka	S/NW 31	N 13	SE/W/S 13	SE/NNE/S 13	N18	S/SE 13
Faridpur	W 5	N 6	W/SW 8	S/ENE/SE 16	W 22	S 15
Ishurdi	N 15	N 25	NW/W/E 20	WSS 40	SE/E 40	SEE 24
Jessore	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Khulna	N 7	NE 15	S 45	S 27	E/NE 25	W/S 25
Maijdee court	SW 03	N 36	N 12	S 17	NNE 27	S 13
Mymensingh	NW 14	W 9	n.a.	n.a.	n.a.	n.a.
Rajshahi	N 8	W 16	NW/W/NE16	NW 31	NW 45	W 45
Rangamati	N 36	S 12	SW 12	E/S 15	SE 10	S 15
Rangpur	NE/W/SW/NW6	W 10	W 13	W 16	E 8	S/SE 8
Sylhet	SW 08	E 18	W/SW 15	S 10	W 9	SE 10

Station	July	August	September	October	November	December
Barisal	SE 10	SW/S/SE 13	S 10	N 8	NE/NW/N 6	N/NW 8
Bogra	E 15	E 23	E 10	N/W/NW/E 5	N/NW/E/W 5	N/NW 7
Chittagong M.M.O. ...	S 23	S/SW 28	SSE 24	SW 28	N 26	NW 10
Chittagong P.B.O.	NE 24	SE 13	SE 9	SE 56	NE 18	NNW 9
Comilla	S 10	SE 20	SE 15	SE 20	N 13	N 12
Cox's Bazar	S 13	S 28	S 14	S 12	NW 9	N 12
Dinajpur	SE/N/S 4	NE 12	E 6	E 10	NE 5	N/W 3
Dhaka	S/SE 13	SE 13	SE 19	NW 9	N/NW 9	E/NE/NW5
Faridpur	S 10	E 10	E/SE 10	SE 9	E 6	N/NW 3
Iswardi	SE 33	E 32	E 30	S/E/N 16	N 24	N 16
Jessore	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Khulna	n.a.	S 25	SE 16	SE 17	NE 18	S 13
Maijdee court	S 18	S 18	S 18	S 18	NNW 34	N 36
Mymensingh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Rajshahi	E 16	E 18	NE 30	N 16	N 10	W 6
Rangamati	S 15	S 15	S 13	S 10	S 18	W 5
Rangpur	E 10	E 14	SE 10	E 10	NE 10	E 9
Sylhet	SE 7	NE 12	S 6	NE/SE/S/E 4	E 10	E 5

(...) data not available.

Source : Bangladesh Meteorological Department.

Table 7

Average wind speed in different units and time intervals.

Station	Unit	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Barisal District :													
Barisal	KTS-(a)	1.9	2.3	3·5	4.5	4.9	4.8	4.9	4.1	3.2	1.6	1.2	1.0
	mi/hr	2.2	2.7	4·0	5.2	5.7	5.6	5.7	4.7	3.7	1.9	1.4	1.2
	km/hr	3.5	4.3	6.5	8.4	9.1	8.9	9.1	7.6	6.0	3.0	2.3	1.9
	m/sec	1.0	1.2	1.8	2.4	2.5	2.5	2.5	2.2	1.6	0.8	0.6	0.5
	ft/sec	3.2	3.9	6.0	7.6	8.2	8.1	8.2	7.0	5.4	2.7	2.0	1.7
	ft/min	192.8	233.2	354.5	456.0	496.8	486.6	496.6	415.2	324.2	162.2	121.4	101.0
Bogra District :													
Bogra	KTS	1.7	2.0	2.7	3.5	3.6	3.3	3.0	2.7	2.3	1.9	1.6	1.6
	mi/hr	2.0	2.3	3.1	4.0	4.2	3.8	3.5	3.1	2.7	2.2	1.9	1.9
	km/hr	3.2	3.7	5.0	6.5	6.7	6.1	5.6	5.0	4.3	3.5	3.0	3.0
	m/sec	0.8	1.0	1.4	1.8	1.9	1.7	1.5	1.4	1.2	1.0	0.8	0.8
	ft/sec	2.9	3.4	4.6	6.0	6.1	5.6	5.1	4.6	3.9	3.2	2.7	2.7
	ft/min	172.4	203.0	273.7	354.5	364.6	334.3	304.0	273.7	233.3	192.8	162.2	162.2
Chittagong District :													
Chittagong	KTS	3.0	3.5	4.8	7.1	6.7	9.0	8.1	7.1	5.4	3.2	2.2	2.3
	mi/hr	3.5	4.0	5.6	8.2	7.7	10.4	9.3	8.2	6.2	3.7	2.5	2.7
	km/hr	5.6	6.5	8.9	13.2	12.4	16.7	15.0	13.2	10.0	6.0	4.1	4.1
	m/sec	1.5	1.8	2.5	3.7	3.4	4.6	4.2	3.7	2.8	2.2	1.1	1.2
	ft/sec	5.1	6.0	8.1	12.0	11.4	15.2	13.7	12.0	9.1	5.4	3.7	3.9
	ft/min	304.0	354.5	486.6	719.2	678.7	912.0	821.1	719.2	547.4	324.2	223.2	223.3
Cox's Bazar	KTS	1.8	2.4	3.0	4.1	4.3	4.5	5.0	4.4	3.2	2.1	1.5	1.4
	mi/hr	2.1	2.8	3.5	4.7	5.0	5.2	5.8	5.1	3.7	2.4	1.8	1.6
	km/hr	3.3	4.5	5.6	7.6	8.0	8.4	9.3	8.2	6.0	3.9	2.8	2.6
	m/sec	0.9	1.2	1.5	2.2	2.3	2.4	2.6	2.3	1.6	1.1	0.8	0.7
	ft/sec	3.1	4.1	5.1	7.0	7·3	7.6	8.3	7.4	5.4	3.6	2.6	2.4
	ft/min	182.6	243.4	304.0	415.2	435.6	456.0	507.0	445.8	324.2	213.1	152.0	111.8
Comilla District :													
Comilla	KTS	1.4	1.9	3.9	6.0	6.4	6.1	6.3	5.6	3.6	2.1	1.2	1.1
	mi/hr	1.6	2.2	4.5	6.9	7.4	7.0	7.3	6.5	4.2	2.4	1.4	1.3
	km/hr	2.6	3.5	7.2	11.1	11.9	11.3	11.7	10.4	6.7	3.9	2.3	2.1
	m/sec	0.7	1.0	2.0	3.1	3.3	3.2	3.3	2.9	1.9	1.0	0.6	0.6
	ft/sec	2.4	3.2	6.6	10.1	10.8	10.3	10.6	9.4	6.1	3.6	2.0	1.9
	ft/min	141.8	192.8	394.9	608.0	648.4	618.1	638.0	567.6	364.6	213.1	121.4	111.2

(a) knots.

Table 7

Average wind speeds in different units and time intervals.

Station	Unit	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dhaka District : Dhaka	KTS	2.8	3.2	5.0	7.1	8.6	7.3	7.5	6.4	6.5	4.8	2.8	3.0
	mi/hr	3.3	3.7	5.8	8.2	9.9	8.4	8.6	7.4	7.5	5.6	3.3	3.5
	hm/hr	5.2	6.0	9.3	13.2	15.9	13.5	13.9	11.9	12.0	8.9	5.2	5.6
	m/sec	1.4	1.6	2.6	3.7	4.4	3.8	3.9	3.3	3.4	2.5	1.4	1.5
	ft/sec	4.8	5.4	8.3	12.0	14.5	12.3	12.6	10.8	11.0	8.1	4.8	5.1
	ft/min	384.8	324.2	507.0	719.2	871.6	739.6	760.0	648.4	658.5	486.6	984.8	3404.0
Dinajpur District : Dinajpur	KTS	1.0	1.4	2.1	3.0	3.3	3.0	2.8	2.4	1.8	1.3	0.9	1.0
	mi/hr	1.2	1.6	2.4	3.5	3.8	3.5	3.3	2.8	2.1	1.5	1.1	1.2
	hm/hr	1.9	2.6	3.9	5.6	6.1	5.6	5.2	4.5	3.3	2.4	1.7	1.9
	m/sec	0.5	0.7	1.0	1.5	1.7	1.5	1.4	1.2	0.9	0.6	0.4	0.5
	ft/sec	1.7	2.4	3.6	5.1	5.6	5.1	4.8	4.1	3.1	2.2	1.5	1.7
	ft/min	101.0	141.8	213.1	304.0	334.3	304.0	384.8	243.4	182.6	131.6	90.9	101.0
Faridpur District : Faridpur	KTS	1.5	2.0	3.4	5.6	6.4	5.6	5.3	5.7	3.8	2.1	1.4	1.4
	mi/hr	1.8	2.3	3.9	6.5	7.4	6.5	6.1	6.6	4.4	2.4	1.6	1.6
	km/hr	2.8	3.7	6.3	10.4	11.9	10.4	9.8	10.6	7.0	3.9	2.6	2.6
	m/sec	0.8	1.0	1.7	2.9	3.3	2.9	2.8	3.0	2.0	1.0	0.7	0.7
	ft/sec	2.6	3.4	5.8	9.4	10.8	9.4	8.9	9.6	6.5	3.6	2.4	2.4
	ft/min	152.0	203.0	344.4	567.6	648.4	567.6	537.3	577.7	384.8	213.1	141.8	141.8
Jessore District : Jessore	KTS	1.7	2.2	3.5	5.5	5.9	4.8	4.1	3.8	2.9	1.8	1.3	1.5
	mi/hr	2.0	2.5	4.0	6.4	6.8	5.6	4.7	4.4	3.4	2.1	1.5	1.8
	hm/hr	3.2	4.1	6.5	10.2	10.9	8.9	7.6	7.0	5.4	3.3	2.4	2.8
	m/sec	0.8	1.1	1.8	2.8	3.0	2.5	2.2	3.0	1.4	0.9	0.6	0.8
	ft/sec	2.9	3.7	6.0	9.2	9.9	8.1	7.0	6.5	4.9	3.1	2.2	2.6
	ft/min	172.4	223.2	354.5	557.5	597.9	486.6	415.2	384.8	293.9	182.6	131.6	152.0
Khulna District : Khulna	KTS	1.6	2.1	3.1	4.2	4.8	4.0	4.2	3.7	3.0	2.1	1.7	1.6
	mi/hr	1.9	2.4	3.6	4.8	5.6	4.6	4.8	4.3	3.5	2.4	2.0	1.9
	km/hr	3.0	3.9	5.8	7.8	8.9	7.4	7.8	6.9	5.6	3.9	3.2	3.0
	m/sec	0.8	1.0	1.6	2.2	2.5	2.1	2.2	1.9	1.5	1.0	0.8	0.8
	ft/sec	2.7	3.6	5.3	7.1	8.1	6.8	7.1	6.3	5.1	3.6	2.9	2.7
	ft/min	162.2	213.1	314.1	425.4	486.6	405.0	425.4	374.7	304.0	213.1	172.4	62.2

Table 7

Average wind speeds in different units and time intervals.

Station	Unit	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mymensingh District : Mymensingh	KTS	1.2	1.5	2.1	2.8	3.2	2.7	2.7	2.5	2.0	1.6	1.2	1.0
	mi/hr	1.4	1.8	2.4	3.3	3.7	3.1	3.1	2.9	2.3	1.9	1.4	1.2
	km/hr	2.3	2.8	3.9	5.2	5.0	5.0	6.0	4.6	3.7	3.0	2.3	1.9
	m/sec	0.6	0.8	1.1	1.4	1.6	1.4	1.4	1.2	1.0	0.8	0.6	0.5
	ft/sec	2.0	2.6	3.6	4.8	5.4	4.6	4.6	4.2	3.4	2.7	2.0	1.7
	ft/min	121.4	152.0	213.1	384.8	324.2	273.7	273.7	253.5	203.0	162.2	121.4	101.0
Noakhali District : Maijdee Court	KTS	2.9	3.4	2.4	5.4	6.7	7.8	8.8	7.5	5.2	3.1	2.3	2.5
	mi/hr	3.4	3.9	2.8	6.2	7.7	9.0	10.2	8.6	6.0	3.6	2.7	2.9
	km/hr	5.4	6.3	4.5	10.0	12.4	14.4	16.3	13.9	9.7	5.8	4.3	4.6
	m/sec	1.4	1.7	1.2	2.8	3.4	4.0	4.5	3.9	2.7	1.6	1.2	1.2
	ft/sec	4.9	5.8	4.1	9.1	11.4	13.2	14.9	12.6	8.7	5.3	3.9	4.2
	ft/min	293.9	344.4	243.4	547.4	678.7	790.6	891.8	760.0	527.2	314.1	233.3	253.5
Noakhali District : Noakhali	KTS	2.9	3.4	4.5	5.4	6.7	7.8	8.8	7.5	5.2	3.1	2.3	2.5
	mi/hr	3.4	3.9	5.2	6.2	7.7	9.0	10.2	8.6	6.0	3.6	2.7	2.9
	km/hr	5.4	6.3	8.4	10.0	12.4	14.4	16.3	13.9	9.7	5.8	4.3	4.6
	m/sec	1.4	1.7	2.4	2.8	3.4	4.0	4.5	3.9	2.7	1.6	1.2	1.2
	ft/sec	4.9	5.8	7.6	9.1	11.4	13.2	14.9	12.6	8.7	5.3	3.9	4.2
	ft/min	293.9	344.4	456.0	547.4	678.7	790.6	891.8	760.0	527.2	314.1	233.3	253.5
Pabna District Sirajganj	KTS	1.6	1.8	2.7	4.1	4.5	4.0	3.8	3.2	2.6	1.7	1.2	1.4
	mi/hr	1.9	2.1	3.1	4.7	5.2	4.6	4.4	3.7	3.0	2.0	1.4	3.6
	km/hr	3.0	3.3	5.0	7.6	8.4	7.4	7.0	6.0	4.8	3.2	2.3	5.8
	m/sec	0.8	0.9	1.4	2.2	2.4	2.1	3.0	1.6	1.3	0.8	0.6	1.6
	ft/sec	2.7	3.1	4.6	7.0	7.6	6.8	6.5	5.4	4.4	2.9	2.0	5.3
	ft/min	162.2	182.6	273.7	415.2	456.0	405.0	384.8	324.2	263.6	172.6	121.4	314.1
Rangpur District : Rangpur	KTS	1.0	1.2	1.8	2.6	2.9	2.6	2.4	2.2	1.8	1.4	0.9	0.8
	mi/hr	1.2	1.4	2.1	3.0	2.4	3.0	2.8	2.5	2.1	2.6	1.1	1.0
	km/hr	1.9	2.3	3.3	4.8	5.4	4.8	4.5	4.1	3.3	5.8	1.7	1.5
	m/sec	0.5	0.6	0.9	1.3	1.4	1.3	1.2	1.1	0.9	1.6	0.4	0.4
	ft/sec	1.7	2.0	3.1	4.4	4.9	4.4	4.1	3.7	3.1	5.3	1.5	1.4
	ft/min	101.0	121.4	182.6	263.6	293.9	263.6	243.4	223.2	182.6	314.1	90.9	80.8
Sylhet District : Srimangal	KTS	1.3	1.5	2.7	3.2	2.7	2.9	3.0	2.7	2.0	1.3	1.0	1.0
	mi/hr	1.5	1.8	3.1	3.7	3.1	3.4	3.5	3.1	2.3	1.5	1.2	1.2
	km/hr	2.4	2.8	5.0	6.0	5.0	5.3	5.6	5.0	3.7	2.4	1.9	1.9
	m/sec	0.6	0.8	1.4	1.6	1.4	1.4	1.5	1.4	1.0	0.6	0.5	0.5
	ft/sec	2.2	2.6	4.6	5.4	4.6	4.9	5.1	4.6	3.4	2.2	1.7	1.7
	ft/min	131.6	152.0	273.7	324.2	273.7	293.9	304.0	273.7	203.0	131.6	101.0	101.0

Sources: (i) Bangladesh Meteorological Department and (ii) Agro-Climatic Survey of Bangladesh by Enginio B. Manalo, Bangladesh Rice Research Institute and International Rice Research Institute.

Table 8

Hours of bright sunshine—1983.

Met. Station	Hours (per day)											
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dhaka	6.85	7.37	7.37	7.30	7.02	5.24	4.20	5.05	4.15	6.15 (30)	—	7.47
Faridpur	6.35	7.38 (27)	7.75	7.77 (29)	7.97	5.31	4.63	5.05	4.58	5.34	7.27	6.78
Rajshahi	6.75	8.00	8.75	7.74	7.13	6.59	5.01	5.78	4.51	6.21 (30)	8.55	8.12 (23)
Jessore	5.20	6.36	6.87	7.24	7.17	6.09	3.59	4.06	4.17	5.03	7.38	6.31
Rangpur	n.a.	8.46	9.08 (27)	6.38 (27)	6.21 (30)	6.24 (27)	5.36 (24)	5.94 (26)	5.46 (23)	6.31	9.28	6.81
Sylhet	7.33	7.93	7.29	6.20	6.42	3.81	3.25	3.56	3.59	6.37	9.00	8.00
Bogra	6.62	7.97	8.42	10.27	6.18	5.60	4.42	4.57	3.97	6.25	8.00	7.07

N B : Figures in the braeeket indicate no. of days for which reading was available during the month.
Source: Collected from Bangladesh Meteorological department.

Table 9

Relative humidity at selected meteorological stations of Bangladesh.

(Percentage)

Met station	1974	1975	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
Dhaka	80	78	78	82	76	80	78	81	82
Mymensingh	84	80	80	81	75	80	80	82	83
Faridpur	76	78	77	79	75	78	79	80	78
Chittagong	82	80	80	82	78	79	80	81	82
Rangamati	83	80	80	81	76	79	78	79	78
Maijdee Court	81	78	80	82	74	79	81	80	76
Comilla	86	80	69	82	77	80	81	82	83
Sylhet	82	79	79	81	77	79	80	78	83
Rajshahi	78	77	...	79	74	75	78	77	78
Dinajpur	78	77	80	79	...	...	...	...	75
Rangpur	86	87	...	...	78	77	80	79	77
Bogra	80	77	85	82	75	77	80	78	81
Pabna (Ishurdi)	80	76	76	80	74	76	77	80	78
Khulna	38	79	...	...	74	82	79	81	81
Barisal	78	80	78	81	76	...	80	79	80
Jessore	n.a.	77	77	79	75	78	81	80	79
Patuakhali	n.a.	n.a.	79	78	75	...	...	...	80

Notes: (a) Data for 8 months. Relative Humidity worked out by (00·00 G.M.T+12·00 G.M.T.) ÷2 of 17 stations from 1976-79 (b) From 1976-77 onwards data have been shown on July-June basis.
Source : Bangladesh Meteorological Department.

Results of reconnaissance soil surveys conducted in the recent past have enabled scientists to divide the country into 19 soil type units. These units along with their soil characteristics and places of occurrence are indicated below:

Soil type unit.	Characteristics.	Places of occurrence (upazila or parts thereof.)	Suitable crops
1. Non-calcareous alluvium.	Recent Tista, Brahmaputra and Jamuna alluvium. Mainly unstable char land.	Mymensingh : Nagarpur, Tangail Kalihati, Gopalpur, Sarisabari, Madarganj, Melandah, Islampur and Dewangaj. Rangpur ; Rahumari, Nageswari, Bhurungamary, Kurigram, Ulipur, Chilmari, Gaibandha and Phulchari. Bogra : Sariakandi and Dhunot. Pabna : Kazipur, Sirajganj, Kamarikhonda, Belkuchi, Chauhali, Shahzadpur and Bera.	Early aus and jute, deep water aman, cheena, mustard, pulses and other rabi crops.
2. Calcareous alluvium.	Recent Ganges and lower Megna alluvium. Part unstable charland. Part saline in the Meghna estuary.	Faridpur : Char Bhadrashan and Sadarpur. Noakhali ; Sudharam, Hatiya, Ramgati and Sonagazi.	Early aus and jute, deep water aman, cheena, mustard, pulses and other rabi crops.
3. Acid sulphate soil	Sundarbans (mangrove swamp) soils with extremely high acidity (potential or actual.) Tidally flooded with blackish of saline water for part or all the year.	Chittagong : Sandwip. Khulna : Dacope and Sarankhola.	Early transplanted aman and mangrove forest.
4. Peat	Permanently wet basin peat and muck, part with alluvial topsoil.	Faridpur : Mukşudpur, Gopalganj, Kotalipara, Kasiani, Rajoir and Madaripur. Sylhet : Rajanagar. Khulna : Daulatpur, Fultala, Terokheda, Dumuria and Mollahat. Bakerganj : Nazirpur. Jessore : Abhoynagar, Salika and Kalia.	Reed and grass swamp, locally broadcast aman and boro.

Classification of soils in Bangladesh.

Table 10

	Soil type unit	Characteristics	Place of occurrence (upazila or parts thereof)	Suitable crops
5.	Grey floodplain soils	Grey, finely mottled brown, seasonally flooded soils with seasonally acid top-soil and near neutral subsoils.	Dhaka : Keraniganj, Nawabganj, Kaliganj, Dhamrai, Munshiganj, Gazaria, Manikganj Saturia, Singair, Daulatpur, Gheor, Narayanganj, Futullah and Raipura. Mymensingh : Sarishabari, Madarganj, Tangail, Kalihati and Nagarpur. Comilla : Homna, Chandpur, Matlabbazar and Bancharampur.	Aus, jute and transplanted aman, locally followed by rabi crops.
6.	Grey floodplain soils and non-cacareaous brown floodplain soils.	Seasonally wet or shallowly flooded grey floodplain soils on lower ridges and in depressions with moderately well-drained, rather acid, brown loams on higher ridges.	Mymensingh : Kotwali, Islampur, Ishwargonj, Gouripur and Jamalpur. Dinajpur : Chirirbander, Fulbari and Khansama. Rangpur : Nilphamari, Saidpur, Dimla, Domar, Jhaldhaka, Kishoreganj, Gangchara, Mithapukur, Badarganj. Kaliganj, Hatibanda, Patgram, Palasbari and Sundar ganj. Bogra : Sherpur.	Do. and sugarcane.
7.	Mixed grey, dark grey and brown floodplain soil	Tista floodplain soils. Non-calcareous brown floodplain soils on higher ridges, seasonally wet or flooded mainly silty, mixed grey floodplain soils and noncalcareous dark grey floodplain soils on lower ridges and in depressions.	Rangpur : Bhurungamari, Lalmonirhat and Fulbari.	Broadcast aman, deepwater transplanted aman/boro, aus or jute, rabi crops and sugarcane.
8.	Grey floodplain soils and non-calcareous darkgrey floodplain soils	Seasonally wet or shallowly flooded grey floodplain soils, mainly on ridges, and seasonally shallowly or deeply flooded non-calcareous dark grey floodplain soils, mainly in basis.	Dhaka : Gazaria, Araihazar and Narsinghdi. Kishoreganj : Hossainpur, Mohanganj, Barhatta and Purbadhala, Bhairab. Mymensingh : Nandail, Phulpur, Jamalpur, Sherpur, Nakla and Melandah. Noakhali : Companyganj, Lakshmipur, Raipur, Begumganj, Senbag and Feni.	Aus, jute, transplanted aman, rabi crops, broadcast aman and boro.

			Comilla : Muradnagar, Burichang, Chauddagram, Laksam, Barura, Faridganj, Hajiganj and Nabinagar. Comilla : Kotwali and Burichang.	
9.	Grey floodplain soils and acid basin clays.	This occupies the eastern Surma-Kusyara floodplain in Sylhet and Comilla basins.	Sylhet : Balaganj, Biswanath, Fenchuganj, Zakiganj, Beanibazar, Habiganj, Chhatak, Jagannathpur, Moulvibazar and Rajanagar.	Aus. jute, transplanted aman and rabi crops.
10.	Grey piedmont soils.	Grey mottled red or brown. strongly acid, loams to clays on seasonally wet or flooded piedmont plains adjoining the eastern hills	Chittagong : Kotwali, Doublemoorings, Mirsarai, Sitakunda, Fatikchari, Raojan, Rangunia Boalkhali. Patiya, Satkania, Chakaria, Kutubdia and Ramu. Chittagong Hill Tracts : Lama. Noakhali : Chhagalnayiya. Comilla : Kasba and Chauddagram Sylhet : Chunarughat, Maulvi-Bazar, Kulaura, Kamalgonj, and Barlekha.	Aus, transplanted aman and rabi crops.
11.	Acid basin clays	Strongly acid heavy clays, pari permanently wet.	Dhaka : Dohar and Serajdikhan. Kishoreganj : Astagram, Nikli, Itna, Khaliajuri, Madan, Kamlakanda and Durgapur. Comilla : Nasirnagor. Sylhet : Nabiganj, Lakhai, Azmiriganj, Sunamganj, Tahirpur Derai, Sulla and Jamalganj. Rajshahi : Naogaon, Atrai, Raninagar and Singra. Pabna : Tarash.	Boro.
12.	Non-calcareous dark grey floodplain soil.	Dark grey, finally mottled brown, and brown soils with dark grey flood coatings with seasonally acid top soils and near-neutral sub soils. Mainly seasonally deeply flooded soils of the	Dhaka : Tejgaon, Lohajang, Tongibari. Araihazar, Rupganj and Baiderbazar. Kishoreganj : Kotwali, Pakundia, Karimgonj Tarail, Bajitpur Kuliarchar, Kathiadi, Netrokona, Atpara and Kendua.	Broadcast aman, deepwater transplanted aman and boro.

Classification of soils in Bangladesh. Table 10

Soil type unit.	Characteristics	Place of occurrence (upazila or parts thereof)	Suitable crops
12. Non-calcareous dark grey floodplain soils —*contd.*	old Brahmaputra-Karatoya-Bangali (part) and old Meghna estuarine floodplains.	Mymensingh : Muktagacha, Fulbaria, Trisal, Sarishabari, Basail, Ghatail and Kalihati. Faridpur : Bhedarganj, Naria, Madaripur and Palang. Noakhali : Ramganj, Comilla : Chandina, Debidwer, Daudkandi, Kachua, Brahmanbaria, Sarail, Nasirnagar, Nabinagar and Bancharampur.	
13. Calcareous dark grey floodplain soils and calcareous brown floodplain soils.	Mainly dark grey or brown clays with dark grey flood coatings, some calcareous throughout some with seasonally acid top soils and calcareous substratum within 4 feet. Brown calcareous loamy soils on highest ridges and near river-banks.	Dhaka : Srinagar, Manikganj, Harirampur and Shivalaya. Mymensingh : Kotwali. Faridpur : Bhanga, Nagarkanda, Baliakandi, Muksudpur, Kotalipara, Kasiani, Kalkini, Goshairhat, Jajira, and Shibchar.	Broadcast aman, deepwater transplanted aman and boro. Aus, jute and rabi crops and sugarcane.
		Rajshahi : Boalia, Paba, Puthia, Charghat, Bholahat, Shibganj, Gamustapur, Natore, Bagatipara, Lalpur, Baraigram and Gurudaspur. Pabna : Kotwali, Atgharia, Ishurdi, Chatmohar, Faridpur, Santhia, Bera and Sujanagar.	Broodcast aman, deepwater aman and boro and aus, jute, rabi crops and sugarcane.
14. Calcareous dark grey floodplain soils with lime kankar.	Mainly leached calcareous dark grey floodplain soils, alout half with a hard lime kankar layer 2-6 feet.	Rajshahi : Bagmara, and Durgapur.	Do.
15. Non-calcareous brown floodplain soils and grey floodplain soils.	Brown soils are the dominant soils in the landscape and the grey soils are subordinate.	Mymensingh : Phulpur, Jamalpur, Madargonj and Dewanganj. Dinajpur : Birganj, Kaharole, Birol Bochaganj, Thakurgaon, Baliadangi, Ranisankail, Haripur, Pirganj, Debiganj and Boda.	Aus or jute, transplanted aman, sugarcane and rabi crops.
16. Black terrace soils ...	Seasonally wet, dark coloured rather acid, loamy soils on ridges, level areas and in depressions.	Dinajpur : Panchagarh, Atrai and Tetulia.	Mainly transplanted aman locally precaled by aus, millet and sugarcane.

17. Brown hill soils ...	Brown, very strongly acid, mainly loamy soils.	Kishoreganj : Durgapur. Mymensingh : Haluaghat, Sribordi and Nalitabari. Chittagong : Panchlaish, Hathazari, Mirsarai, Fatikchari, Rangunia, Anwara, Banskhali, Cox's Bazar, Ramu, Maheshkhali, Teknaf and Ukhiya, all thanas of Chittagong Hill Tracts. Noakhali : Chagalnaiya and Parsuram. Comilla : Kotwali and Chauddagram. Sylhet : Kotwali, Gowainghat, Golapgonj, Jaintipur and Kanaighat.	Forest, bamboo, grassland shrub etc. tea rubber, til, cotton pineapples, ginger, turmeric and fruit trees.
18. Shallow red-brown terrace soils. and deep red-brown terrace soils.	Well to moderately well-drained, red and brown. strongly acid, clay loams and clays, part over compact Modhupur clay at 1-3 feet, part over deeply mottled clay substratum.	Dhaka : Sripur, Kapasia, Kaligonj, Joydevpur, Savar, Kaliakair, Rupgonj, Shibpur and Monohardi. Mymensingh : Fulbaria, Trisal and Ghatail. Comilla : Kasba. Rajshahi : Nowabganj. Dinajpur : Nowabganj, Ghanaghat. Rangpur : Pirganj, Gobindaganj and Sadullapur. Dhaka : Joydevpur. Kishoreganj : Durgapur.	(1) Gazari forest, grassland, shrub etc. (2) Mainly jackfriuts and aus and rabi crops. Aus and transplanted aman deep water aman or boro.
19. Grey terrace soils.	Poorly drained, grey, mottled, acid silty soils over a grey, mottled clay substratum.	Mymensingh : Haluaghat, Sribordi and Nalitabari. Rajshahi : Tanore, Godagari, Nowabganj, Bholahat, Nachole, Shibganj, Porsha, Badalgachi, Niamatpur, Mohadevpur Raninagar and Dhamoirhat. Dinajpur : Kotwali, Parbatipur, Phulbari and Hakimpur. Rangpur : Mithapukur, Gobindaganj, Sadullapur. Bogra : Panchbibi, Khetlal, Adamdigi, Dupchanchia, Kahalu, Kotwali, Shibganj and Nandigram. Pabna : Tarash.	

Sources : (i) B.B.S.
(ii) Department of Soil Survey.

Table 11

SOIL TYPES

(GENERALIZED)

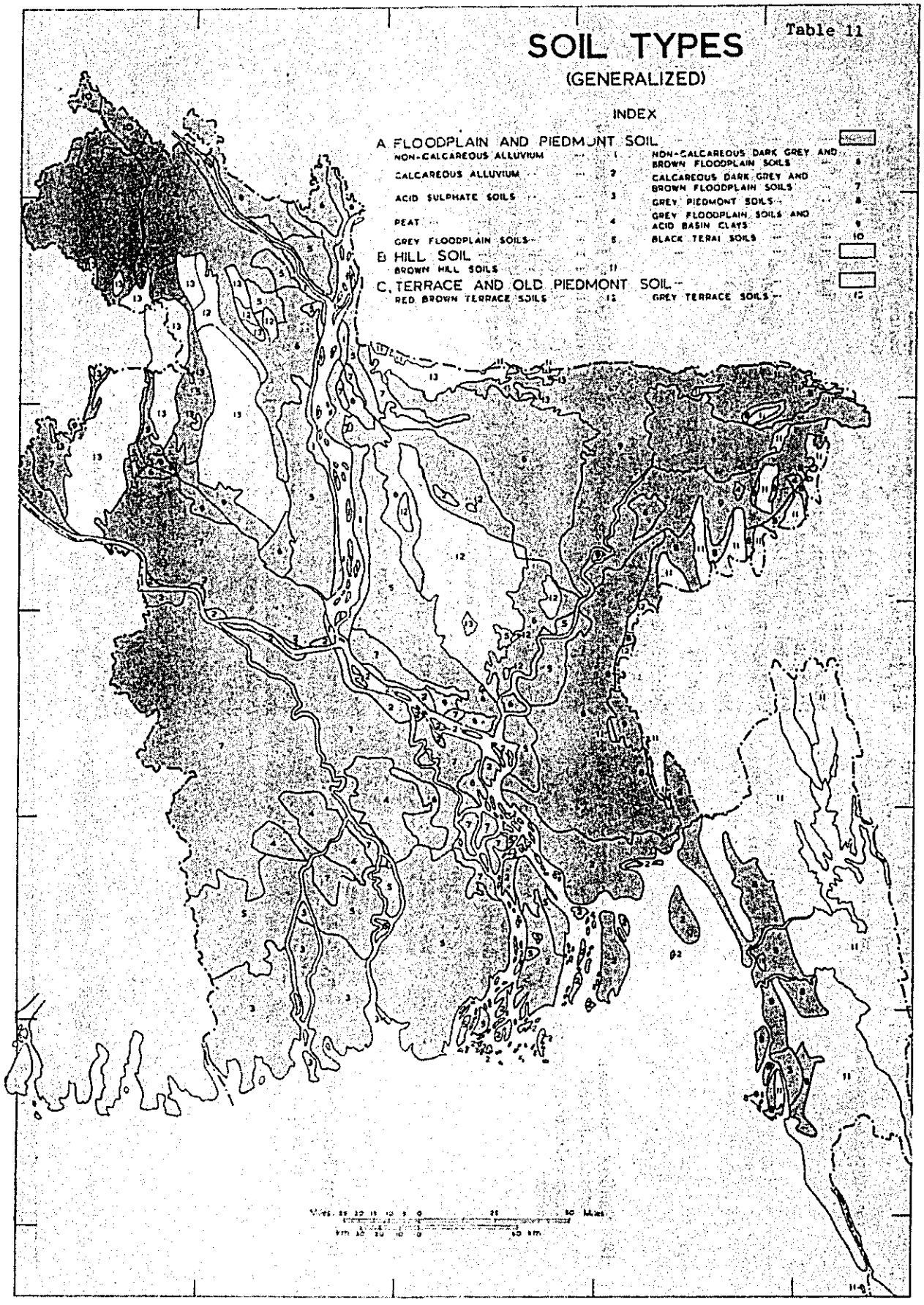


Table 12

Area breakup of Bangladesh by district.

Former District	Area in Sq. Miles*			
	Total area	River area	Forest area (Reserved area)	Effective land area
Bandarban	1738	7	1654	77
Chittagong	2879	314	682	1883
Ctg. Hill Tract	3351	14	2915	422
Comilla	2549	95	...	2453
Noakhali	2108	425	...	1683
Sylhet	4911	112	483	4316
Dhaka	2884	207	91	2586
Faridpur	2657	182	...	2475
Jamalpur	1293	48	13	1232
Mymensingh	3733	85	123	3525
Tangail	1314	64	99	1151
Barisal	2818	550	...	2268
Jessore	2538	60	...	2478
Khulna	4698	120	327	4251
Kushtia	1328	66	...	1262
Patuakhali	1581	303	...	1278
Bogra	1501	33	...	1468
Dinajpur	2535	28	...	2507
Pabna	1827	100	...	1727
Rajshahi	3651	67	...	3584
Rangpur	3705	144	...	3561
Bangladesh	55598	3024	6387	46187

Source : B.B.S.

Table 13

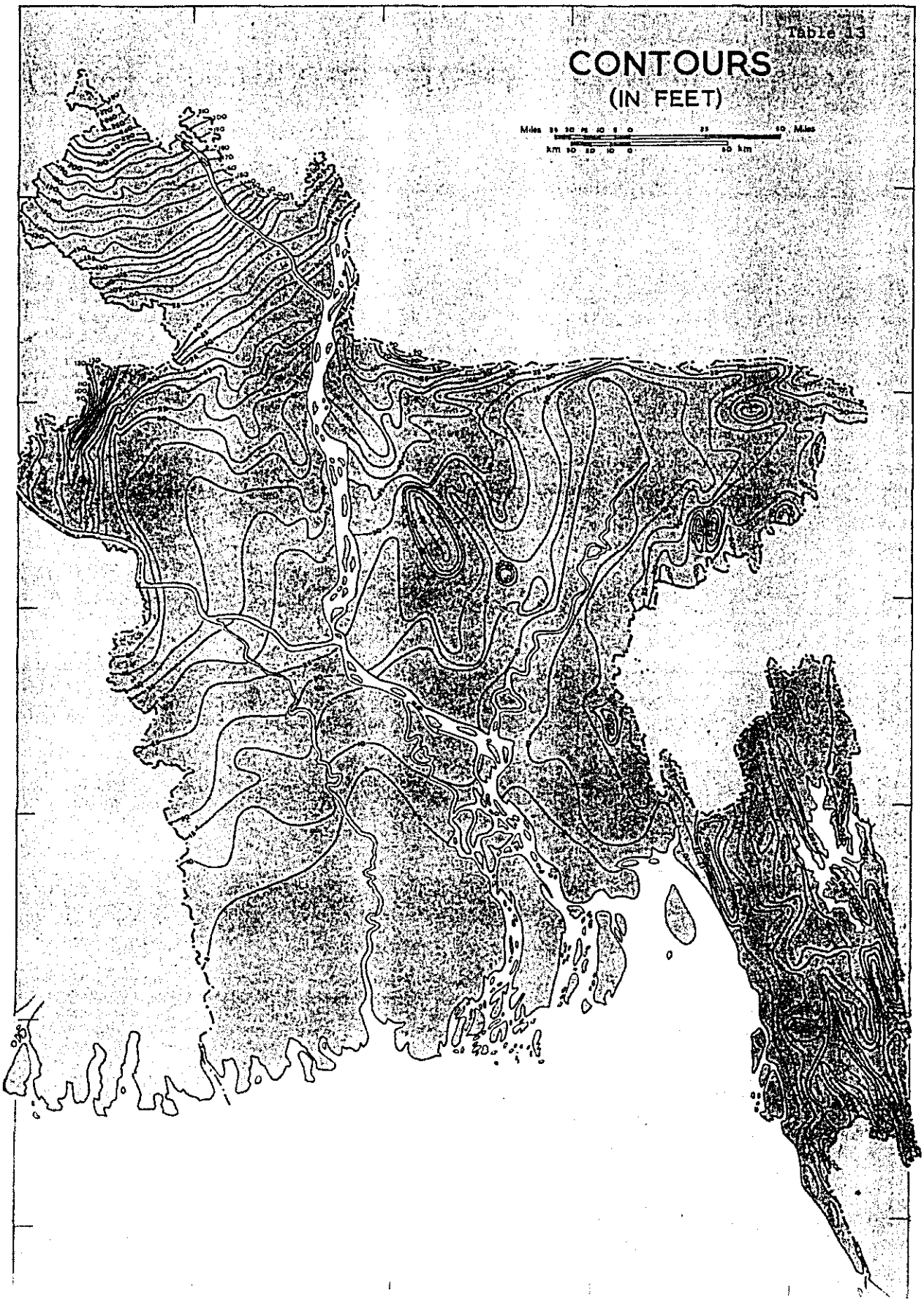


Table 14

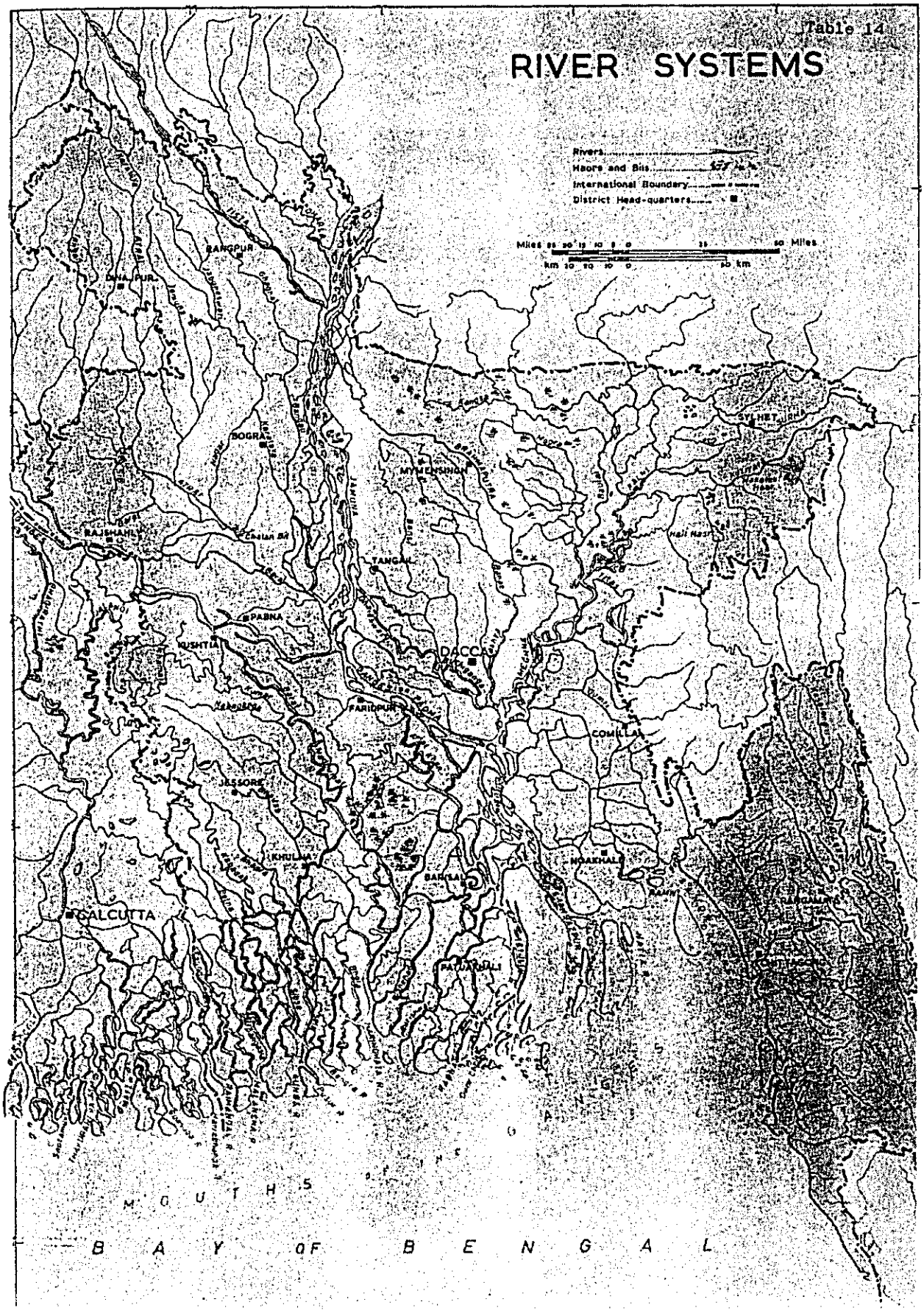

RIVER SYSTEMS
Rivers
Haors and Bils
International Boundary
District Head-quarters
Miles
km
RANGPUR
DINAJPUR
BOGRA
RAJSHAHI
PABNA
KUSHTIA
JESSORE
KHULNA
CALCUTTA
MYMENSINGH
TANGAIL
DACCA
FARIDPUR
BARISAL
PATUAKHALI
COMILLA
NOAKHALI
SYLHET
MOUTHS
BAY OF BENGAL

Table 15

PHYSIOGRAPHIC REGIONS

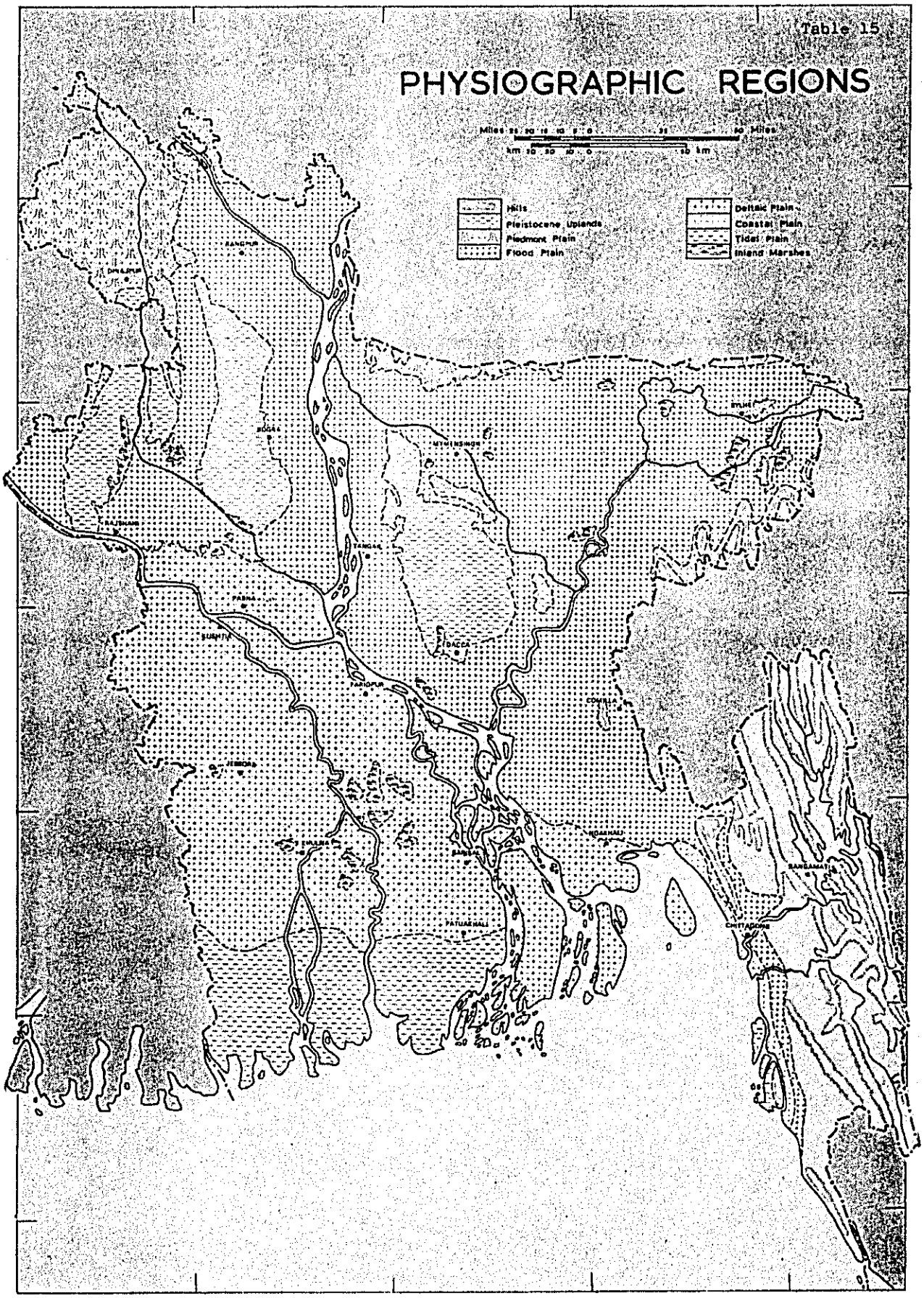
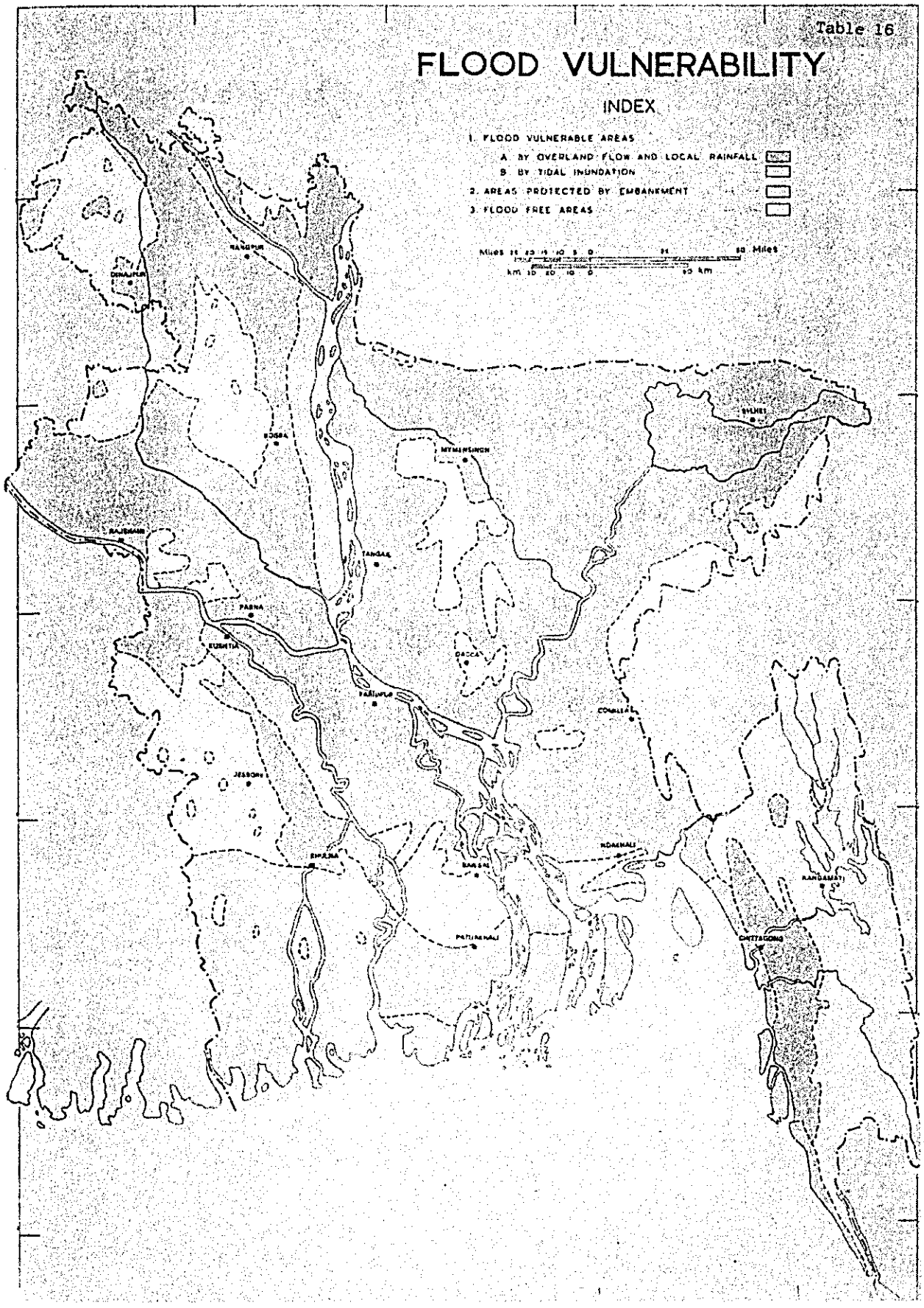


Table 16

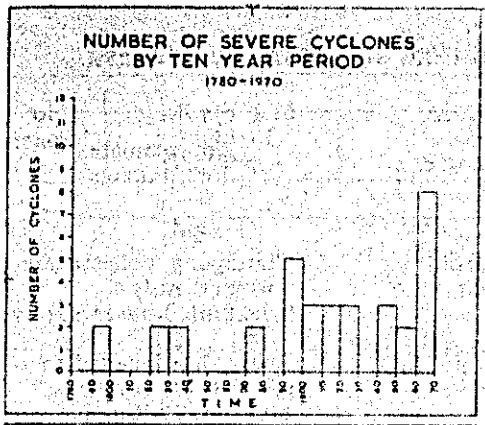
FLOOD VULNERABILITY




FLOOD FREQUENCY
IN PERCENT
100
75
50
25
Less than 25
Miles
km

Table 18

CYCLONIC STORM TRACKS
1905-70



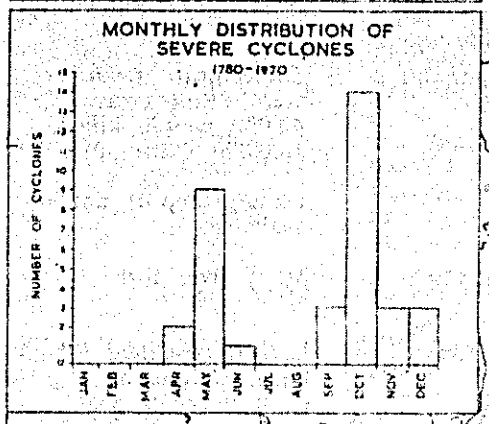


Table 19

Chronology of major cyclonic storms and tidal surges in Bangladesh.

Year of occurrence	Month and date of occurrence	Affected areas	Nature of the phenomena	Approximate loss/damage
1795	May-June	Chittagong town and district	Severe gale blown from evening till midnight, June 3.	Chittagong collectorate unroofed only 5 brickbuilt houses survived.
1797	...	Chittagong	Most severe cyclone hit, Chittagong.	Every hut levelled to ground. 2 vessels sunk in Chittagong port.
1822	May	Barisal	Most severe cyclone hit, Barisal.	Collectorate records were swept away. 40,000 people killed, 1,00,000 cattle lost.
1831	October	Barisal	Storm wave hit, Barisal coast.	Damage report not available.
1872	October	Cox's Bazar	Cyclonic storm hit Cox's Bazar subdivision.	Many lives lost.
1876	October	Hatiya (Noakhali)	Most severe storm wave 10-45 ft.	Hatiya, Noakhali, Patuakhali, Chittagong coast affected. A great number of population lost, enormous properties lost by tidal-bore.
1895	October	Sandwip	A destructive cyclone accompanied by storm wave.	Bagerhat sub-division affected.
1897	October 24 midnight	Chittagong	Hurricane reached maximum intensity with series of storm waves.	Kutubdia Island and villages on mainland near coast were swept away. 14,000 were killed, 18,000 died subsequently in epidemic.
1898	May	Teknaf	Cyclonic storm waves.	Damage report not available.
1901	November	Western Sundarbans	Ditto	Ditto
1909	October	Ditto	Ditto	Ditto
1909	December	Cox's Bazar	Ditto	Ditto
1911	April	Teknaf	Ditto	Ditto
1917	May	Sundarbans	Ditto	Ditto
1919	September	Barisal	Ditto	Ditto
1922	April	Teknaf	Ditto	Ditto
1923	May	Teknaf	Ditto	Ditto
1926	May	Cox's Bazar	Storm wave.	Ditto

Table 19

Chronology of major cyclonic storms and tidal surges in Bangladesh.

Year of occurrence	Month and date of occurrence	Affected areas	Nature of the phenomena	Approximate Loss/damage
1941	May	Eastern Meghna estuary.	Cyclonic storm along with storm wave.	Storm wave hit eastern coast, Meghna estuary.
1942	October	Sundarban	Severe cyclonic storm.	Damage report not available.
1948	May 17-19	Between Chittagong and Noakhali.	Cyclonic storm.	Ditto.
1950	Nov. 15-20	Patuakhali.	Cyclonic storm.	Ditto.
1958	May 16-19 Oct. 21-24	East Meghna estuary near 91 east of Barisal and Noakhali also West Meghna estuary.	Ditto.	Ditto.
1960	May 25-29	Sundarban coast.	Ditto.	Ditto.
1960	October 9-10	Eastern Meghna estuary.	Severe cyclonic storm 125 miles per hour, maximum storm wave 10 ft.	Caused considerable damage to Char Jabbar, Char Amina, Char Bhati, Ramgati, Hatya and Noakhali 3,000 people reported killed.
1960	October 30-31	Chittagong.	Severe cyclonic storm maximum speed 130 miles per hour.	70 per cent, building in Hatiya blown off, 2 large occean liners thrown on mainland. 5-7 vessels capsized in Karnaphully river.
1961	May 9	West Meghna estuary, Comilla and Dhaka.	Severe cyclonic storm, speed 90-92 mile and wave 8-10 ft.	Rail track tetween Noakhali and Harinarayanpur damaged. Heavy loss of life in Char Allanda.
1961	May 30	Chittagong and Noakhali coast and off-shore islands of districts.	Cyclonic storm 59 miles per hour at Chittagong.	Damage report not available.
1962	Oct. 26-30	Near Feni.	Ditto.	Ditto.
1963	May 28-29	Sitakund, Chittagong, Cox's Bazar, Sandwip and adjoining areas of of Noakhali.	Severe cyclonic storm with storm wave 8-12 ft. in Chittagong. Maximum speed 125 miles and Cox's bazar 102 miles per hour.	Chittagong, Noakhali and off-shore Islands badly affected, inundation by storm wave along coast up to 30 miles north of Chittagong.

Table 19

Chronology of major cyclonic storms and tidal surges in Bangladesh.

Year of occurrence	Month and date of occurrence	Affected areas	Nature of the phenomena	Approximate Loss/damage
1963	June-5-8	Near Jessore	Cyclonic storm.	Damage report not available.
1963	October 25-29	Near Teknaf	Ditto	Ditto
1965	May 11-12	Barisal, Faridpur, Khulna, Jessore, Chittagong, Sylhet and Noakhali.	Most severe cyclonic storm, maximum speed at Dhaka 100 miles per hour, with storm wave 12 ft..	Total loss of life 19,270 In Barisal 14,193 people were killed.
1965	December 14-15	Cox's Bazar and Teknaf.	Severe cyclonic storm with storm wave 8-10 ft. Maximum speed 130 miles per hour in Cox's Bazar. 60 miles in Chittagong.	Great loss of life.
1966	October 23	Sandwip.	Severe cyclonic storm with storm wave 20 to 22 ft.	Inundated Chittagong town
1966	December 12	Near Cox's Bazar.	Cyclonic storm.	Damage report not available
1967	October 11	Khulna and Sundarban coast.	Ditto	Ditto
1967	October 23-24	Near Cox's Bazar.	Ditto	Ditto
1969	October 11	Khulna coast.	Ditto	Ditto
1970	May 7	Chittagong coast south of Cox's Bazar.	Ditto	Ditto
1970	October 23	Khulna, Patuakhali, Dhaka and Chittagong.	Severe cyclonic storm of hurricane intensity with moderate storm surge.	Khulna, lower Chitagong and Dhaka division experienced violent stormy weather with moderate storm waves along Khulna, Barisal and Noakhali coast. No heavy damage report received.
1970	November 12-13	Meghna estuary.	Most severe cyclonic storm accompanied by moderate severe storm surge Naval ship at Chittagong reported speed, 138 miles per hour.	The entire belt from Khulna to Chittagong and offshore Islands experienced hurricane winds for about 9 hours accompanied by storm surge of moderate to severe intensity which caused widespread damage to crop and properties. Innumerable human lives estimated to be about two lakhs were lost. A great number of animals were also killed.

Table 19

Chronology of major cyclonic storms and tidal surges in Bangladesh.

Year of occurrence	Month and date of occurrence	Affected areas	Nature of the phenomena	Appoximate Loss/damage
1971	May 7-8	..	Cyclonic storm crossed the coast of the country near Meghna estuaries. Patenga observatory recorded an estimated maximum wind speed of 50 m.p.h.	..
1971	September 28-30	..	Severe cyclonic storm crossed the Sundarban coast near longitude 89° F (near Satkhira). The district of Khulna experienced stormy weather from the afternoon of 29th. In the town area wind reached a speed of 60-70 m.p.h. the late evening. The storm caused seawater to rise to about 2 feet in Khulna town where low lying areas were inundated.	..
1971	November 5-6	..	Severe cyclonic storm crossed the coast north of Chittagong and weakened rapidly.	..
1973	November 16-18	..	Cyclonic storm weakened and crossed Chittagong coast in the early morning of 18th. Rain, thundershowers had been fairly widespread over Chittagong, Khulna and Dhaka divisions.	..
1973	December 6-9	..	Severe cyclonic storm crossed Sundarban coast. Storm surge of slight to moderate intensity caused some inundation of some low-lying coastal areas of Patuakhali and the offshore islands.	..

Table 19

Chronology of major cyclonic storms and tidal surges in Bangladesh.

Year of occurrence	Month and date of occurrence	Affected areas	Nature of the phenomena	Approximate Loss/damage
1974	August 13-15	Barisal and off-shore islands	Severe cyclonic storm 50 mph,	...
	November 24-28	Coastal belt from Cox's Bazar to Chittagong and off-shore islands	Severe cyclonic storm 100 mph 9—17 ft storm surge tide wave	20 persons killed 50 ,, injured 280 ,, missing 1000 ,, cattle killed 2300 dwellings perished
1975	January 5	Chittagong	Cyclonic storm 60 mph. Inundated lowlying coastal area and offshore islands	6000 dwellings perished
	May 9-12	Bhola in Patuakhali Dist. Cox's Bazar and Khulna	Severe cyclonic storm 60—70 mph	5 persons killed 4 ,, injured 36 fishermen missing
1976	October 19-20	Chittagong Coastal	—	—
1977	May 9-12	Khulna Noakhali Patuakhali Barisal Chittagong and offshore islands	Cyclonic storm 70 mph (61 kts)	—
1978	September 30 to October 3	Khulna and Sundarban Coastal.	Cyclonic storm 46 mph (40 kts)	—
1979 1980 1981 1982	No major cyclonic	storms reported		
1983	Oct. 15	Chittagong coast near the Feni River	Cyclonic storm with a speed of 122 k.p.h.	43 persons killed, 6 fishing boats and a trawler drowned, more than 1000 fishermen and 100 fishing boats reportedly missing and 20% aman crops destroyed.
	Nov. 9	Chittagong Coxs' Bazar coast near Kutubdia and the low lying areas of St. Martin, Teknaf, Ukhya Moheshkali, & Sonadia	Severe cyclonic storm (Harricane) with a speed of 136 k.p.h. and a storm surge of 5 feet height.	300 fishermen with 50 boats reportedly missing, 2000 kutcha houses, 22 institutions and 3000 boruage of betel leaf distroyed.

Source : Bangladesh Meteorological Department.

Table 20

Indices of prices of building materials, transport charges and wage rates of construction labour.

(*Base* : 1969-70=100)

Period	General Index	Building materials	Transport charges	Wage rates
1974-75	465	536	415	245
1975-76	532	613	466	275
1976-77	474	538	463	277
1977-78	485	543	529	298
1978-79	509	549	469	369
1979-80	617	642	551	449
1980-81	724	797	552	540
1981-82	847	925	629	659
1982-83 (r)	831	922	623	635
1983-84	833	913	723	634
1983-84				
Dec.	841	923	728	633
Jan.	838	916	726	641
Feb.	827	901	710	643
Mar.	829	903	715	645
Apr.	833	910	716	638
May	844	929	717	629
June	863	954	737	632
1984-85				
Jul.	874	966	760	642
Aug.	879	969	787	652
Sep.	878	966	791	653
Oct.(r)	906	998	803	670
Nov. (r)	912	1001	812	678
Dec.	920	1010	819	685

Source : *B.B.S.*

Average wholesale prices of selected building materials at principal towns.

(Taka)

Item	Specification	Market	Unit	1981-82	1982-83	1983-84	1984-85 Jul.-Sep.	1984-85 Oct.	1984-85 Nov.	1984-85 Dec.
1. Bricks	10" (First class)	Dhaka	1000	1323	1091	1274	1413	1390	1400	1380
		Narayanganj	"	1320	1081	1278	1365	1325	1353	1325
		Chittagong	"	1817	1375	1621	1472	1525	1525	1525
		Rajshahi	"	1066	931	910	933	950	1263	1350
		Khulna	"	1069	926	1107	1167	1500	1500	1300
		Sylhet	"	1433	1354	1384	1476	1500	1495	1500
		Rangpur	"	1121	1003	1194	1333	1400	1400	1400
2. Cement	(A.B.C.)	Dhaka	Bag.	95	108	104	103	104	104	104
		Narayanganj	"	96	109	104	104	104	104	103
		Chittagong	"	101	105	98	100	103	103	130
		Rajshahi	"	105	...	1083	...	...	...	...
		Khulna	"	...	150	167	...	...	...	...
		Sylhet	"	107	117	123	121	...	117	...
		Rangpur	"	113	113	125	125	...	121	122
	Do.	(Korea)	Dhaka	"	111	108	105	105	105	105
			Narayanganj	"	111	109	106	106	106	105	...
			Chittagong	"	103	104	96	100	103	103	103
			Rajshahi	"	108	115	...	...	...	...	...
			Khulna	"	105	112	105	105	103	105	102
			Sylhet	"	106	118	114	118	...	117	117
			Rangpur	"	120	117	126	122	122	121	122
3. Sand	(Coarse, Superior)	Dhaka	100 Cft	318	281	318	409	488	485	475
		Narayanganj	"	299	282	339	421	450	510	388
		Chittagong	"	80	92	96	102	110	110	110
		Rajshahi	"	125	154	118	85	400	400	400
		Khulna	"	235	226	371	325	325	325	300
		Sylhet	"	...	168	179	250	...	250	250
		Rangpur	"	...	136	96	188	250	250	250

Table 21

Average wholesale prices of selected building materials at principal towns.

(Taka)

Item	Specification	Market	Unit	1981-82	1982-83	1983-84	1984-85			
							Jul.-Sep.	Oct.	Nov.	Dec.
4. Iron rods	(⅜" or 3 suta)	Dhaka	Cwt.	628	607	657	737	685	688	690
		Narayanganj	"	624	618	643	765	740	703	700
		Chittagong	"	620	625	671	672	673	673	673
		Rajshahi	"	645	582	526	456	...	538	550
		Khulna	"	620	591	630	764	800	800	775
		Sylhet	"	672	666	534	591	...	590	...
		Rangpur	"	689	648	644	122	743	770	770
5. C.I. sheet	(26 gauge)	Dhaka	Bundle	1639	2032	2318	2589	2600	2600	2600
		Narayanganj	"	1659	1968	2360	2517	2600	2825	2600
		Chittagong	"	1660	2133	2319	2278	2250	2240	2250
		Rajshahi	"	1622	1817	...	...	...	...	...
		Khulna	"	1542	1931	2300	...	...	...	...
		Sylhet	"	1583	1904	2503	2597	...	2555	2555
		Rangpur	"	1478	1760	1936	2450	...	2350	2350
6. Paints	(Synthetic)	Dhaka	Gallon	414	497	423	529	725	440	443
		Narayanganj	"	415	413	424	...	440	450	450
		Chittagong	"	427	461	434	448	455	455	455
		Rajshahi	"	430	429	...	445	...	...	...
		Khulna	"	440	466	475	...	...	...	...
		Sylhet	"	428	412	451	...	...	...	...
		Rangpur	"	440	449	623	533	460	460	460
7. Varnishes	(Syn. Qlty)	Dhaka	1 lb Tin	26	26	55	...	...	...	...
		Narayanganj	"	26	26	56	..	48	50	48
		Chittagong	"	30	46	46	...	...	45	45
		Rajshahi	"	36	52	...	...	...	...	...
		Khulna	"	24	20	46	...	...	...	...
		Sylhet	"	31	33	...	...	...	...	...
		Rangpur	"	31	23	...	...	...	...	...
8. Timber	Ctg. teak	Dhaka	Cft.	447	521	509	669	700	725	740
		Narayanganj	"	449	455	516	675	...	...	790
		Chittagong	"	359	415	443	393	325	425	425
		Rajshahi	"	...	...	..	....	...	575	425
		Khulna	"	248	275	393	..	...	575	425
		Sylhet	"	...	...	...	...	...	425	425
		Rangpur	"	...	400	400	...	...	575	652
9. Timber,	Garjan, beam	Dhaka	"	140	141	146	147	200	200	200
		Narayanganj	"	137	144	151	177	190	175	220
		Chittagong	"	125	127	126	130	150	150	150
		Rajshahi	"	...	...	...	...	...	...	...
		Khulna	"	100	...	275	...	...	...	...
		Sylhet	"	169	174	182	200	...	200	...
		Rangpur	"	...	...	...	...	...	...	...
10. Timber	Garjan, plank	Dhaka	"	158	153	150	181	180	183	183
		Narayanganj	"	158	156	155	183	200	185	205
		Chittagong	"	129	129	135	138	148	148	248
		Rajshahi	"	...	...	...	...	...	...	...
		Khulna	"	...	275	275	...	...	...	...
		Sylhet	"	171	183	180	200	...	200	200
		Rangpur	"	150	153	...	...	...	...	...
11. Amkat	Mango tree	Dhaka	"	76	74	78	87	73	78	78
		Narayanganj	"	73	70	76	94	95	85	79
		Chittagong	"	65	71	94	98	98	98	98
		Rajshahi	"	61	46	49	76	83	83	85
		Khulna	"	63	48	85	...	...	...	...
		Sylhet	"	68	72	91	118	118	118	118
		Rangpur	"	65	63	60	75	75	100	100
12. Bamboo	Borak	Dhaka	Each	35	31	30	38	35	41	41
		Narayanganj	"	35	32	32	37	34	38	41
		Chittagong	"	19	26	31	38	40	41	40
		Rajshahi	"	26	23	30	33	33	33	33
		Khulna	"	22	24	26	...	...	...	...
		Sylhet	"	24	22	27	31	31	31	31
		Rangpur	"	26	22	23	32	35	35	40

Source : B.B.S.

Table 22

Average of daily wage rates in Bangladesh.

(Nominal wages in taka)

Type of labour		1980-81	1981-82	1982-83	1983-84	1984-85				
						Jul.-Sep.	Sep.	Oct.	Nov.	Dec.
1. Largescale Industry:-										
(i) Cotton textile:	Skilled	22·13	24.32	26.43	29.70	30.09	28.09	28.09	31.47	44.00
	Unskilled	16.90	17.97	19.88	21.63	22.69	21.97	21.97	23.98	21.47
(ii) Jute textile	Skilled	19.82	21.82	24.90	27.71	26.78	27.09	27.09	27.09	27.09
	Unskilled	16.49	17.57	19.35	20.22	20.52	20.73	20.73	21.98	20.73
(iii) Match	Skilled	16.96	21.93	27.04	27.28	27.60	27.77	27.77	27.76	27.76
	Unskilled	13.80	16.40	18.82	20.12	20.52	20.80	20.68	20.43	20.43
(iv) Engineering(Fitter)	Skilled	27.75	33.32	36.59	37.75	38.35	39.50	39.50	40.42	40.62
	Unskilled	15.39	18 22	20.33	22.78	23.31	23.50	23.50	24.92	23.12
(v) Vegetable oils	Skilled	17.31	18.54	20.16	23.78	25.61	23.62	23.62	25.83	24.00
	Unskilled	13.72	15.40	16.05	16.47	17.96	17.50	17.50	17.25	18.00
2. Small scale and cottage industry	...	13.90	15.59	16.38	24.25	25.25	26.00	26.25	27.80	28.00
3. Construction	Skilled	38.24	43.15	47.42	50.05	49.27	50.37	50.50	51.42	51.12
	Unskilled (Helper)	19.29	21.74	23.30	24.56	26.28	26.50	26.62	26.00	26.62
4. Agriculture	Skilled	16.84	20.82	21.22	21.94	24.51	25.37	24.12	24.73	26.50
	Unskilled	14.40	16.90	16.33	15.25	16.81	17.00	17.00	16.83	18.00
5. Fishery	Skilled	23.11	27.67	28.19	32.02	33.12	29.75	30.25	35.50	31 88
	Unskilled	18.34	21.56	21.48	19.80	21.19	21.37	21.25	20.90	22.87

Note : The averages are based on data collected from 4 centres viz. Dhaka, Chittagong, Rajshahi and Khulna.

Source : B.B.S.

Table 23

Average daily wage-rates of construction labour by type at principal towns.

(Taka.)

Type of labour	Town	1980-81	1981-82	1982-83	1983-84	1984-85			
						Sep.	Oct.	Nov.	Dec.
Mason	Chittagong	52.33	52.33	60.00	61.22	62.50	62.00	62.00	62.00
	Dhaka	53.42	54.25	55.83	60.54	61.00	60.00	61.00	61.00
	Khulna	34.38	34.32	42.37	43.00	42.50	42.50	42.50	42.50
	Narayanganj	45.45	52.00	52.72	55.50	60.00	57.50	61.00	60.00
	Rajshahi	30.00	30.00	32.50	35.46	36.50	37.50	38.00	39.00
	Rangpur	35.59	35.63	35.93	42.08	46.00	47.50	50.00	50.00
	Sylhet	42.86	42.86	42.85	45.71	47.50	47.50	55.00	56.00
Helper (Jogaly)	Chittagong	26.17	26.17	30.42	27.27	32.50	32.50	32.50	32.50
	Dhaka	24.92	24.92	26.83	27.36	30.00	30.00	30.00	30.00
	Khulna	19.17	19.17	17.46	21.13	21.00	21.00	21.00	20.00
	Narayanganj	24.00	23.68	24.59	28.95	29.00	28.00	29.00	30.50
	Rajshahi	16.00	16.00	16.79	22.50	22.50	21.00	24.00	24.00
	Rangpur	17.55	21.69	18.86	25.22	25.00	25.00	25.00	25.00
	Sylhet	24.32	24.32	22.42	22.37	21.00	21.00	23.50	24.00
Carpenter	Chittagong	49.37	56.58	59.58	60.62	61.00	61.00	65.00	62.00
	Dhaka	45.16	54.71	52.58	59.73	60.00	61.00	60.00	60.00
	Khulna	26.33	29.87	32.25	40.40	37.50	37.50	37.50	37.00
	Narayanganj	42.71	53.50	51.63	52.55	60.00	61.00	60.00	60.00
	Rajshahi	28.08	33.75	37.08	42.00	42.50	42.50	42.50	42.50
	Rangpur	31.91	34.59	34.37	41.67	46.00	47.00	40.00	40.00
	Sylhet	25.29	34.36	32.25	38.00	37.50	37.50	40.00	41.00

Source : B.B.S.

Transport charges of building materials.*

Table 24

(Taka)

Period	Motor truck (3 tons) (per mile)	Motor truck (5 tons) per mile	Bullock cart (cart per mile)	Push cart (cart per mile)	Country boat (maund per mile)	Group Index (Base: 1969-70 =100)
1973-74 ...	26.24	...	15.92	13.34	0.88	289
1974-75 ...	41.18	67.00	17.92	16.80	1.03	415
1975-76 ...	49.68	81.80	16.94	15.06	1.60	466
1976-77 ...	50.12	82.50	16.37	12.81	1.47	463
1977-78 ...	54.44	89.70	11.36	11.58	1.57	529
1978-79 ...	47.39	78.82	20.33	17.67	1.74	469
1979-80 ...	59.17	98.61	15.93	19.97	2.18	551
1980-81 ...	59.16	110.91	15.50	11.83	2.64	552
1981-82 ...	68.13	113.56	20.65	24.07	2.78	629
1982-83 ...	63.26	105.43	27.35	22.98	2.01	635
1983-84 ...	74.38	123.96	29.49	23.20	1.94	723
1983-84						
Dec.(p) ...	74.44	124.07	26.90	24.17	2.00	728
Jan. ...	75.14	125.24	26.90	22.50	1.95	726
Feb. ...	74.72	124.54	25.60	20.91	1.95	710
Mar. ...	74.02	123.38	28.20	22.58	1.93	715
Apr. ...	73.61	122.68	29.50	23.75	1.86	716
May ...	72.22	120.37	31.70	25.75	1.84	717
Jun. ...	73.06	121.76	30.50	25.33	1.98	737
1984-85						
Jul. ...	77.64	129.40	31.40	24.67	2.00	760
Aug. ...	78.87	131.48	33.50	23.67	2.11	787
Sep. ...	79.22	132.04	34.00	23.42	2.07	791
Oct. ...	80.28	133.80	35.00	23.25	2.07	803
Nov. ...	80.97	134.95	35.40	23.75	2.06	812
Dec. ...	81.35	135.42	36.30	24.08	1.93	819

Source : B.B.S. **National average*

Table 25

Employed population 10 years and over and growth rates by broad industry group, 1961, 1974 and 1983-84.

Broad Industry	Employed Population (Thousands of persons)			Growth Rates (percent)	
	1983-84	1974	1961	1974 to 1983-84	1961 to 1974
Total Employment	**27972**	**21408**	**16828**	**2.7**	**1.9**
Agriculture, Forestry, Fisheries	16389	16839	14239	—0.3	1.3
Mining, Quarrying	48	2	1	37.4	3.0
Manufacturing	2108	1026	810	7.5	1.8
Electricity, Gas, Water	107	8	11	29.6	—2.5
Construction	321	36	92	24.5	—7.2
Trade, Hotels, Restaurants	3271	841	619	14.6	2.4
Transportation, Storage, Communications ...	1209	351	204	13.2	4.3
Finance, Business Services	178	62	10	11.1	14.7
Community, Personal Services	3250	2242	774	3.8	8.5
Not reported	1089	*	68	...	...

*Less than 0.05%

...Not aplicable.

Table 26

Chronology of major cyclonic storms and tidal surges in Bangladesh.

Year of occurrence	Month and date of occurrence	Affected areas	Nature of the phenomena	Approximate Loss/damage
1941	May	Eastern Meghna estuary.	Cyclonic storm along with storm wave.	Storm wave hit eastern coast, Meghna estuary.
1942	October	Sundarban	Severe cyclonic storm.	Damage report not available.
1948	May 17-19	Between Chittagong and Noakhali.	Cyclonic storm.	Ditto.
1950	Nov. 15-20	Patuakhali.	Cyclonic storm.	Ditto.
1958	May 16-19 Oct. 21-24	East Meghna estuary near 91 east of Barisal and Noakhali also West Meghna estuary.	Ditto.	Ditto.
1960	May 25-29	Sundarban coast.	Ditto.	Ditto.
1960	October 9-10	Eastern Meghna estuary.	Severe cyclonic storm 125 miles per hour, maximum storm wave 10 ft.	Caused considerable damage to Char Jabbar, Char Amina, Char Bhati, Ramgati, Hatya and Noakhali 3,000 people reported killed.
1960	October 30-31	Chittagong.	Severe cyclonic storm maximum speed 130 miles per hour.	70 per cent, building in Hatiya blown off, 2 large ocean liners thrown on mainland. 5-7 vessels capsized in Karnaphully river.
1961	May 9	West Meghna estuary, Comilla and Dhaka.	Severe cyclonic storm, speed 90-92 mile and wave 8-10 ft.	Rail track tetween Noakhali and Harinarayanpur damaged. Heavy loss of life in Char Allanda.
1961	May 30	Chittagong and Noakhali coast and off-shore islands of districts.	Cyclonic storm 59 miles per hour at Chittagong.	Damage report not available.
1962	Oct. 26-30	Near Feni.	Ditto.	Ditto.
1963	May 28-29	Sitakund, Chittagong, Cox's Bazar, Sandwip and adjoining areas of of Noakhali.	Severe cyclonic storm with storm wave 8-12 ft. in Chittagong. Maximum speed 125 miles and Cox's bazar 102 miles per hour.	Chittagong, Noakhali and off-shore Islands badly affected, inundation by storm wave along coast up to 30 miles north of Chittagong.

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

DIRECTORY OF SELECTED INDUSTRIAL PRODUCTS

MINISTRY OF INDUSTRIES & COMMERCE

(DEPARTMENT OF INDUSTRIES)

Price : Tk. 74·00 only

Name of the Sector : C. I. SHEET/G. P. SHEET/M. S. SHEET.

1	M/s. Chittagong Steel Mills Ltd., Chittagong. Phone : 500668, 501472.	60,000 M/Tons.	7,836·00 M/Tons.	Sizes : (a) 26 Guage	C. I. Sheet—70,000 M/Tons.
				(b) 24 Guage	G. P. Sheet—25,000 M/Ton
				(c) 22 Guage	M. S. Sheet—15,000 M/Tons.

Name of the Sector : ELECTRIC WIRES AND CABLES.

1	M/s. Eastern Cables, Potenga, Chittagong. Phones : 502344, 503161 and 503370.	2,000 tons. (2,80,000 coil).	Wires and Cables.— 1,877 M. Tons (2,62,780 coil).	1. Domestic Cables. 2. LT Power Cables. 3. HT Power Cables. 4. AAC/ACSR.	Wires and Cable— 10,000 M. Tons.	Managed by the Bangladesh Steeland Engineering Corporation.
2	M/s. Sihan Cable Industries, 85, Subaldas Road, Dhaka. Phone : 251658.	Electric Wire and Cable— 15,000 coils.	Electric Wire and Cable— 1,178 coils.	1. PVC flexible wire—14/0076 and 23/0076, British Standard. 2. PVC wire single cable— 1/044, 3/029, 3/036, 7/036, 7/044, British Standard. 3. PVC wire Twine cable— 1/044, 3/029, 3/039, 7/029 and 7/044, British standard.		
3	M/s. Sunshine Cable & Rubber Works Ltd., Baitul Hossain, 27, Dilkusha C/A, Dhaka. Phone : 250542, 231625	Electric Wire and Cables— 1,00,000 coils.	Electric Wire and Cable— 14,205 coils.	1. 1/044, 3/029, 3/036, 7/029, 7/036, 7/044 PVC single core 250 V. British standard. 2. 19/064, 3/029, 3/036, 7/029, 7/036, PVC single core 660 V. British standard. 3. 1/044, 3/029, 3/036, 7/029, 7/036, PVC Twine core 250 V. British standard. 4. PVC Sheathed single 7/044. 5. PVC Three core 7/044-660 V. 6. PVC Flexible wire 250 V. British standard. 7. PVC Telephone Cable— British standard.		
4	M/s. Supersign Inds. (Electrical), 108, B.C.C. Road, Dhaka. Phone : 244447, 254379	Electric Wire and Cable— 60,000 coils.	Electric wire and cable— 11,756 coils.	1. 1/044, 3/029, 7/029, 3/036, 7/044, 7/064, 19/044, single core. PVC cable, British standard. 2. 1/044, 3/029, 7/029, 3/036, 7/044, Twine core PVC cable, British standard.		

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned Capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
1	2	3	4	5	6	7
				3. 1/044 3/029, 3/036, 7/029, 7/044 7/052, 7/064-PVC cable, British standard.		
				4. 1/044, 3/029, 3/036, 7/029, 7/044, 7/052, 7/064-PVC Sheathed Twine core, British standard.		
				5. 14/0076, 23/0076, 40/0076, 70/0076, 110/0076-PVC Sheathed Flexible core, British standard.		
				6. PVC Telephone cable.		
5	M/s. New Diamond Cable Factory, 50/51, Lolitmohan Das Lane, Nowabgonj, Dhaka.	PVC Flexible wire—verious sizes—10,000 coils.	1. PVC Flexible wires & cables—234 coils.	1. PVC Flexible wire—various sizes.		
6	M/s. Sunrise Cable Industries, 139, Bongshal Rd. Dhaka. Phone : 237772	PVC Flexible wire—various sizes—10000 coils.	PVC Flexible wire—verious sizes—1,199 coils.	1. 3/029 single core.		
				2. 3/029 Twine core.		
				3. Flexible wire.		
7	M/s. Sheuly Plastic Industries Ltd., BA-82, Dakhin Badda, Golshan, Dhaka.	PVC Elec. wire and cable—10,000 coils	PVC. wires and cables—various sizes—215 coils.	1. PVC wire single core—1/044, 3/029, 7/029.		
				2. PVC wire Twine core—1/044. 3/036. 7/029.		
				3. PVC Flexible wire		
8	M/s. Master Flexible Wire Works, Idrakpur, Fotullah, Narayangonj, Dhaka.	PVC Flexible and PVC wire single and duble core—15,000 coils.	PVC wire and cable—various sizes—330 coils.	1. PVC wire single core—1/044, 3/029, 3/036, 7/029, 7/036, 7/044, B.S.		
				2. PVC wire Twine core—1/044, 3/029, 3/036, 7/029, & 7/036, B.S.		
				3. PVC Flexible wire Twine core—14/0076, & 23/0076.		

Name of Sector: Electric Wires & Cables

Table 27

9	M/s. National Cable Industry, 28, College Road, Chawk Bazar, Chittagong.	50,000 coils PVC. insulated wire both for domestic and industrial use.	600 coils.	Insulated PVC wire : 1. 3/029 single. 2. 4/029 Twine. 3. 7/064 single.
10	M/s. Bangladesh Cables Shilpa Ltd., Shiromoni Indl. Area, Khulna, P.O. Box. No. 154, Khulna. Phone : 62299, 5188.	400,000. cond. KM of different types telecommunication (4·00 lac KM—4,000coils.)	2,70,000 Cond. KM (last 3 years.) (2,700 coils).	1. Callular P. E. Insulated laminated, Sheathed under, ground junction cable. 2. P. E. insulated, laminated, sheathed under ground primary cables. 3. P. E. insulated, petrejelly filled, laminated sheathed under ground Secondary cables. 4. PVC insulated, PVC sheathed switch board cables. 5. PVC insulated and PVC sheathed insulated cables. 6. Drop wires VDE (West Germany).
11	M/s. B.R.B. Cable Indus. Ltd., Kushtia, BSCIC I/E, Kushtia. Phone : 3433.	228 tons. 31,920 coils.	300 tons 42,000 coils.	Electric Cables.
12	M/s. Begnal Cables Industry (a proprietor of Sena Kolyan Sangstha) 194,-A/B, Tejgaon Industrial Area, Dhaka. Phone : 603546	Electric Wire and Cables—5,000 coils.	Electric wire and Cables—1,893 coils.	1. 3/029, 7/029, 3/036, 7/036, 7/044, 7/064 single cable, British Standard. 2. 3/029, 3/036, 7/036, 7/029 Twine cable, B.S.
13	M/s. Bengal Steel Works Ltd., Amin Court (6th floor), 52—63, Motijheel C/A., G.P.O. BOX NO. 832. Dhaka. Phone : 231061.	Aluminium conductor :— 1. A.A.C.—2,000 M/Tons. 2. A.C.S.R.—2000 M/Tons.	(i) A.A.C.—"ANT" 415 M/Tons. (ii) ACSR "Dog" 38·244 M./Tons.	1. All Aluminium conductor (AAC). 2. Aluminium conductor steel Re-inforced (ACSR).

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
1	2	3	4	5	6	7
Name of the Sector : ELECTRIC BULB.						
1	M/s. Bangladesh Lamps Ltd., 16-17, Kawran Bazar, Dhaka Phone: 325081-5 Fac.: 600285-6	110.00 Lac pcs.	61,00,657 Pcs.	Electric Bulb— GLS—25 Watt.	240.00 Lac Pcs.	
				40 Colour.		
				60 Colour.		
				100 Colour.		
				150 Colour.		
				200 Colour.		
				Argenta—60 Colour.		
				100 Colour.		
				200 Colour.		
	M/s. National Electric Company Ltd., 245, Tongi Industrial Area, Dhaka. Phone: Off: 300790 Fac: 390394 Off: A.R.A. Mansion, H-74, International Airport Road, Dhaka.	70.00 Lac Pcs (GLS) 14.00 Lac Pcs (Special)	9,72,094 Pcs. ..	Electric Bulb— 200 watt.		
				150 watt.		
				100 watt (Forsted).		
				100 watt (Colour).		
				100 watt (Superwhite).		
				60 watt (Superwhite).		
				60 watt (Colour/Forsted).		
				40 watt (Colour/Forsted).		
				25 watt (Colour/Forsted).		
				20 watt (Colour/Forsted).		
				15 watt (Colour/Forsted).		
				30 watt (Colour/Forsted).		

3	"BELCO Limited, Off: Nahar Mansion (1st floor), 150, Motijheel C/Area, Dhaka-2. Tele: 239907 Fac.: Bilashpur, Joydevpur, Dhaka.	18.00 Lac Pcs. (GLS)	1,77,890 Pcs.	Electric Bulb— 200 watt. 100 watt. 60 watt. 40 watt. 25 watt. 50 watt.
4	M/s. Perfect Electric Lamp Industries Ltd., 104, Motijheel (Globe Chamber), Dhaka—2. Tele: Off: 256654 Fac: 390261	17.28 Lac Nos.	1.49 Lac Nos.	Electric Bulb— 15 watt. 25 watt. 40 watt. 60 watt. 100 watt.
5	M/s. Hossain Electric Industries (Pvt.) Ltd., Off: Stock Exchange Bldg., 2nd Floor, Tele: 327647 Motijheel C/A., Dhaka, and 75/C, Asad Avenue, Mohammadpur., Dhaka. Fac.: Joypurpara, Bogra.	13.25 Lac Nos.	..	Electric Bulb— 15 watt. 25 watt. 40 watt. 60 watt. 100 watt.

Sl. No.	Name and address of the Industrial Unit with Telephone No.	Annual sanctioned Capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand	Remarks.
1	2	3	4	5	6	7
Name of the Sector : ELECTRIC MAIN SWITCH.						
1	M/s. General Electrical Industries, 51, Bijoynagar, Dhaka. Phone: 230272 (Fac) 405876 (Off)	(a) 15 Amps—30,000 pcs. (b) 30 Amps—IP/DP—10,000 pcs.	15,056 Pcs.	15 Amp main switch 30 Amp main switch. 60 Amp/TP/DP.	2,50,000 Nos.	
2	M/s. Salim Electric Industries, Fac.: 12/B, Tipu Sultan Rd., Dhaka. (Bhajahari Shaha Rd., Dhaka) Phone: 281532.	1,400 Nos.	2,158 Nos.	15 Amp main switch 30 Amp main switch. 60 Amp main switch. 100 Amp main switch. 200 Amp main switch. 300 Amp main switch.	..	
3	M/s. Mahboob Electric Co., Off : 131, B.C.C. Road, (Rana Mansion), Dhaka. Phone: 254698. Fac.: Mahajanpur Lane, Nawabpur, Dhaka. Phone: 254436.	2,194 pcs.	2,600 Nos.	15 Amp to 500 Amp	..	
4	M/s. Universal Plastic Industries Ltd., Off: 65-66, Motijheel C/A., Dhaka. Phone: 257739 & 231088 Fac.: Mirpur Housing Estate, Dhaka.	6,250 pcs.	5,000 pcs.	15 Amp main switch Brand—Unik, British Standard Size—5" × 4" made of aluminium.	..	
5	M/s. Meghna Light House, Off : 100/103, Nawabpur Road, Dhaka. Phone: 259876 Fac. : Juginagar, Dhaka.	1,108 pcs.	800 pcs.	100 Amp main switch 200 Amp main switch. 300 Amp main switch. 400 Amp main switch. 500 Amp main switch. 600 Amp main switch.	..	

6	M/s. Shams Electric Co., 42/2, Tipu Sultan Road, Dhaka.	1,500 pcs.	752 pcs.	15 Amp DP/IP switch.	..
7	M/s. Star Electrical Engg. Works, Bathua, P.O. Noor Bari, Chittagong.	105 pcs.	25 pcs.	Domestic main switch.	..
8	M/s. Electrical Mechanical Engg. Industries, 1719, Bangabandhu Road, Chittagong.	47,127 Nos.	4,166 Nos.	Electrical main switch.	..
9	M/s. Sk. Farid Electrical Engg. Works, Chowkbazar, Kapashgola Road, Chittagong.	1,059 Nos.	616 Nos.	Electrical main switch—15Amp to 400 Amps.	..
10	M/s. Swash Corporation Ltd., Off : 8/2, North South Road, Purana Paltan, Dhaka. Fac : 2 Chandi Charan Bose St. Wari, Dhaka. Phone: 253639.	7,944 pcs.	542 Nos.	15 Amp DT/IP	..
11	M/s. Kaiser Metal Works, 167-168, Tejgaon I/A., Dhaka. Phone: 304173.	4,082 pcs.	2,000 Pcs.	15 Amp. DP/IP. 30 Amp. DP/IP.	..
Name of the Sector : ELECTRIC TRANSFORMER.					
1	M/s. G.E.M. Co. Ltd., Off.: Bangladesh Steel and Engineering Corporation, Steel House, Karwan Bazar, Dhaka. Tel.: 327922 Fac.: Potenga, Chittagong.	1,440 Nos-KVA	1,540 Nos. KVA	500 KVA Transformer 250 KVA Transformer 100 KVA Transformer 15 KVA Transformer. 10 KVA Transformer.	(i) Single Phase—8,000 Nos. (ii) Triple phase—700 Nos.
2	M/s. G.E.C. of Bangladesh Ltd. 1, Shahid Abdul Halim Sarak, Chittagong. Phone : 200275-76 204356	Transformer—100 Nos.	12 Nos.	Electric Transformer— 100 KVA Transformer. 250 KVA Transformer. 200 KVA Transformer. 300 KVA Transformer. 500 KVA Transfrmer.	..

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
2		3	4	5	6	7
Name of the Sector : ELECTRIC FAN.						
1	M/s. G.E.C. Co. of Banladesh Ltd., Off: 72, Dilkhusha Commercial Area, Dhaka. Tele: 252415, 252011-13	20,000 Nos.	31,883 Nos.	Items : (a) Ceiling Fan—56", 48" & 36" (b) Table Fan—16" (c) Padestral Fan—20" (d) Exhaust Fan—16" & 18" (e) Cabin Fan—16" "GEC" Brand, Capacitor Type.	3·25 Lacs Nos.	
2	M/s. Nayan Metallic Corporation, Off: 6, Shah Suja Road, Narayanganj, Dhaka. Fac.: 35, Shah Shuja Road, Narayanganj, Dhaka.	10,000 Nos.	700 Nos.	Ceiling Fan 56", 48" & 36" "HIRA" De-Luxe Brand, Capacitor Type.	..	
3	M/s. Jamuna Electric and Engg. Industries Ltd., Off: 5, WAPDA Bldg., Dhaka Phone: 231416/257276 Fac.: Joydebpur, Dhaka.	10,000 Nos.	2,576 Nos.	Ceiling Fan56" & 48" "JAMUNA" Brand, Capacitor Type.	..	
4	M/s. Amin Industries Ltd., Off: 77, Baitul Mukarram, Dhaka. Tele. 282553/236357	10,000 Nos.	1,934 Nos.	Ceiling Fan—56" & 46" "AMIN" Brand, Capacitor Type.	..	
5	M/s. Motin Metal Industries (Pvt.) Ltd., 63/1, Purana Paltan, Dhaka. Tele: 250410	20,000 Nos.	866 Nos.	Ceiling Fan—56", 48" & 36" "TUSHAR" Brand, Capacitor Type.	..	
6	M/s. Metallex Corporation Ltd., 99, Tongi Indl. Area, Dhaka. Phone: 391238 & 391138	20,000 Nos.	41,173 Nos.	Ceiling Fan—56" & 48" "MILLAT" Brand, Capacitor Type.	..	

7	M/s. Monwar Industries, 27, Dilkhusha C/A., Baitul Hassan (2nd Floor), Dhaka. Phone: 231625 & 234342	5,000 Nos.	846 Nos.	Ceiling Fan—56" "MONWAR" Brand, Capacitor Type.	..
8	M/s. Mahboob Electrical Industries, East Bilurhat, Hathazari Road, Chittagong.	3,000 Nos.	1,200 Nos.	Ceiling Fan—56", 48" & 36" Capacitor Type.	..
9	M/s. Good Luck Engg. Works BSCIC Industrial Estate, Sholoshahar, Chittagong.	10,000 Nos.	120 Nos.	Ceiling Fan—56", & 48" Capacitor Type.	..
10	M/s. Chittagong Industries Ltd. 173, B.B. Chittagong Indl. Area,	5,000 Nos.	3,314 Nos.	Ceiling Fan—56" & 48" Capacitor Type.	..
11	M/s. Three Star Metal Industries, Sholoshahar Industrial Area, Chittagong. Tele: 224859	3,000 Nos.	122 Nos.	Ceiling Fan—56" & 48" Capacitor Type.	..
12	M/s. Fashion Metal Industries, 287/283, B.B. Indl. Area, Chittagong.	11,520 Nos.	15,000 Nos.	Ceiling Fan—56", 48" & 36" "HABIB" Brand, Capacitor Type.	..
13	M/s. Khan Ellan Corpn. Ltd., Batali Hill, Chittagong. Phone: 201995	6,000 Nos.	230 Nos.	Exhaust Fan—56" & 48" Capacitory Type.	..

1. Name of the Sector: ELECTRIC SWITCH: GEAR (L.T. & H.T.)

1	M/s. Siemens Dhaka Switch Board Factory, 74, Dilkusha C/A, Dhaka. Ph: 232064—66.	(1) Direct-on-line and Star Delta Starters upto 40 HP=500 units (ii) Distribution Boards upto 1,600A/440 Volts=150 units. (iii) Switch Board upto 630A/11 KV=20 units	(1) L.T. Switch Boards 34 units.	(1) L.T. Switch Boards. (2) Direct-on-line and Star Delta Starters upto 40 H.P. (3) Distribution Boards upto 1,600A/440 volts. (4) Switch Board upto 630A/11 KV.	(1) L.T. distribution Boards=1200 units (2) H.T. Switch Boards upto 630A/11 K.V.=200 units. (3) Drop out Fuse & safety power plug=3,500 Nos. (4) Switch gear: 15 Amp (200 Volts), 60 Amp (500 volts), 100 Amp (500 volts), 15 Amp (250 volts) and 30 Amp (500 volts), =20,000 Nos.

Sl. No.	Name and address of the Industrial Unit with Telephone No.	Annual sanctioned Capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
1	2	3	4	5	6	7
2	M/s. A.E.G. Engineering Ltd. 103, Motijheel C/A., G.P.O. Box No. 393, Dhaka, Phone: 242448, 233797,253723. Fac: 388/A, Tejgaon Indl. Area, Dhaka.	(i) L.T. Switch gear =96 pcs. (ii) H.T. Switch gear =72 pcs. (iii) Drop out fuse=3,000 pcs. (vi) Safety power plug =30,000 pcs.	L.T. Switch Gear=42 pcs.	(1) H.T. Switch gear upto 11,000 volts. (2) L.T. Switch Gear upto 415 volts. (3) P.F. I. Plants. (4) Distribution boxes, etc.		
3	M/s. Globe Industrial Enterprise Ltd., 51, Motijheel C/A, Dhaka. Phone: 231782,401645. Fac: 248, Tongi Indl. Area, Dhaka.	(1) Switch Gear=13,800 Nos. (2) Ballast=10,848 Nos.	Switch gear—688 Nos.	(1) Switch gear 60 Amp. (2) Switch gear 100 Amp. (3) Switch gear 200 Amp. (4) Switch gear 300 Amp.		
4	M/s. Chittagong Electric Manufacturing Co. Ltd., 302, Shola Shahar Indl. Area, Chittagong. Phone: 212677 & 210994. Off: Bangladesh School Text Book Board Bhaban, 69-70, Motijheel C/A, Dhaka. Phone: 230329.	Switch Gear 18,000 pcs.	Switch Gear 10,000 pcs.	(1) Switch Gear 15 Amp, 250 Volts. (2) Switch Gear 60 Amp, 500 Volts. (3) Switch Gear 100 Amp, 500 Volts. (4) Switch Gear 15 Amp, 250 Volts (D.B). (5) Switch Gear 30 Amp, 500 Volts (D.B).		
Name of the Sector: FERROUS FOUNDRY.						
1	M/s. Essential Products Ltd., Fac : 186, Rayer Bazar, Dhaka. Phone: 325311. Off: 125/A, Motijheel C/A, Dhaka. Phone: 231392.	Machinery and Agricultural Equipments—150 M/tons.	428·33 M/tons.	Lathe Machine 6½' & 4' Drill Machine 1" & 1½" Baby Expeller, Rice Husking Machine spare, Rice Huller, Shell Pulley, etc.	1. C.I. Pipe—10,000 Nos. 2. Tube-well Head & Handle—40,000 Nos.	
		Centrifugal pumps—2000 M/T.	2,400 M/T.	Centrifugal pumps.	3. Manhole Cover——20,000 Nos.	

		Hand Pump—2000 M/T.	2,463/33 M/T.	Hand Pump No.6 & 4.	4. C.I. Cistern—5,000 Nos.
		Sanitary pipe and Fittings—750 M/T.	1,170 M/T.	Sanitary pipe 4" and 2" dia 6' length and fittings thereof.	5. Oil Expeller—50 Pair.
		Other Cast Iron Products etc.—100 M/T	193·66 M/T.	Domestic Gas Cooker kg. weight and other Misc. items.	6. Tea, Socket, Union, Elbow, etc. 7. Lathe Machine 4'ft size—150 Nos. 8. Lathe Machine upto 6' ft. size—100 Nos.
2	M/s. National Foundry and Engineering Works (Pvt)Ltd., Fac: Shyampur, Narayangonj Road, Dhaka Phone: 281396, 231981. Off: 45, Bangabandhu Avenue, Dhaka. Phone: 234242, 238161.	(1) Tube-well Pump No. 6"—5,000 pcs.	4,550 pcs.	Tube-well pump No.6	9. Lathe Machine upto 8"ft. size—50 Nos.
		(2) Wheel and pinions—1000 Pcs.	3,808 pcs.	Wheel and Pinion 14" dia	10. Drill Machine upto ½" capacity—200 Nos.
		(3) Soil pipe 4" 1500 pcs.	4,267 pcs.	Soil pipe 4" dia	11. Drill Machine ½" to 1' ft. capacity—75 Nos.
		(4) Manhole cover 18" —2,421 pcs.	459 pcs.	Manhole cover 18" dia	12. Shaper Machine 18" to 24"—50 Nos.
		(5) Rain Water pipe 4" —1,860 pcs.	1033 pcs. 213 pcs. 16 pcs. 170 pcs.	R.W. Pipe 4" dia. Match Factory Machine spare. Lathe Machine Rolling Machine	13. Band Saw Machine all sizes—200 Nos. 14. Ball press 4 No. —50 Nos. 15. Ball press 6 No. —50 Nos. 16. Ball Press 8 No.—50 Nos. 17. Ball Press 12 & 16 Nos.—16 Nos. 20 Nos. 18. Spinning Lathe upto 6½' ft.—750 Nos. 19. Power Press upto 40 tons capacity—25 Nos.
3	M/s. Bangladesh Light Casting Co., Ltd. Off: 12, Bangabandhu Avenue, Dhaka. Phone: 231619, 235737, 429—432. Fac: Tejgaon Indstrial Area, Dhaka. Phone: 602543.	(1) Hand Pump (2) G.I. Pipe and (3) Pipe fitting.	22,972 Pcs. 25,500 Pcs.	(i) Hand pump No. 6 & 4 (ii) G.I. Pipe 4" dia; 6' long (iii) 4" dia pipe & fittings	
4	M/s. New Star Engineering Ltd., 321/A, Nakhalpara, Dhaka. Phone: 602664.	(1) Agric. pump spare—60 Tons.	46·50 Tons.	(i) Agri. pump spare	
		(2) Hand pump spare—13 Tons.	13 Tons.	(ii) Hand pump spare	

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned Capacity	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
1	2	3	4	5	6	7
Name of the sector: FERROUS FOUNDRY.						
		(3) Kg. Weights—(200 gram to 50 kg.)	21 Tons.	(iii) Kg. Weights (200 gram to 50 kg.).		
		(4) Misc. C.I. Products (Job work) 8 Tons.	34 Tons.	(iv) Misc. C.I. Products (Job works).		
5	M/s. Engineers Wood Steel Industries Ltd., 67, Tejgaon Indl. Area, Dhaka Phone : 315171, 315172.	1,25,225 Pcs.	Hand Pump—4591 Pcs. Soil Pipe—11081 Pcs Cistern—2158 Pcs.. Rice Huller Parts—751 Pcs. Man-hole cover—3086 Pcs.	Hand Pump No. 6 Soil Pipe. Cistnr ½ Gallon Rice Huller parts Man-hole cover 18" Pcs. dia.		
6	M/s. Manoo Casting Industries, 210/B, Tejgaon Indl. Area, Dhaka—8. Phone : 602925.	1500 M/Tons 112·50 Lac. Pcs.	C.I. Pipe—547·77 M/T.	6 ft. Long, 2" to 6" dia		
			C.I. Cistern—48·40 M/T.	3 Gallons Anti-mosquito 1" Automatic Cistern.		
			C.I. Fittings—302·43 M/T.	6" dia plain bend, 6" dia door junction, 6" dia plain junction, 6" ×4" Door junction, 6". 2" plain bend, B/D Bend, Double junction plain syphone, Horn Syphone L/D, R/D Juntion, Loose Socket/cowel.		
			Manhole cover—112·83 tons	24"×4" to 18"×4" C.I. T. Manhole cover. 18"×2" light pit cover. 18" dia looking cover. 18"×3" Manhole cover.		
			C.I. Machinery parts—168·57 tons.	12"×18" printing machine. 58" paper cutting machine. 42" Rolling Mills.		

7	M/s. Fazal Wire & Metal Industries, 41/1, H. C. Roy Road, Dhaka. Fac.; Rajapari, Postogola Chowrasta, Dhaka. Phone: 282468.	90 Tons.	3½ Tons.	General Casting and Job work as per order and specification given by the customer.	
8	M/s. Mahboob Metal Industries, Off: 5/4, Kawran Bazar, Dhaka. Fac.: Ditto.	68 Tons.	39 Tons.	Manhole cover 18" dia. Soil pipe 4' dia. Rain Water pipe 4" dia.	
9	M/s. Agricultural Engineering Industries, Fac.: 5, Kazla Dhania Road, Dhaka, and 689, Shajahanpur, Dhaka. Off.: 29, DIT Avenue, (3rd floor) Motijheel C/A., Dhaka. Phone : 230223	265 Tons (i) Manufacture of Machineries. (ii) Tube-well pump and spare parts all sorts.	276 Tons	Deep Tube Turbine pump—Model F-100 Level crossing Barrier Centrifugal pump 1 and ½ cusec, Pumps spare and machinery spare, Sluice gate, Lathe machine 6'	..
10	M/s. Madina Machinery and Engineering Works Ltd., 23/1, Kunipara, Tejgaon IndL Area, Dhaka. Phone: 606015	(i) Tubewell head (No. 6)—90 Tons. (ii) Manhole cover 2"×18"—28 Tons. (iii) Plain Bend 4"—45 Tons (iv) Long Trap 4"—42 Tons	180 Tons 112 Tos 52½ Tons 42 Tons	Tubewell Head No. 6 Manhole cover 2"×18" Plain Bend 4" Long Trap 4"	..
11	M/s. Noor Industries (BD) Ltd., Off: 3/18, Iqbal Road, Mohammadpur, Dhaka. Phone: 318908, 325614 Fac: 31, Bangabandhu Road, Narayanganj, Dhaka. Phone: 71444.	Manufacturing of machineneries and parts thereof —340 Tons.	(1) 107 Tons (2) 35 Tons. (3) 8·04 Tons (4) 66 Tos (5) 59·99 Tons (6) 19·40 Tons (7) 8·46 Tons (8) 28·17 Tons (9) 25·33 Tons (10) 9·25 Tons	(1) Centrifugal pumps 3/4 cusec. (2) Rolling Machine 8' capacity. (3) Spade—8"×11" size. (4) C.I. Gravels (As per looms of different sizes). (5) Pilling Hammer (3 tons capacity). (6) Saw Machine (42" & 48"). (7) Ball Press (16, 20 & 24 Nos.). (8) Dyeing Press Cylinder (Different sizes). (9) Lathe Machine (4', 6' & 8' sizes). (10) Oil Gunny.	.. ..

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned Capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
1	2	3	4	5	6	7
Name of the Sector : G.I. Pipe						
1	M/s. National Tubes Ltd Tongi, Industrial Area, Dhaka. Phone:391123,391225	M.S. & G.I. Pipe 45,000 M/Tons.	M.S. & G.I. Pipe Various sizes.=12923 M/Tons.	½" M.S. & G.I. Pipe ¾" Do. 1" Do. 1¼" Do. 2" Do. 2½" Do. 3" Do. 4" Do. 8" Do.	60,000 M/Tons.	Managed by the Bangladesh Steel and Enginnering Corporation.
2	M/s. Karim Pipe Mills Ltd, Off: 149, Green Road, Dhaka. Phone: 311285 Fact:74—75, Fouzdarhat I/Area, Sagarika Road, Pahartali, Chittagong. Phone: 51636,51637 & 51638.	M.S. & G.I. Pipe 6,000 M/Tons.	M,S. & G.I. Pipe various sizes - 3291·211 M/Tons.	½" M.S.& G.I. Pipe ¾" Do. 1" Do. 1¼" Do. 2" Do. 2½" Do. 3" Do. 4" Do.		
3	M/s. Bangladesh Steel Tubes Pvt. Ltd., BSCIC Industrial Estate, Kushtia, Phone: 3267,4167.	G.I. Pipe 6,000 M.Tons.	G.I. Pipe 150 M/Tons.. 1½" dia. 25·8 M/Tons. 1" dia.	1" G.I. Pipe 1½" G.I. Pipe		1½" dia production started from Jan'83 and 1" dia from July/1983.
Name of the Sector : G.I. Wire.						
1	M/s. Bengal Steel Works, Fac:218, Tejgaon Industrial Area, Dhaka. Off: Amin Court, 62/63, Motijheel C/A, Dhaka. Phone: 231061—3 (PBX). Do.	10,800 M/Tons.	2,631 M/Tons.	G.I. Wire 4 Gauge to 30 gauge.	30,000 M/Tons.	
2	M/s. Mirza Aboo Wire Mfg. & Industries Ltd, 239, B.B. Industrial Area, Chittagong. Phone: 21 481,211392.	4,500 M/Tons.	873 M/Tons.	G.I. Wire ¼" to 1/12".		

8	M/s. Bangladesh Can Co. Ltd. Nasirabad Indl. Area, Chittagong. Phone: 212476, 210461	1,800 M/Tons	1,272 M/Tons	Decorated Can of various sizes.	..	

Name of the Sector: M.S. ROD/ANGLES/BARS/CHANNELS.

1	M/s. Dhaka Steel Works Ltd., Tongi, Dhaka. Phone: 407505	7500 M/Tons.	8201 M/Tons.	Sizes ¼″,⅜″,½″,⅝″,1″.½″.	3·00 Lacs M/Tons.	This includes 4000 M/Tons of Wire Rod.
2	M/s. Prince Iron and Steel Industries, Mirpur, Dhaka. Phone: 230252 Off: 382312	9000 M/Tons.	9374 M/Tons.	Sizes: ⅜″,½″,1″,¾″,⅝″,1¼″,1½″.		
3	M/s. G.M. Steel, 215/278, Industrial Area, Bayazid Bostami Road, Chittagong. Phone: 211223, 205437.	7000 M/Tons.	5910 M/Tons.	M.S.Rod ⅜″,½″,⅝″,1″.		
4	Ditto.	75000 M/Tons.	6535 M/Tons.	Angles 2″×2″×¼″,2″×2″×3″, 2½″×2½″¼×″,2½″×2½″×⅜″.		
5	M/s. Quaraishi Steel Mills, Lobonchura, Khulna. Phone: 4821,4321.	7500 M/Tons.	6535 M/Tons.	Sizes: ¼″,⅜″,½″,⅝″,¾″,⅞″.		
6	M/s. Khulna Industrial and Trading Corporation, Khalishpur, Khulna. Phone: 4336,4337,4338.	6000 M/Tons.	6241 M/Tons.	⅜″,½″,⅝″,¾″,⅞″,1″,1¼″,1½″.		
7	M/s. Bengal Metal Industries, Tejgaon, Dhaka. Phone: 282877,601578.	3500 M/Tons.	4504 M/Tons.	⅜″,½″,⅝″,¾″,⅞″,1″,1¼″,1½″.		
8	M/s. Malik Re-Rolling Mills, Chittagong. Phone: 211497.	6000 M/Tons.	5682 M/Tons.	Ditto.		
9	M/s. New-Era Steel Mills, Nasirabad, Chittagong. Phone: 210378,210379.	7000 M/Tons.	7917 M/Tons.	Ditto.		

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned Capacity.	Annual Average Production	Name of the items manufactured with specification, if any.	Present estimated demand.	Remarks.
1	2	3	4	5	6	7
Name of the Sector: M.S. ROD/BARS/ ANGLES/CHANNELS.						
10	M/s. National Foundry Engineering Works, 45, Bangabandhu Avenue, Dhaka.	4200 M/Tons.	1578 M/Tons.	(1) M.S. Rod: ½",½",¾",1". (2) ¾"×3/16".		
11	M/s. Sonar Bangla Re-Rolling Mills Ltd,. 198, Tejgaon Industrial Area, Dhaka.	3500 M/Tons.	1634 M/Tons.	(1) M.S. Rod: ½"¾",1",¼". (2) M.S. Bars: ¾"×3/16".		
12	M/s. Bangladesh Commercial Corporation Ltd., 11, Bangabandhu Avenue, Dhaka.	4400 M/Tons.	1752 M/Tons.	M.S. Rod & Plate Bars: ¾",1", × ½" dia.		
13	M/s. Dhaka Re-Rolling Mills Ltd., 125/A, Motijheel Commercial Area, Dhaka.	5500 M/Tons.	1171 M/Tons.	M.S. Rod: ½"½",¾",1",dia.		
14	M/s. Khulna Steel Structural Mills Ltd., Zohra Manson, 22, Mymensingh Road, Dhaka.	6000 M/Tons.	1048 M/Tons.	M.S. Rod: ½",½",¾",1".		
15	M/s. Rahim Steel Re-Rolling Mills Ltd., 11, Bangabandhu Avenue, Dhaka.	3300 M/Tons.	795 M/Tons.	M.S. Rod & Plate Bars: ¾",1",1",1",1" dia.		
16	M/s. Rupsa Re-Rolling Mills & Industries Ltd., Dhaka. Phone: 405650, 405350.	4800 M/Tons.	791 M/Tons.	M.S. Rod: ⅜",½",⅝",¾",⅞",1",		
17	M/s. Tejgaon Re-Rolling Mills Ltd., Zohra Manson, 22, Mymensingh Road, Dhaka.	4800 M/Tons.	2687 M/Tons.	Ditto.		
18	M/s. Tiger Wire (Re-Rolling) Mills Ltd., 56-57, Motijheel Commercial Area, Dhaka.	10,000 M/Tons.	3412 M/Tons.	(1) M.S. Wire Rod: ½" (2) M.S. Rod: ¾".		

19	M/s. Panthar Steel Ltd., 62,63, Motijheel C/Area, Dhaka.	4,800 M/Tons.	4023 M/Tons.	(1) M.S. Rod: ½",⅜",¼",⅝"dia (2) Plate Bar: ¾"×3/16" dia (3) M.S.Z. Bar: ½"×¾"×⅛" (4) M.S. Angle:½"×½×⅛",1"×1"×⅛", 1½"×1½"×⅛",1½"×1½"×3/16", 1½"×1½"×⅛", 2"×2"×⅛.
20	M/s Habibulla Re-Rolling Mills, 180/1, Karimullabag, Postogola, Dhaka.	3,000 M/Tons.	381 M/Tons.	M.S. Rod: ½",⅜",¼",⅝",dia.
21	M/s. Bengal Steel Works, Amin Court, Motijheel C/ Area, Dhaka.	30,000 M/Tons.	14,651 M/Tons.	(1) M.S. Rod: ½",⅜",⅝". (2) Tor Steel: 8—5 mm.
22	M/s. Al-haj Ahmed Ali Steel Re-Rolling Mills Ltd., Iswardi, Pabna.	10,000 M/Tons.	3320 M/Tons	M.S. Rod.
23	M/s. Section Steel Industries Ltd., C—7, Road No. 4, K.D.A. Indl. Estate, Shuromoni, Khulna.	5,000 M/Tons.	2,944 M/Tons.	(1) M.S. Rod: ⅜" to 1" (2) Flat Bar: ½" × ⅛".
24	M/s. Daulatpur Steel Re-Rolling Mills Ltd., Town, Khalishpur, Khulna.	21,000 M/Tons.	3,157 M/Tons.	M.S. Rod: ½" to 1"
25	M/s. Khulna Industrial and Trading Corporation, Chandni Mohol, Khulna. Tele: Off: 61181.	6,000 M/Tons	5,000 M/Tons.	M.S. Rod: ½" to 1".
26	M/s. Rahman Metal Industries Off: & Fact: 403—404, Tejgaon I/Area, Dhaka. Tele: 310445, 311351.	16,600 M/Tons.	2,600 M/Tons.	M.S. Rod: ½",½",¾",⅞".
27	M/s. Bangladesh Steel Re-Rolling Mills Ltd., Ali Mansion, Sadarghat Road, Chittagong. Tele: 201759, 211053.	23,600 M/Tons.	6,800 M/Tons.	M.S. Rod: ½",1",¾" Angles: ½" × 3/16"
28	M/s. East Bengal Trading & Industrial Corpn. Ltd., 100/A, Sadarghat Road, Chittagong. Tele: 201405 & 200390	22,000 M/Tons.	5,800 M/Tons.	M.S. Rod: ½",½",¾" Angles: ½" × 3/16",2½" ×2½"

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioneed capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated deman :.	Remarks
1	2	3	4	5	6	7
Name of the Sector: M.S. ROD / BARS/ANGLES/CHANNELS.						
29	M/s. Karnaphuli Metal Works Ltd., 91, Agrabad, Chittagong. Tele: 504823 & 504339.	3,000 M/Tons.	1150 M/Tons.	M.S. Rod: ½",¾",1" Bar: ¾" × 3/16"		
30	M/s. SINO Bangladesh Indl. Works, 39, Baizid Bostami Road, Chittagong. Tele: 212539 & 212619	4,800 M/Tons.	1600 M/Tons.	M.S. Rod: ½",¾",1" Bar: ¾" × 3/16".		
31	M/s. National Iron & Steel Industries Ltd., Ali Mansion, Sidarghat Road, Chittagong. Tele: 204786 & 200765.	21,600 M/Tons.	4,100 M/Tons.	M.S. Rod: ½"1",1" Bailing Hoops.		
32	M/s. General Iron & Steel Co. (Ctg) Ltd., 84, Sidarghat Road, Chittagong. Tele: 202831 & 211094.	27,000 M/Tons.	5,900 M/Tons.	M.S. Rod: ½",¾",1",1" Angles: ¾" × 3/16".		
33	M/s. Bangladesh Steel Ltd., 54—55, Nasirabad Indl. Area, Chittagong. Tele: 210232 & 211443.	18,400 M/Tons.	11,200 M/Tons.	M.S. Rod: ½",¾",1",1" Angles: ¾" × 3/16".		
34	M/s. Northern Steel Re-Rolling Mills Ltd., BSCIC Indl. Estate, Tongi, Dhaka. Tel: Off: 317265 Fac: 391538	19,200 M/Tons.	7,500 M/Tons.	M.S. Rod: ½",½",¾",1",6/8" & 1".		
Name of the Sector: M.S. PIPE/M.S. TUBE.						
1	M/s. National Tube, Tongi, Dhaka. Phone: 391123	20,000 M/Tons.	12,922 M/Tons.	½" to 8" dia.	(i) M.S. pipe 28,980 M/Tons.	
2	M/s. Hussain Industries Ltd., 83, Sagarika Road, Pahartali, Chittagong.	2,500 M/Tons.	200 M/Tons.	Steel Pipe ½",¾",¾",1", 1",1½"1½ & 1½" dia.	(II) M.S. Tubes:- 14,500 M/Tons.	

3	M/s. Chittagong Allied Steel Industries, 305, Kadam Mobarak, Rahmatgonj, Chittagong.	310 M/Tons.	6 M/Tons.	Steel pipe 3" to 4" dia.	
4	M/s. Noor Industries (Bangladesh) Ltd., 31, Bangabandhu Road, Narayangonj, Dhaka.	217 M/Tons.	213 M/Tons.	Steel pipe 5" to 48" dia.	

Name of the Sector: M.S. PLATE

1	M/s. Chittagong Steel Mills Ltd., Chittagong. Phone: 500668,501472.	57,000 M/Tons.	8410 M/Tons.	Sizes ¼",⅜",½", ⅞", 2", 1", 1¼", 1½".	25,000 M/Tons

Name of the Sector : MOTOR CYCLE ASSEMBLY.

1	M/s. Nippon Motors Ltd., Off : 13/2, Toyenbee Circular Road, Motijheel C/A, Dhaka. Tele : 280685. Fact. : Shahbagh Avenue, Dhaka. Phone : 500296.	Motor Cycles/Scooters= 3,000 Nos.	438 Units.	Suzuki Motor Cycles : Model —125 C.C. " 100 C.C. " 80 C.C. " 50 C.C.	15,000 Nos.
2	M/s. Menoka Motors Ltd., Head Off : Dhanialapara, Dhaka Trunk Road, Chittagong. Tele : 50 - 02, 504786. Branch Off : Dilkusha C/A, Dhaka. Tele : 257623. Fac : 5/D, Sholashahor light Indl. Area, Chittagong. Phone : 210726.	2 wheeler (CKD)— 1,500 Nos.	29 Nos.	Bajaj Motor Cycles : Model—150 C.C.	

			(iii) Permissible deviation of denier : 86+5.	
			(iv) Tensile strength : Dry 1·60 mm.	
	(b) Cellophane— 1,500 M/Tons.	608 M/Tons.	(b) Cellophane : Substance : 30 Grm. Grades of Cellophane plain colour (PC) Moisture proof ; heat sealing colourless transparent Gouge —300,350 and 400. Thickness 0·020 ; 0·023 ; 0·018 in (mm).	627 M/Tons.
Name of the Sector: CEMENT				
1 M/s. Chattak Cement Co. Ltd., Chattak, Sylhet. Phone No. 225.	1,25,000 M/tons.	1,14,080 M/tons	Portland Cement, Regular type, Greay Colour.	10·60 lac M/tons.
2 M/s. Chittagong Cement Clinker and Grinding Co. Ltd., South Kalishahar, Chittagong Phone: 500191.	3,00,000 M/tons.	1,92,608 M/tons	Ditto.	
Name of the Sector: CERAMIC INDUSTRY				
1 M/s. Imperial Pottery Works, 1, B.K. Roy Lane, Dhaka. Factory: 214, Muradpur (Jurain), Dhaka. Phone: 2586.	600 M/tons.	27·64 M/tons	Tea cup, Tea pot, plate, Salt Jar, etc.	12,000 M/tons.
2 M/s. Bengal Ceramic Industries Ltd., 215, Rayer Bazar, Dhaka. Phone: 233664, 3253, 325327.	1200 M/tons.	260 M/tons	Curry cup, plate, Tea cup, Tea pot, etc. (Earthen wares)	..
3 M/s. Peoples Ceramic Industries Ltd., 64, Motijheel Commercial Area, Dhaka. Factory: Tongi Industrial Area, Dhaka. Phone: 234237, 253761.	2,850 M/tons	1,862 M/tons	All sorts of procelain Table Wares.	..

Sl. No.	Name and address of the Industrial unit with Telephone No.	Annual sanctioned Capacity.	Annual Average Production.	Name of the items manufactured with specification, if any.	Present estimated demand	Remarks.
1	2	3	4	5	6	7
	Name of the Sector : SANITARY WARES AND INSULATOR:					
1	M/s. Bangladesh Iinsulator and Sanitary Wares Factory, Bux Nagar, Mripur, Dhaka. Phone : 382527.	(a) 4,000 M/Tons (b) 2,400 M/Tons.	(a) 1317 M/Tons (b) 341 M/Tons	(a) Sanitary Wares: (i) Wash Basin (ii) Long Pan (iii) Water cloned (iv) Oriental Pan (v) Cistern (b) Insulator : All kinds of electrio insulator.	(a) Sanitary Wares-1600 M/Tons (b) Insulator-800 M/Tons	Under the management of BCIC
2	M/s. Dhaka Ceramic & Sanitary Wares Ltd., 30, Bangabandhu Avenue, Dhaka. Phone : 258907.	1800 M/Tons	358·18 M/Tons	(a) Sanitary Wares : (i) Long Pan (ii) Foot rest (iii) Syphons (to fit allsize pan) (iv) Wash Basins.		Sponsored by BSCIC
3	M/s. Imperial Pottery Works, 1. B.K. Roy Lane, Dhaka. Fac : 214, Furadpur (Jurain) Dhaka.	Sanctioned capacity has been indicated in the Ceramic ware section of the unit.	10,14 M/Tons	Insulators (1) Sharkle Insulators (L.T. for use in the Electric Pole.)		
	Name of the Sectore : TYPE WRITER RIBBON					
	M/s. Paper Converting and Packaging Limited., Off: Karim Chamber (Ground Floor), 99 Motijheel C/Area, Dhaka. Tel: 258754,233292. Fac: Shimrail, Demra, Dhaka.	Type Writer Ribbon Size : 11 yds. × ½"208166 Rolls.	78,767 Rolls	Type Writer Ribbon. Size : Length 11 yds & Width-½" P.C.P. Special Black 11 yds × ½" P.C.P.S. Special Red' Black 11 yds × ½" Vacum Sealed tin container Cotton Binding. Wrapped in Aluminium Foil longivity—12 to 15 days on average with continued service.	8,00,000 rolls.	

Table 28

EDUCATION SYSTEM IN BANGLADESH

PRIMARY STUDY (CLASS I-V) — 5(FIVE) YEARS

JUNIOR STUDY (CLASS VI-VIII) — 3(THREE) YEARS

* SECONDARY STUDY (CLASS IX-X) — 2(TWO) YEARS

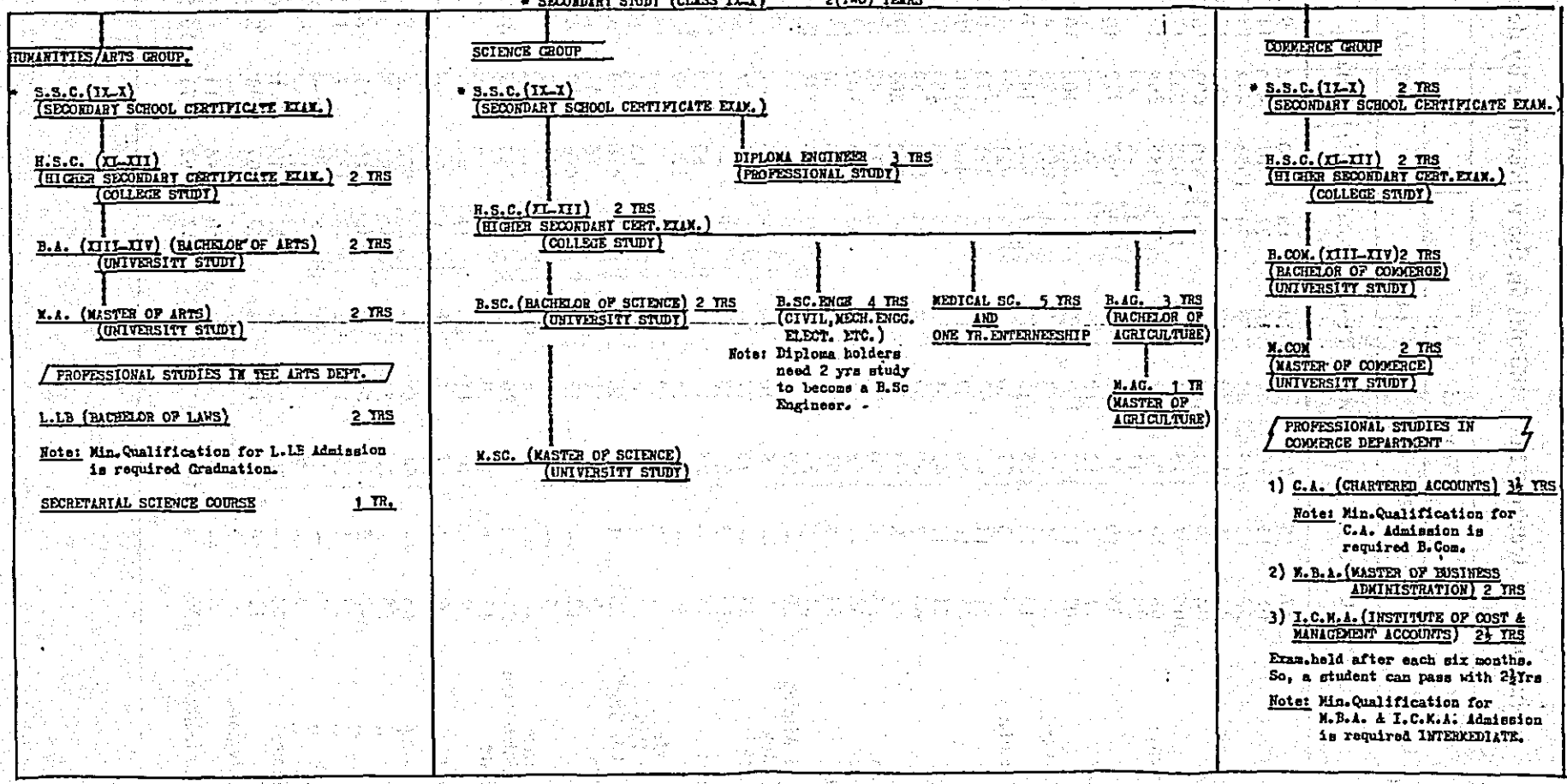


Table 29

Number of teachers and students in the universities by departments.

Departments	Teachers						Students					
	1981-82			1982-83			1981-82			1982-83		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. English	57	16	73	68	12	80	680	242	922	681	253	934
2. Bengali	65	11	76	57	16	73	701	406	1107	744	551	1295
3. History	58	10	68	62	8	70	1053	444	1497	1005	473	1478
4. Islamic History	43	5	48	40	2	42	974	282	1256	991	283	1274
5. Philosophy	44	9	53	47	9	56	880	692	1572	862	400	1262
6. Economics	106	7	113	111	6	117	1423	332	1755	1542	406	1948
7. Political Science	66	10	76	67	12	79	1185	368	1553	1442	505	1947
8. Language	26	6	32	25	7	32	—	—	—	7	2	9
9. Sociology	55	10	65	55	11	66	957	717	1674	958	781	1739
10. Social Work	11	1	12	12	—	12	—	—	—	143	91	234
11. Physics	107	13	120	70	7	77	978	102	1080	1108	123	1231
12. Applied Physics	31	1	32	32	2	34	395	26	421	343	23	366
13. Chemistry	113	12	125	115	12	127	967	141	1108	980	162	1142
14. Applied Chemistry	24	3	27	26	2	28	421	50	471	393	62	455
15. Botany	55	11	66	63	10	73	475	178	653	477	151	628
16. Zoology	45	10	55	47	13	60	406	180	586	430	198	628
17. Psychology	31	12	43	31	14	45	543	183	726	467	207	674
18. Statistics	66	3	69	69	4	73	863	59	922	981	81	1062
19. Geography	52	8	60	51	8	59	702	206	908	771	208	979
20. Mathematics	74	6	80	72	6	78	673	42	715	802	52	854
21. Management	58	—	58	61	—	61	1243	105	1348	1570	119	1689
22. Accounting	64	2	66	64	3	67	1445	80	1525	1775	88	1863
23. Law	31	2	33	23	—	23	1123	138	1261	874	119	993
24. Geology and Mining	29	—	29	27	—	27	—	—	—	260	18	278
25. Marine Biology	8	—	8	10	—	10	—	—	—	38	4	42
26. Bio-Chemistry	25	—	25	27	—	27	183	38	221	208	40	248
27. Pharmacy	16	5	21	16	4	20	—	—	—	131	12	143
28. Journalism	25	—	25	11	1	12	83	15	98	85	19	104
29. Soil Science	26	—	26	25	—	25	120	30	150	65	1	66
30. Persian and Urdu	2	2	4	2	2	4	—	—	—	4	1	5
31. Sanskrit and Pali	7	1	8	8	2	10	90	34	124	95	54	149
32. Arabic and Isl. Studies	32	1	33	40	1	41	476	49	525	592	36	628
33. Int. Relations	9	—	9	11	—	11	76	51	127	76	56	132
34. Marketing	17	—	17	19	1	20	476	19	495	507	26	533
35. Finance	14	—	14	20	—	20	342	33	375	446	28	474
36. Military Science	—	—	—	4	—	4	—	—	—	—	—	—
37. Public Administration	21	4	25	30	2	32	365	115	480	389	145	534
38. Social Welfare	11	6	17	10	7	17	—	—	—	301	136	437
39. Fine Art	9	1	10	11	—	11	—	—	—	31	17	48
40. Library Science	6	1	7	5	1	6	—	—	—	78	19	97
41. Civil engineering	64	—	64	68	—	68	956	22	978	1010	31	1041
42. Mechanical ,,	35	—	35	34	—	34	581	3	584	645	3	648
43. Electrical ,,	49	2	51	54	2	56	618	13	631	656	16	672
44. Chemical ,,	15	1	16	17	1	18	134	7	141	141	12	153
45. Metallurigical ,,	9	—	9	9	—	9	30	—	30	31	1	32
46. Naval. Arch. ,,	7	—	7	7	—	7	41	—	41	48	—	48
47. Water Resources	20	—	20	23	1	24	39	1	40	56	2	58
48. Architecture	12	4	16	15	4	19	209	40	249	173	45	218
49. Urban and Regional Planning	8	—	8	9	1	10	54	13	67	63	17	80
50. Faculty of Agriculture	139	4	143	148	4	152	1462	73	1535	1609	84	1693

Table 30

DIFFERENT CADRE OF ENGINEERS IN BANGLADESH

ONE WAY IS

(A) DIVISIONAL ENGINEER

SUB-DIVISIONAL ENGINEER

ASSISTANT ENGINEER (MIN.QUALIFICATION AT THE TIME OF JOINING SERVICE IS REQUIRED B.SC.ENGR.)

SUB-ASSISTANT ENGINEER (MIN.QUALIFICATION AT THE TIME OF JOINING SERVICE IS REQUIRED DIPLOMA ENGINEER).

OTHER WAY

(B) CHIEF ENGINEER

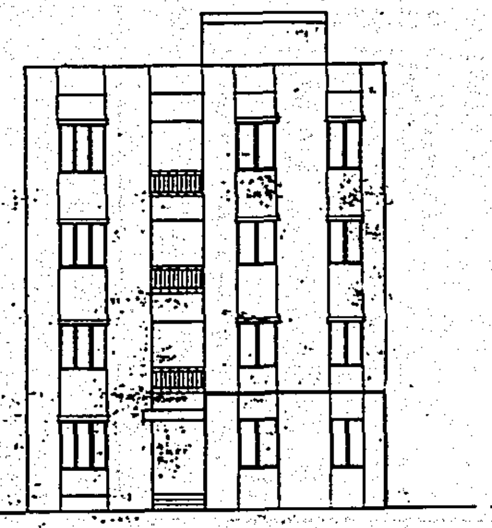
SUPERINTENDENT ENGINEER

EXECUTIVE ENGINEER

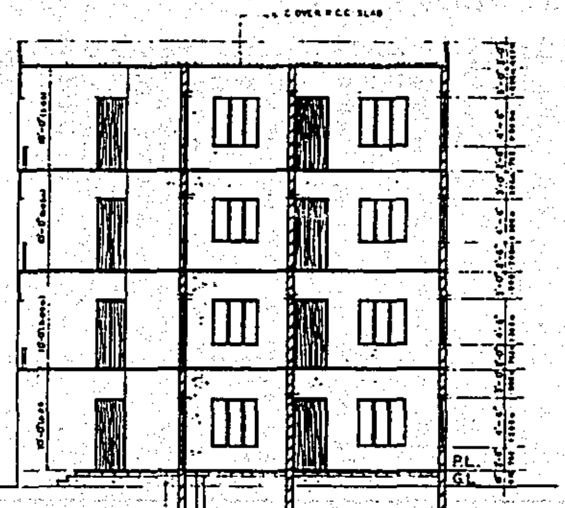
ASSISTANT ENGINEER (MIN.QUALIFICATION AT THE TIME OF JOINING SERVICE IS REQUIRED B.SC.ENGR.)

SUB-ASSISTANT ENGINEER (MIN.QUALIFICATION AT THE TIME OF JOINING SERVICE IS REQUIRED DIPLOMA ENGINEER).

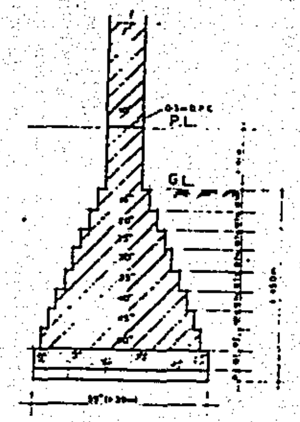
Table 31



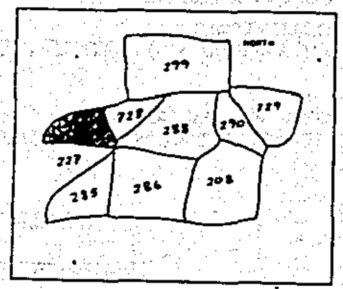
ELEVATION



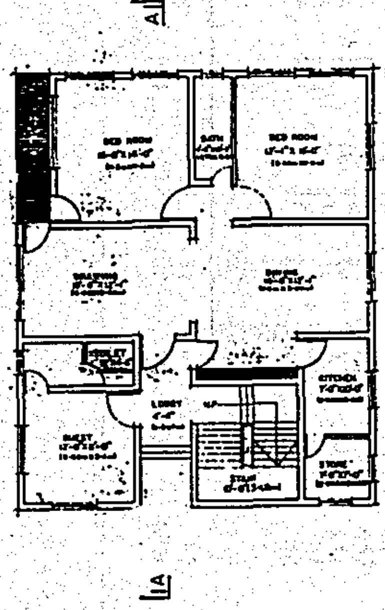
SECTION: A-A



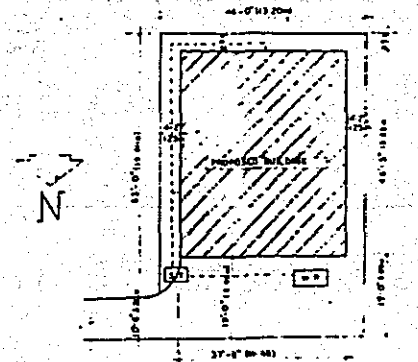
WALL FOUNDATION



MOUZA MAP



GROUND & 1st.2nd.3rd FLOOR PLAN ARE SIMILAR



LAY OUT PLAN

PROPOSED FOUR STORIED RESIDENTIAL BUILDING

PLOT NO

MOUZA

THANA — TEJGAON, DHAKA

GARAGE — 700

Table 32

Application Form for approval of work of Construction (Making) Buildings/Digging anywhere Under Bangladesh House-building Act 1952, clause - 3.

1. Name of the Applicant:-

2. Address:-

3. Detail Particulars of the Plot where the Proposed Building/ Soil digging will be Constructed:-

(a) Name of Municipality/Pawrashava:-

(b) Number of Permanent Residence:-

(c) Number of Word:-

(d) Name of Road:-

(e) Name of Mouza:-

(f) Plot Number of Tax Measurement.(If the Plot is a Part of identified Place, Taxable, Please show it in the Mouza Map):-

(g) No of site:-

(h) Part of the Plot of the ownerd by the applicant:-

4. Please explain the particulars stated below being shown the Previous constructed structure in the Area Map:-

(a) Total number of previous constructed buildings:-

(b) Total Quantity of Place which is occupied by the Previous constructed buildings:-

(c) Total Number of Previous constructed hut:-

(d) Total Quantity of Place which is Occupied by Previous Constructed hut:-

(e) If there is a occupied place by the previous constructed buildings or by coustructed hut it should be broken immediately after getting approval of new construction:-

5. Please enclose with this form at least four copies of area map measuring-66' = 1". in that area map there should be plot mark and road or lane which is attached with plot mark the propose construction should be shown with that attaching plot mark and indetail building map, building seenery and part share measuring 8'=1" and copy should be submitted and proposed building work should be shown marking red colour, The following particulars should be submitted about the proposed construction works:-

Table 32

(a) Quantity of surrounding area .....,.....
..... Ground floor .....
Ist floor.....2nd floor.....3rd floor.
;.....4th floor.....

(b) The distance of the proposed construction works from the roads, lanes or public road which are attached with the plot:-

(c) The wide of the road 'b', lanes or public roads;-

(d) The distance of the construction work from the boarder of the plot:-

From the northern boarder ... ... Feet.

From the eastern boarder ... ... Feet.

From the western boarder ... ... Feet.

From the centre of the road,
lane and plot attached road ... ... Feet.

From the nearest building ... ... Feet.

From the southern boarder ... ... Feet.

6. What purpose the proposed building will be used:-

7. Is there any sewrage drain facility in the area:-

(a) Distance of the plot from the sewrage drain:-

(b) Whether the applicant is interested to connect his toilet with that sewrage drain:-

8. Is there any septic tank in the proposed plot? (For each toilet there should be septic tank or there, should be a connection with the sewage connection and the position and map of the septic tank should be shown in the proposed map) ?

9. When the proposed construction or digging will be started:-

10. Is there any circulated by anybody to construct the building or pond without the permission of the concerning map approval officer?-

11. Is there any suit filed against you under the East Bengal act under clause 12 for constructing the building ?

12. The legality and right of the application the plot:-

Table 32

13. Explain on the proposed digging work:-

(a) Boundary:-

(b) Distance from the attached road, lane and public road:-

(c) Distance from another boundary of the plot:-

(d) Distance from the nearest building:-

(e) Purpose:-

14. I, Mr./Mrs. Praying with area map.....copies of building/map of pond and.....Taka with fee and declare that the submitted map is correct measured and the particulars stated above are true and I would like to request you to please approve the map and give me the permission to start the construction work and obliged thereby.

Dated:

.....

Name and Address of the Applicant.

বাংলাদেশ গৃহ নির্মাণ আইন, ১৯৫২ সালের ৩ ধারা মতে ইমারত নির্মাণের/খনন কার্য অনুমোদনের

আবেদন পত্র

Table 33

১। আবেদনকারীর নাম :—

২। ঠিকানা :—

৩। যে দাগে প্রস্তাবিত ইমারত তৈয়ারী/মাটি খনন করা হইবে উহার বিস্তারিত বিবরণ :

(ক) পৌরসভার নাম :—

(খ) বসত বাড়ীর নং :—

(গ) ওয়ার্ডের নম্বর :—

(ঘ) রাস্তার নাম :—

(ঙ) মৌজার নাম : —

(চ) কর নির্দ্ধারণ তরিপের দাগ নং (যদি দাগ কর নির্দ্ধারণ তরিপের অংশবিশেষ হয় তবে উহা অনুগ্রহ পূর্বক মৌজা নক্সায় দেখাইতে হইবে)।

(ছ) সিট নং :—

(জ) দরখাস্তকারীর দাগের অংশের পরিমাণ :—

৪। অনুগ্রহ পূর্বক পূর্ব নির্মিত কাঠামো এলাকা নক্সায় দেখাইয়া নিম্ন লিখিত বিবরণ পেশ করুন :—

(ক) মোট পূর্ব নির্মিত ইমারতাদির সংখ্যা :—

(খ) মোট পূর্ব নির্মিত ইমারতাদির দ্বারা বেষ্টিত স্থানের পরিমাণ :

(গ) মোট পূর্ব নির্মিত কুড়ে ঘরের সংখ্যা :—

(ঘ) মোট পূর্ব নির্মিত কুড়ে ঘরের দ্বারা বেষ্টিত স্থানের পরিমাণ :

(ঙ) যদি পূর্ব নির্মিত ইমারত বা কুড়ে ঘর দ্বারা বেষ্টিত স্থান থাকে তবে উহা প্রস্তাবিত নির্মাণ কার্য্য অনুমোদনের সঙ্গে সঙ্গে ভাঙ্গিয়া ফেলিতে হইবে।

৫। অনুগ্রহ পূর্বক ৬৬ = ১" মাপের অঙ্কিত এলাকা নক্সা ন্যূনপক্ষে ৪ কপি এই ফরমের সহিত জমা দিতে হইবে উক্ত এলাকা নক্সায় দাগ এবং রাস্তা, বা গলি যাহার সহিত দাগ সংলগ্ন আছে উহার সহিত সম্পর্ক রাখিয়া প্রস্তাবিত নির্মাণ কার্য্য অবশ্যই দেখাইতে হইবে এবং বিস্তারিত ইমারতের নক্সা, ইমারতের দৃশ্য এবং ভাগের অংশ বিশেষ ৮' = ১" মাপে এবং কর্ড দাখিল করিতে হইবে এবং প্রস্তাবিত নির্মাণ কার্য্য লাল রং এ রঞ্জিত করিয়া দেখাইতে হইবে। প্রস্তাবিত নির্মাণ কার্য্য সম্বন্ধে নিম্নলিখিত বিবরণাদি পেশ করিতে হইবে।

(ক) বেষ্টিত এলাকার পরিমাণ।

... ... — ... ১ম তলা ... .২য় তলা.... ... ...৩য় তলা।

... ... ৪র্থ তলা ... ... ৫ম তলা।

(খ) যে সমস্ত রাস্তা গলি বা সাধারণ চলাচলের পথ যাহা দাগ সংলগ্ন উহা হইতে প্রস্তাবিত নির্মাণ কার্যের দূরত্ব :—

(গ) 'ক' বর্ণিত রাস্তা, গলির বা সাধারণ চলাচলের পথের প্রস্থ :—

(ঘ) দাগের সীমানা হইতে নির্মাণ কার্যের দূরত্ব :—

উত্তর সীমানা হইতে ... ... ফুট,
পূর্ব সীমানা হইতে .. .. ফুট,
দক্ষিণ সীমানা হইতে ... . ফুট,
পশ্চিম সীমানা হইতে .... ফুট,
দাগ সংলগ্ন রাস্তা, গলি বা পথের কেন্দ্র হইতে... ..... ফুট,
নিকটবর্তী ইমারত হইতে ... ...— ফুট,

৬। প্রস্তাবিত নির্মাণ কার্য্য কি উদ্দেশ্যে ব্যবহৃত হইবে :—

৭। এলাকায় কোন মল নিষ্কাশণের নালা আছে কিনা :—

(ক) মল নিষ্কাশণের নালা হইতে দাগের দূরত্ব :—

(খ) আবেদনকারী পায়খানার সহিত উক্ত নালায় সংযোগ স্থাপন করিতে ইচ্ছুক কিনা ?

প: পৃ: ও:—

Table 33

৮। প্রস্তাবিত দাগে কোন সেপ্টিক ট্যাঙ্ক আছে কিনা ? (প্রত্যেক নূতন পায়খানার জন্য সেপ্টিক ট্যাঙ্ক বা মল নিষ্কাশনের নালার সহিত সংযোগ থাকিতে হইবে এবং সেপ্টিক ট্যাংকের অবস্থান ও নক্সা প্রস্তাবিত নক্সায় অবশ্যই দেখাইতে হইবে) ?

৯। প্রস্তাবিত নির্মাণ/খনন কার্য্য কখন শুরু করিবেন ?

১০। নক্সা অনুমোদনকারী অফিসারের পূর্ব অনুমতি ব্যতিত ইমারত বা পুকুর খনন কার্য্য করিবার জন্য ইজারা দেওয়া হইয়াছে কিনা ?

১১। এই নির্মাণ কার্যের জন্য আপনার বিরুদ্ধে পূর্ব বাংলা গৃহ নির্মাণ আইনের ১২ ধারা মতে কোন মামলা দায়ের করা হইয়াছে কিনা ?

১২। দাগের উপর আবেদনকারীর স্বত্ব ও অধিকার :—

১৩। প্রস্তাবিত খনন কার্যের বিবরণ :—

(ক) সীমানা :—

(খ) সংলগ্ন রাস্তা, গলি বা চলাচলের পথ হইতে দূরত্ব :—

(গ) দাগের অন্যান্য সীমানা হইতে দূরত্ব :—

(ঘ) নিকটবর্তী ইমারত হইতে দূরত্ব :

(ঙ) উদ্দেশ্য :—

১৪। আমি, জনাব/মহাশয়/বেগম/মহাশয়া ... ... এলাকা নক্সাসহ ... ... ফর্দ ইমারতের/পুকুরের নক্সা এবং ... ... টাকা মাশুলসহ আবেদন করিতেছি এবং ঘোষণা করিতেছি যে, দাখিলকৃত নক্সা সঠিক মাপযুক্ত এবং উপরে লিখিত যাবতীয় বিবরণাদি সত্য; এবং অনুরোধ করিতেছি যে, আমার নক্সা অনুগ্রহ পূর্বক অনুমোদন করতঃ নির্মাণ কার্য্য আরম্ভ করিতে অনুমতি দিতে আজ্ঞা হয়।

... ...

তাং— আবেদনকারীর স্বাক্ষর ও ঠিকানা

গণ-প্রজাতন্ত্রী বাংলাদেশ সরকারের প্রধান সাধারণ [illegible]

সিডি / ডিএ-১ / ৪(৮) / ৮৫-২৭১ তাং ৭-৮-৮৩ নং স্মারক মোতাবেক বাংলাদেশ গৃহ নির্মাণ আইন, ১৯৫২ সালের ৩ ধারা মতে ইমারত নির্মাণের / খনন কার্য অনুমোদনের

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Table 34

আবেদন পত্র

১। আবেদনকারীর নাম :—

২। ঠিকানা :—

৩। যে দাগে প্রস্তাবিত ইমারত তৈয়ারী / মাটি খনন করা হইবে উহার বিস্তারিত বিবরণ :—

ক) পৌরসভার নাম :—

খ) বসত বাটীর নাম :—

গ) ওয়ার্ডের নম্বর :—

ঘ) রাস্তার নাম :—

ঙ) মৌজার নাম :—

চ) কর নির্দ্ধারণ জরিপের দাগ নং (যদি দাগ কর নির্দ্ধারণ জরিপের অংশ বিশেষ হয় তবে উহা অনুগ্রহ পূর্বক মৌজা নক্সায় দেখাইতে হইবে)।

ছ) সিট নং :—

জ) দরখাস্তকারীর দাগের অংশের পরিমাণ :—

৪। অনুগ্রহ পূর্বক পূর্ব নির্মিত কাঠামো এলাকা নক্সায় দেখাইয়া নিম্নলিখিত বিবরণ পেশ করুন :—

ক) মোট পূর্ব নির্মিত ইমারতাদির সংখ্যা :—

খ) মোট পূর্ব নির্মিত ইমারতাদির দ্বারা বেষ্টিত স্থানের পরিমাণ :—

গ) মোট পূর্ব নির্মিত কুড়ে ঘরের সংখ্যা :—

ঘ) মোট পূর্ব নির্মিত কুড়ে ঘরের বেষ্টিত স্থানের পরিমাণ :—

ঙ) যদি পূর্ব নির্মিত ইমারত বা কুড়ে ঘর দ্বারা বেষ্টিত স্থান থাকে তবে উহা প্রস্তাবিত নির্মাণ কার্য্য অনুমোদনের সঙ্গে সঙ্গে ভাঙ্গিয়া ফেলিতে হইবে।

৫। অনুগ্রহ পূর্বক ৬৬´´=১´´ মাপে অঙ্কিত এলাকা নক্সা ন্যূনপক্ষে ৪ কপি এই ফরমের সহিত জমা দিতে হইবে উক্ত এলাকা নক্সায় দাগ এবং রাস্তা বা গলি যাহার সহিত দাগ সংলগ্ন আছে উহার সহিত সম্পর্ক রাখিয়া প্রস্তাবিত নির্মাণ কার্য অবশ্যই দেখাইতে হইবে এবং বিস্তারিত ইমারতের নক্সা, ইমারতের দৃশ্য এবং ভাগের অংশ বিশেষ ৮´=১´ মাপে এবং কপি দাখিল করিতে হইবে এবং প্রস্তাবিত নির্মাণ কার্য্য লাল রং এ রঞ্জিত করিয়া দেখাইতে হইবে। প্রস্তাবিত নির্মাণ কার্য্য সম্বন্ধে নিম্নলিখিত বিবরণ পেশ করিতে হইবে।

ক) বেষ্টিত এলাকার পরিমাণ :

১ম তলা ২য় তলা ৩য় তলা

খ) যে সনদ রাস্তা, গলি বা সাধারন চলাচলের পথ যাহা দাগ সংলগ্ন উহা হইতে প্রস্তাবিত নির্মাণ কার্যের দূরত্ব।

গ) 'খ' বর্ণিত রাস্তা, গলি বা সাধারণ চলাচলের পথের প্রস্থ :

ঘ) দাগের সীমানা হইতে নির্মাণ কার্যের দূরত্ব :

উত্তর সীমানা হইতে ... ... ফুট,

পূর্ব সীমানা হইতে ... ... ফুট,

দক্ষিণ সীমানা হইতে ... ... ফুট,

পশ্চিম সীমানা হইতে ... ... ফুট.

দাগ সংলগ্ন রাস্তা, গলি বা পথের কেন্দ্র হইতে — ... ফুট,

নিকটবর্তী ইমারত হইতে ... ... — ফুট,

(পর পৃঃ দ্রঃ)

৬। প্রস্তাবিত নির্মাণ কার্য্য কি উদ্দেশ্যে ব্যবহৃত হইবে :—

৭। এলাকায় কোন মল নিকাশনের ব্যবস্থা আছে কিনা :—

ক) মল নিকাশনের নালা হইতে দাগের দূরত্ব :—

খ) আবেদনকারী কি পায়খানার সহিত উক্ত নালার সংযোগ স্থাপন করিতে ইচ্ছুক কিনা ?

৮। প্রস্তাবিত দাগে কোন সেপটিক ট্যাংক আছে কিনা ? (প্রত্যেক নূতন পায়খানার জন্য সেপটিক ট্যাংক বা মল নিকাশনের নালার সহিত সংযোগ থাকিতে হইবে এবং সেপটিক ট্যাংকের অবস্থান ও নক্সা প্রস্তাবিত নক্সায় অবশ্যই দেখাইতে হইবে।

৯। প্রস্তাবিত নির্মাণ / খনন কার্য্য কখন শুরু করিবেন ?

১০। নক্সা অনুমোদনকারী অফিসারের পূর্ব অনুমতি ব্যতিত ইমারত বা পুকুর খনন কার্য্য করিবার জন্য ইস্তাহার দেওয়া হইয়াছে কিনা :

১১। এই নির্মাণ কার্য্যের জন্য আপনার বিরুদ্ধে পূর্ব বাংলা গৃহ নির্মাণ আইনের ১২ ধারা মতে কোন মামলা দায়ের করা হইয়াছে কিনা ?

১২। দাগের উপর আবেদনকারীর স্বত্ব ও অধিকার :

১৩। প্রস্তাবিত খনন কার্য্যের বিবরণ :—

ক) সীমানা :-

খ) সংলগ্ন রাস্তা, গলি বা চলাচলের পথ হইতে দূরত্ব :

গ) দাগের অন্যান্য সীমানা হইতে দূরত্ব :

ঘ) নিকটবর্তী ইমারত হইতে দূরত্ব :

ঙ) উদ্দেশ্য :—

১৪। আমি, জনাব/মহাশয়/বেগম/মহাশয় ... ... —

এলাকা নক্সাসহ ... ... কর্দ ইমারত/পুকুর নক্সা ... ...

আবেদন করিতেছি এবং ঘোষণা করিতেছি যে, দাখিলকৃত নক্সা সঠিক মাপযুক্ত এবং উপরে লিখিত বাবতীয় বিবরণাদি সত্য এবং অনুরোধ করিতেছি যে, আমার নক্সা অনুগ্রহ পূর্বক অনুমোদন করতঃ নির্মাণ কার্য্য আরম্ভ করিতে অনুমতি দিতে আজ্ঞা হয়।

আরো উল্লেখ করিতেছি যে, উপরোক্ত প্রস্তাবিত জমির উপর ইতিপূর্বে কোন প্ল্যান অনুমোদন করা হয় নাই।

উপরোল্লিখিত বিবরণ সত্য

আবেদনকারীর স্বাক্ষর ও ঠিকানা

চেয়ারম্যান—

তারিখ ... ...

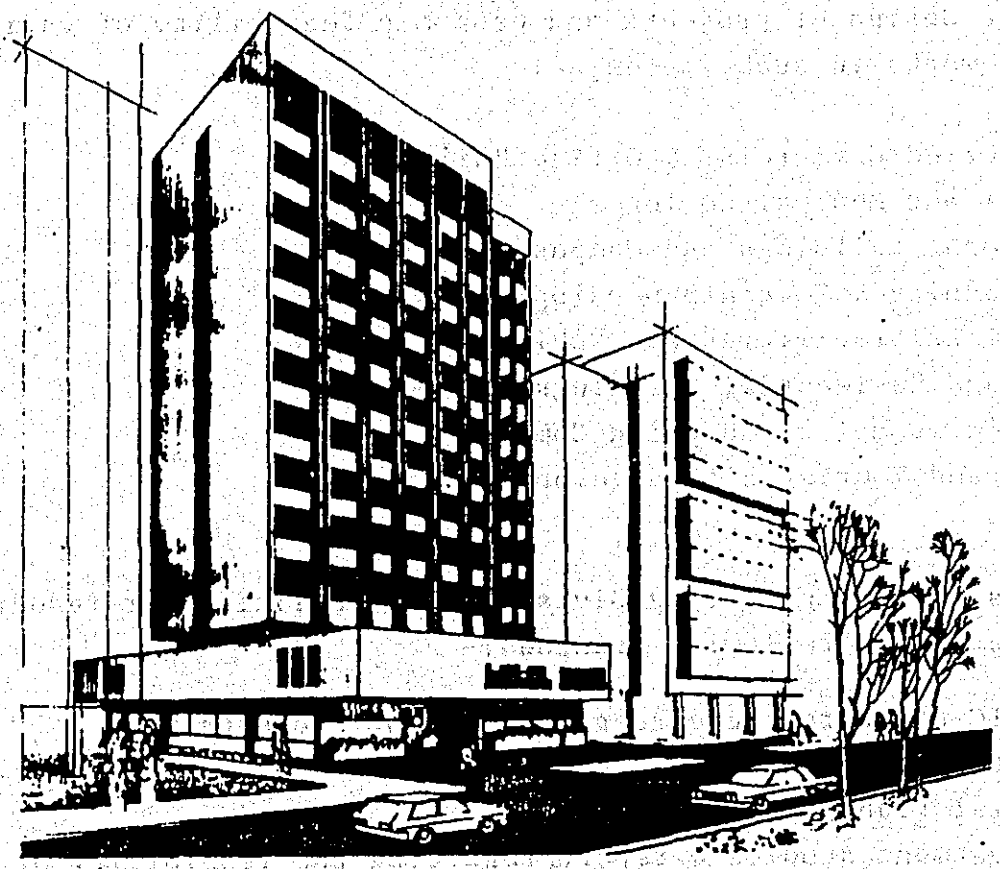
... ... ইউনিয়ন পরিষদ।

REVISED HIRE CHARGES RATES OF MACHINERIES AND T&P'S UNDER P.W.D.MECHANICAL WORKSHOP DIVISION, DHAKA WITH EFFECT FROM 21-7-80:

Sl. No.	Name of Machine	DEPARTMENTAL RATE Half Day	DEPARTMENTAL RATE Full Day.	PRIVATE PARTY Half Day	PRIVATE PARTY Full Day	P/Party ½ Day	P/Party Full Day.
				With Fuel		Without Fuel	
.	'C' Pull Scraper No-4,93, 96,611 & 612.	2925/-	5850/-	3217/50	6435/-	2267/46	4534/92
.	'D' Pull Scraper No-1,2 & 94.	1434/-	2868/- ~~1577~~	1577/-	3154/-	1034/12	2068/24
.	Bull Dozer No-95 & 107.	1806/-	3612/-	1986/50	3973/-	1172/18	2344/35
.	Grader No-83.	1020/-	2040/-	1122/-	2244/-	579/12	1158/24
.	Grader No-101 & 102.	1011/-	2023/-	1112/50	2225/-	705/34	1410/68
.	Crane No-108,167 & 323.	1153/50	2307/-	1269/-	2538/-	929/70	1859/40
.	Trailer No-92.	1691/-	3382/-	1860/-	3720/-	1520/70	3041/40
.	Water Tanker No-3285,3289 & 3292.	938/-	1876/-	1031/50	2063/-	895/78	1791/56
,	International Dumper No-853 & 854.	948/50	1897/-	1043/-	2086/-	839/42	1678/84
0.	Truck No-160,852,856,865, 6630,7541,1036,1037,1038, 1039 & 1040.	538/50	1077/-	592/50	1185/-	456/78	913/56
1.	Dumper No-6629,6631,8902, 8903,7539 & 7540.	574/50	1149/-	632/-	1264/-	496/28	992/56
2.	10/12 Tons Road Roller No-1 (3 Wheel).	1489/-	978/-	537/50	1075/-	401/78	803/56
3.	Roller No-2 & 3.	483/-	966/-	531/-	1062/-	395/28	790/56
..	4/6 Tons Road Roller No-4.	385/-	770/-	423/50	847/-	287/78	575/56
	10/12 Tons Road Roller No-5.	441/-	882/-	485/-	970/-	349/26	698/56
6.	10/14 Tons Road Roller No-6 & 7.	566/-	1132/-	622/50	1245/-	486/78	973/56
7.	Road Roller No-8.	573/50	1147/-	631/-	1262/-	495/28	990/56
8.	Road Roller No-12 to 17.	486/-	972/-	534/50	1069/-	4[illegible]/78	797/56
9.	Road Roller (2 Wheel) 8/10 Tons No-18 & 19.	615/-	1230/-	676/50	1353/-	540/78	1081/56
0.	Road Roller No-20 to 23 (8/10 Tons.)	632/-	1264/-	695/-	1390/-	559/28	1118/56
1.	Tamping 9 Wheel Road Roller (New) Hyster Roller (New).	670/-	1340/-	717/-	1834/-	581/28	1162/56
2.	Loader No-2,3,4 & 6 (New).	1549/-	3098/-	1703/50	3407/-	1432/06	2864/12
3.	Tractor No-157.	300/-	600/-	330/-	660/-	126/42	252/84
.	Barber Greene (Paver Finisher)	2212/50	4425/-	2434/-	4868/-	2298/25	4596/50
.	Stone Crushing Plant.	325/-P/Cft. With effect from 1-1-82.					358/- P/Cft.

6. [illegible]
7. Fork lift 1,8[illegible]/32
8. Air compressor [illegible] 3116/32
9. Mixture Machine — 180/= fuel

Sd/-Illegible.
Executive Engineer,
P.W.D.Mech.Workshop Division,
Dhaka.



INDEX ARCHITECTS LTD

SCOPE OF SERVICES:

The Company's activities are divided into following sphere:- Architecture and Physical Planning Division, General Engineering and Water Resources Divisions. This combination gives a unique blend of dynamism & originality.

The Architecture and Physical Planning Division assets large & small Govt., Semi-govt., autonomous and private bodies in all over Bangladesh with the design of projects and economic feasibility of various development works in such fields as:-

Multistoried Commercial & Office Buildings
Hospital and Medical Colleges
Educational Buildings and Campus Planning
City Planning & Township Development
Recreational facilities and Public Buildings
Hostel and Residential Buildings
Industrial Complex, Shopping Complex
Tourism and Tourist site development.

The Consulting Engineering Division has facilities for rendering services in the following branches:-

HyDRAULIC AND Water Resources Development Projects
Agriculture & Urban Development Projects
Industrial Plants
Pre-investment studies & reports regarding the feasibility of proposed projects.
Field survey for various types of technical, socio-economic & land use surveys.

Supervision and interpretation of results of site drilling programme for investigation and sub-soil condition.
Setting up procedure for the procurement, inspecting and testing of materials.
Submission of prgress reports and budget estimates.
Supervision, inspection and quality control of construction.

BRIEF PARTICULARS OF THE FIRM:

1. Name of the firm	:	INDEX ARCHITECTS LTD.	
2. Address	:	Dhaka Office:	Chittagong Office:
		Ahmed Mansion 1st floor 1, (28/b old) Dhanmondi Residential Area, Road No. 1, Dhaka. Bangladesh.	House No: 11 Jamal Khan Road Chittagong.
		TEL: 5 0 2 5.2 5 5 0 8 1 0 8	TEL: 2 0 8 1 0 7
3. Year of Establishement	:	1977	
4. Constitution/Status of the firm	:	Private Limited Company.	
5. Particulars of Registration	:	Registration Nos:	
		i. Index Architects, PF-22726/78	
		ii. Index Architects Ltd.	
		C-8049/906 of 1979-80 dated 6.6.80	
		Under the Companies Act(Act-VII), 1913.	
6. Income Tax Certificate	:	GIR No. 1139/COY-I(E), Dhaka. (East Zone).	
7. Principals of the Firm	:	a. Md. Mazherul Quader	B. Arch. MIAB.
		b. A.K.M. Nuruzzaman	B. Arch. MIAB.
		c. Md. Samsul Haque	B. Arch. MIAB.
		d. Ferdous A. Chowdhury	B. Arch. MIAB.
		e. Nurun Nahar Mili	B. Arch. MIAB.
		f. Md. Abdul Wadud	B. Sc. Engg. (Civil).
		g. Md. Shariful Islam	B. Sc. Engg. (Civil).

7. Associates :

a. ARCHITECTURAL & ENGINEERING:

1. M/s. Engineering Consultants & Associates Ltd.
   8, Dhanmondi Residential Area,
   Road No. 2, Dhaka-5, Bangladesh.

2. M/s. Design Associates
   Dhanmondi Residential Area
   Road No. 18, Dhaka, Bangladesh.

b. ELECTRICAL, MECHANICAL, SEWERAGE & PLUMBING:

1. M/s. Technological Services Ltd.
   399, Dhanmondi Residential Area
   Road No. 28, Dhaka, Bangladesh.

c. SUBSOIL INVESTIGATION & TESTING:

1. M/s. Subsoil Engineers
   39, New Elephant Road,
   Dhaka-5.

   TEL: 3 1 8 3 3 3

2. M/s. M. Ahmed & Co.
   198, Malibag
   Dhaka.

   TEL: 3 1 4 3 2 8

d. STRUCTURAL ENGINEERING:

1. M/s. Associated Structural Engineers
   and Architects.
   55/G, Dhanmondi R.A., Road No. 9A

   TEL: 3 2 6 6 6 5

e. LAND SURVEY & CARTOGRAPHY:

1. M/s. Bangladesh Survey Organisation Ltd.
   House No. 143/B(Old), Road No. 5
   Dhanmondi R.A., Dhaka-5.

   TEL: 3 1 5 2 2 3

8. Bankers :

1. M/s. Janata Bank
   Dhaka College Gate Branch, Dhaka.

2. M/s. American Express
   Agrabad C.A., Chittagong.

LIST OF LOCAL SUB -CONTRACTOR.

1. CONCORD ENGINEERS & CONSTRUC LTD.
   43, NORTH COMMERCIAL AREA.
   GULSHAN, DHAKA.

   PHONE : 600273 - 4,
   TLX : 642563 CORD BJ.
   CABLE : LANCER DHAKA.

   MANAGING DIRECTOR : MR. S. M. KAMAL.

   WORK DONE :

   a) SHILPA BANK 25th STORIED BLDG.
   b) JIBAN BIMA 26th STORIED BLDG.
   c) SO MANY COMMERCIAL, GOVT. & FOREIGN COMPANIES BLDG.

2. RANA CONSTRUCTION CO.,LTD
   282, DHANMANDI RESIDENTIAL AREA.
   ROAD NO, 25, DHAKA - 5.

   PHONE : 311689, 319610.
   CABLE : " ARCICI " DHAKA.

   MANAGING DIRECTOR : MR. S. Q. HODA.

   WORK DONE : (BIG ONE ONLY)

PROJECT.	COST
CONSTRUCTION OF SUPERSTRUCTURE	TK. 30,789,753.89
BANGLADESH BANK PRESS BUILDING	TK.141,057,136.69
BANGLADESH INSULATER & SANITARY WARE FACTORY	US $ 4.33 MILLION.

3. GEO CON LTD.
6, MOTIJHEEL COMMERCIAL AREA,
DHAKA - 2, G. P. O. BOX - 2994.

PHONE : 232366, 238770, 411672.

MANAGING DIRECTOR : ENG. AFTAB HOSSAIN BHUYAN.

WORK DONE :

a) ELECTRICAL PROJECT IN LIBYA : US $ 30.00 MILLION.
b) 100 BED NURSING UNIT AT CMH. JESSORE CANTONMENT TK. 15,000,000.00
c) RANGPUR T.V. RELAY STATION US.$ 5 MILLION

BUILDING & BRIDGE PROJECT

1. THE ENGINEERS LTD.
48, DILKHUSHA COMMERCIAL AREA,
DHAKA - 2

PHONE : 412115, 252223, 235383.
CABLE : PILE, DHAKA

MANAGING DIRECTOR : SAYEDUR RAHAMAN KHAN

WORK DONE :

		COST
i)	3 MAJOR BRIDGE IN DHAKA -CHITTAGONG ROAD	US $ 70 MILLION.
ii)	BORAL RIVER BRIDGE AT BHAGHABARI, PABNA	US $ 50 MILLION.
iii)	NATIONAL ASSEMBLEY BLDG.	US $ 30 MILLION.
iv)	HOTEL SONERGAON	US $ 50 MILLION.
v)	THARMAL POWER STATION	US $ 45 MILLION.

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
Facilities Department, Ministry of Education,
SHIKKHA BHAVAN, DHAKA
Tender Notice No. 85/2/U.C./11 Dated, Dhaka, The 24th March, 1985

TENDER NOTICE

Sealed Tender in B.D. Form 2911 are hereby invited from the enlisted A1 Contractors of this Department for development of the following Government Colleges under the scheme Special Development of 8 (Eight) Government Colleges for post Graduate Teaching.

Group No.	Name of work	Estimated cost (Taka)	Earnest money (Taka)	Price of Each Tender documents (Non-Refundable)	Period of completion in Months.
1.	Construction of 2nd & 3rd floor of existing Science Building of A.M. College, Mymensingh	20,50,000/-	42,000/-	600/-	09 (Nine)
2.	Construction of 1st floor of newly constructed Hostel Building of B.L. College, Daulatpur, Khulna.	17,00,000/-	34.000/-	500/-	09 (Nine)
3.	Construction of 1st floor of Degree Hostel Building of Victoria College, Comilla.	24 00,000/-	48,000/-	650/-	09 (Nine)

Tender documents may be obtained from the undersigned on all working days during office hours. Sale of tender documents will be closed ONE DAY BEFORE the date of receiving the tenders.

Tender will be received by the undersigned on 11.4.85 upto 12.00 Noon and will be opened on the same, at 12.30 p.m. in the presence of the tenderer if therebe any.

Each tender must accompany a Bank Draft/Pay Order from any schedule Bank of Bangladesh for an amount shown against the works as earnest money in favour of the DIRECTOR, FACILITIES DEPARTMENT, MINISTRY OF EDUCATION, SHIKKHA BHAVAN, DHAKA.

Contractors should submit certificate of satisfactory completion of multistoried building works of this department for a minimum of Tk. 10.00 lacs in a single work order in duplicate and two copies of work order.

An upto date income tax clearance certificate showing the amount paid by the contractor with G I.R.No. for current year & last year.

Document of departmental contractor with upto date renewal fees needed.

Financial solvency certificate for capital investment of Tk. 20.00 (Twenty) lacs at a time duly certified by a Bank Manager of any schedule Bank showing last two years transaction out of which in any time the bank balance will be at 5.00 (Five) lacs.

Department may supply some material as per departmental issue rate.

To purchase tender documents permission shall have to be obtained from the undersigned on submitting relevant papers as mentioned above with attested photo of the owner. All other informations, instructions relating to the above will be seen in the office notice board. The tenderers must follow the instructions, terms and conditions etc. as laid down in the tender documents.

(K.P. KAR)
Executive Engineer.

DFP(G)2589(2)25/3 GC—836

Tender Notice

UNIVERSITY OF DHAKA—(1) Fresh Sealed tenders in Dhaka University form 'Tender for works' are hereby invited from the enlisted contractors (Bldg) of Dhaka University for the undermentioned work and will be received by the undersigned up to 12 noon on 3rd April, 1985 and will be opened on the same day at 12.15 p.m. in presence of the contractors who may remain present.

1. Name of work:—Construction of 4th storey over Bldg. No. 43 at Azimpur Area, Dhaka University.
2. Estimated cost :— Tk. 11,48,979|00.
3. Earnest money :— Tk. 22,980|-.
4. Time allowed for 90 (ninety) days from the date of issue of work order.

Tender forms, schedule of items of work, special terms and conditions may be had from the office of the undersigned on all working days except on the date fixed for submitting the tender on payment of Tk. 200|- (non-refundable) to the office of the Director of Accounts after the showing the necessary enlisted papers endorsed by the undersigned.

The authority reserves the right to accept or reject any tender without assigning any reason. The contractors are liable to abide by the decision of the authority. Tender forms, schedule of items of work, tender notice and special terms and conditions etc. will be the integral part of the tender. Contractors should write the name of the works and their firms name on the envelope clearly.

Sd|- Amir Hossain.
Executive Engineer,
University of Dhaka.

GC—9729

Bangladesh Telegraph & Telephone Board

Office of the Director, Building Construction, 2|A, New Airport Road, Dhaka-15.

RE-TENDER NOTICE

Sealed tenders are hereby invited by the undersigned from the specified enlisted Contractor of B. T&T Board Dhaka for under mentioned works. For undertaking the electrical works they must associate with an enlisted electrical Contractor of B. T&T Board or any Electrical Firm having ABC working licence and supervisory licence from the Govt. Electricity licencing Board. The letter of Association from the Electrical Associates and attested photo copies of the licences are to be accompanied alongwith the tender papers.

For tender in Sl. No. 1 & 2, the enlisted B Class Contractors of B. T&T Board having executed work of more than Tk. 9.00 lakhs in a single tender, supported by completion certificate of work from the execution authority, are also eligible to participate.

Tender documents for all works may be obtained from the office of the undersigned and for Sl. No. 1, 3 & 4 from Divisional Engineer, Building Construction Agrabad, Chittagong, on all working days on payment as shown against each work. No tender paper will be sold on the date of opening of the tender.

The tender will be received by the undersigned on 9-4-85 at 12.00 hours and will be opened at 12.15 hours on the same day in presence of the tenderers willing to be present. The tender should be submitted separately for each work with their names written clearly on the top of the tender cover.

Each tender must be accompanied with Earnest Money @ 2½% of the total quoted amount in the form of Pay Order or Bank Draft from any scheduled Bank of Bangladesh or Govt. Saving Certificate, in favour of the respective Divisional Engineer as mentioned against each work.

The authority reserves the right to reject or to accept any tender in any part or full and to waive any irregularity of a tender if it is the interest of B.T&T Board without assigning any reasons whatsoever.

Sl. No.	Name of works.	Estimated cost in Tk.	Price of tender paper.	Contractors illegible to compete	Earnest money to be submitted in favour of
1.	Construction of Telephone Exchange Building at Rangamati.	13,24,302/-	350/-	A & B (As specified)	DEBC Chittagong
2.	Construction of Telephone Exchange Building with Electrification at Sherpur.	13,48,924/-	350/-	A & B (As specified)	DEBC Project.
3.	Construction of 2 units 350 sft Qtr. at Begumganj.	4,53,400/-	100/-	B & C	DEBC Chittagong.
4.	Construction of one unit 550 sft quarter at Feni.	2,93,800/-	75/-	B & C	DEBC Chittagong.

(Md. Rezaul Haque),
Director,
Building Construction, Dhaka.
Phone :- 326738.

DFP(G)247/5(2)23/3 GC—811

Notice Inviting Tenders

Paper Cutting to be submitted.

1. Sealed Tenders in Bangladesh Form No. 2911 are hereby Invited from the Class-I (One) Sanitary and Plumbing Contractors/Firms of P.W.D for the undermentioned works and the tenders will be received by the undersigned as well as by all the Executive Engineers under Mymensingh P.W.D Circle, Mymensingh in their respective Offices upto 12-00 Noon of 1-4-85 and will be opened on the same day at 12.15 P.M. in presence of the tenderers who may like to remain present. Each tender shall be in a sealed cover with the name of work superscribed on it.

2. Name of Work : Contruction of Upa-Zilla Complex in connection with 112 Upa-Zilla one at Kalmakanda-Construction of Munsiff and Magistrate Court with a separate Toilet Providing sanitary and internal Water supply installation.

3. Estimated cost :- Tk. 1,83,044/-

4. (a) Earnest money :- Tk. 3661/-

(b) The tenderers quoting rate less than the rate of estimated cost have to deposit an earnest money amounting to 10% of the estimated cost put to tender instead of depositing 2% earnest money as shown in Sl. 4 (a).

5. Time for completion of the work from the issue of work order :- 2(two) months.

6. Contract documents consisting of Bangladesh Form No. 2911, schedule of items, specifications, terms and conditions, plans etc. can be seen and obtained from the Office of the undersigned and also the Executive Engineer, Kishoreganj P.W.D. Division, Myn./Tangail P.W.D. Division, Tangail/Jamalpur P.W.D Division, Jamalpur during Office hours on payment of usual charges of Tk. 3/- (Non-refundable) per sheet of the tender notice inviting tender schedule of items, additional terms and conditions etc. and a sum of Tk. 25/- (Non-refundable) per copy of the Tender Form No. 2911. The Tender Form may be purchased by the contractor along with Registration book himself or his representative on production of authorised letter bearing the signature of the representative duly attested by the contractor any day during Office hours upto 31.3.85. No Tender Form will be sold on opening date of tender.

7. Notice inviting tenders, schedule of items, additional terms and conditions etc. duly signed by the contractors in every page will form a part of tender and be binding upon the tenderers.

(M.A. Jalil)
Executive Engineer,
Mymensingh P.W.D. Division,
Mymensingh.
Phone : 4276

DFP(G)2566(4)25/3 GC—828

TENDER NOTICE

Sealed tenders are hereby invited by the undersigned for the construction of the Hostel Buildings including sanitary, water supply and Electrification works at Green Road for Dhaka University from the 1st class contractors of Govt., Semi-Govt. and autonomous bodies only, who have successfully completed construction of a single multi-storied building of similar nature in a single work order worth not less than Tk. 45.00 Lakhs with own supply of materials. Tender documents will be available from the office of the undersigned on application duly supported by the following documents/papers during office hours on all working days upto 16th April. The tender will be received on 29-4-85 upto 12 noon and will be opened on the same day at 12-15 p.m. in presence of the bidders who may remain present.

a) Successful completion certificate of work costing Tk. 45.00 (forty five) lakhs or above together with the copy of work order from an officer not below the rank of Executive Engineer. Completion certificate of project consisting of several building and construction of private factory Buildg. & other private construction costing Tk. 45.00 lakhs (forty five) will not be entertained under any circumstances. Consortium will not be allowed.
b) Up-to-date income tax clearance certificate with G.I.R. No.
c) List of technical personnel with their bio-data. The firm must have at least one B.Sc. (Civil) Engineer of 3 years experience and 2 Sub-Asstt. Engineer (Civil) of more than 5 years experience.
d) Trade Licence.
e) List of tools, plants and equipment.
f) Solvency certificate from any schedule Bank.
g) List of successfully completed works with amount during the last 5 (Five) years.
h) Electrical contractor in association with the firm must produce completion certificate of work not less than Tk. 15.00 (fifteen) lakhs from an officer not below the rank of an Executive Engineer.
i) Valid A.B.C. licence for electrical works.
j) Valid A.B.C. electrical supervisory licence of Engineering Supervisor under their employment.
k) The electrical contractor must furnish the list of their electrical staff along with their relevant certificates.
l) Associated electric contractor of the firm must produce all the relevant papers as above before obtaining permission for purchasing tender paper and all the electrical works must be executed by that electrical contractor only.
m) The firm must have a B. Sc. Engineer (Elec.) with minimum 3 years experience or a Diploma Engineer (Elec) with minimum 7 years experience.
n) List of works in hand.

Tenderers whose quoted amount stands at 5% above or below the estimated cost, item wise analysis for all the items must be submitted along with tender. Earnest money as mentioned below must be submitted along with the tender in the form of Bank Draft or Pay Order from any schedule Bank of Bangladesh in favour of the Executive Engineer, Dhaka University.

Tender will summarily be rejected without requisite earnest money. The tender will also summarily be rejected if there is any anomaly in quoting rates both in words and in figures. Over-writing, erasing, if any must be supported by proper initial.

Tenderers must quote their rates at par, above or below for part "A" and item-wise rate for part "B".

The successful bidders shall have to execute performance Bond worth Tk. 4,00,000/- (Taka Four lakh) from any schedule Bank of Bangladesh in addition to the earnest money submitted along with the tender before signing of an agreement with Dhaka University on its standard form which will be refunded after successful completion of the Project.

The University authority reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever.

Sl. No.	Name of work.	Total Estimated cost. Tk.	Earnest money Taka.	Cost of tender paper (non-refundable) Taka.	Time of completion
1.	Hostel Buildings at Green Road for I.B.A., Dhaka University.	Tk. 1,16,67,229/-	Tk. 2,50,000/-	Tk. 2000/-	18 (Eighteen) months.

Sd/- Ataur Rahman.
Executive Engineer,
University of Dhaka.

C—3180

Notice Inviting Tenders

Paper cutting to be submitted

1. Fresh sealed Tenders in Bangladesh Form No. 2911 are hereby invited from the Class-I (one) enlisted Building Contractors/Firms of PWD for the undermentioned works and the tenders will be received by the undersigned as well as by all the Executive Engineers under Mymensingh PWD Circle, Mymensingh in the respective offices upto 12.00 Noon of 31-3-85 and will be opened on the same day at 12.15 P.M. in presence of the tenderers who may like to remain present. Each tender shall be to a sealed cover with the name of work superscribed on it.

2. Name of work :- Construction of Upa-zilla in subsequent phase beyond 5th & 6th phase-One at Dhubaura-Construction of Permanent Residence for Non Gazetted (Unmarried Mess) (First floor) including Sanitary works.

3. Estimated cost :- Tk. 3,38,440.00

4. (a) Earnest money :- Tk. 6769.00

(b) The tenderers quoting rate less than the rate of estimated cost have to deposit an earnest money amounting to 10% of the estimated cost put to tender instead of depositing 2% earnest money as shown in Sl.4(a).

5. Time for completion of the work from the date of issue of work order :- 3 (three) months.

6. Contract documents consisting of Bangladesh Form No. 2911, schedule of items, specifications, terms and conditions, plans etc. can be seen and obtained from the Office of the undersigned and also the Executive Engineer, Kishoreganj PWD. Division, Mymensingh/Tangail PWD. Divn. Tangail/Jamalpur PWD. Divn. Jamalpur during Office hours on payment of usual charges of Tk. 3/- (Non-refundable) per sheet of the tender notice, inviting tender, schedule of items, additional terms and conditions etc. and a sum of Tk. 25/- (Non-refundable) per copy of the tender Form No. 2911. The tender form may be purchased by the contractor along with Registration Book himself or his representative on production of authorised letter bearing the signature of the representative duly attested by the contractor, any day during office hours upto 30.3.85. No Tender form will be sold on opening date of tender.

7. Notice inviting tenders, schedule of items, additional terms and conditions etc. duly signed by the contractors in every page will form a part of tender and be binding upon the tenderers.

(M. A. Jalil)
Executive Engineer,
Mymensingh P.W.D. Divn.
Mymensingh.
Phone : 4276

DFP(G)2567(4)25/3 GC—832

PWD TENDER NOTICE

(2ND CALL)

Phone No. 330 I

Fresh Tenders are invited in Bangladesh Form No. 2911 from the eligible contractors of PWD. for construction of Deputy Commissioner's Court Bldg. (Collectorate Building) for District Headquarters at Lalmonirhat under PWD. Division-II, Rangpur during the year 1984-85 (work divided into four groups) at an estimated cost of Tk. 49,67,460/- for Group No. I (One), Tk. 49,73,180/- for Group No. II (two), Tk. 45,21,769/- for Group No. III (three) & Tk. 43,92,261/- for Group No. IV (four).

The tenders will be received by the undersigned as well as by the Executive Engineer, PWD. Division-II, Dinajpur/Sub-divisional Engineer, P.W.D. Subdivision, Nilphamari upto 12.00 Noon on 9 4.85 and will be opened on the some day at 12.15 P.M. in presence of the contractors who may like to remain present. Earnest money @2% of the estimated cost in T.C./B.D./S.D.R./C.D./ Sanchay patra should accomuany each tender in favour of the undersigned.

Tender documents consisting of Bangladesh Form No. 2911, schedule of items additional terms and conditions etc. can be seen and obtained from the office of the Executive Engineer, P.W.D. Division-I/II, Rangpur/P.W.D. Division-II, Dinajpur/ Subdivisional Engineer, P.W.D. Subdivision-II/III, Rangpur/Nilphamari in any day during office hours upto 5.00 P.M. on 8.4 85 on payment of usual charges as admissible under rules.

(Md. Zulfiqar Hyder.)
Executive Engineer,
P.W.D. Division II,
Rangpur.

DFP(G)2510(4)24/3 GC—813

Table 39

Government of the People's Republic of Bangladesh
Office of the Executive Engineer,
Dhaka P.W.D.Division NO.II,Dhaka.

NOTICE INVITING TENDERS.

(FOR NEWS PAPER ONLY)

1. Sealed tender in Bangladesh form No.2911 are hereby invited from Class-I(one) and Class-'A' enlisted and approved(Bldg.& Sanitary) contractors of P.W.D,for the undermentioned work and will be received by the undersigned and the Executive Engineer,Dhaka P.W.D.Division NO.I,III & City PWD Division,Dhaka upto 12.00 noon on 28/7/84 and will be opened on the same day at 12.15 P.M. in presence of the tenderers who may like to remain present.No tender form will be sold after 26/7/84,

S.N.	Name of work.	Group NO.	Estimated amount.	Earnest money.	Time allowed for Completion.
a).	Construction of 400 man accommodation (Single man barrack)at BDR,Peelkhana,Dhaka i/c.sanitary and water supply arrangement (Half portion in/c.stair)	GroupNO. I.	Tk:55,96,459/-	Tk.1,11,929/-	10(ten) month.
b).	..Do- (Full portion excluding stair)	--do- Group NO.II.-Tk.-9,86,955/-		Tk.99,739/-	10(ten) month.

2. Tender form No.2911 together with the schedule of items,specifications additional terms and conditions etc. can be seenand obtained from the offices of the undersigned and the Executive Engineer,Dhaka P.W.D.Division NO.I,III & City PWD Division,Dhaka during office hours on payment of usual charges @Tk.3/-per page(Non-refundable) for schedule of items of works and addl.terms and conditions etc, and a sum of Tk.25/-per copy of tender form No.2911 upto26/7/84 (both non-refundable).

Copy forwarded to the Advertisement Officer,(Advertisement),Govt. of Bangladesh,Ministry of Information and Broadcasting,Shed No.23,Bangladesh Secttt.,Dhaka for favour of Publication of the above tender notice of the above noted work in 2(two) local daily news papers 1(one) in English and 1(one) in Bengali in single insertion.The Manager of the papers may also be requested to kindly submit their bills in qua-druplicate to this office through proper channel for payment along with the cutting of papers in due course.

Enclo:-1).Tender Notice 10 copies in English.
2). " " 10 copies in Bengali.

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
নির্বাহী প্রকৌশলীর কার্যালয়
ঢাকা পি, ডব্লিউ, ডি, বিভাগ-২
ঢাকা।

" দরপত্র আহবানের নোটিশ "

১। নিম্নে বর্ণিত কাজের জন্য গণপূর্ত দপ্তরের অনুমোদিত এ-শ্রেণী এবং ১ম শ্রেণী (ইমারত ও সেনিটারী) ঠিকাদারদের নিকট হইতে ২৯১১ নং বাংলাদেশ ফরমে শীল মোহরকৃত দরপত্র আহবান করা যাচ্ছে। টেন্ডার ফরম ও প্রয়োজনীয় নথিপত্রগুলি নিম্ন স্বাক্ষরকারীর কার্যালয় ছাড়াও ঢাকা গণপূর্ত বিভাগ নং-১,৩ এবং নগর গণপূর্ত বিভাগের কার্যালয়ে ইং ২৮/৭/৮৪ --- তারিখ দুপুর ১২ ঘটিকা পর্যন্ত গৃহীত হবে এবং ঐ দিনই বিকাল ১২-১৫ মিনিটে ঠিকাদারদের উপস্থিতিতে দরপত্র খোলা হবে। কোন দরপত্র ইং-২৬/৭/৮৪ পর বিক্রী করা হবে না।

এস্টিম নং	কাজের নাম	বরাদ্দকৃত ব্যয়	আর্নেস্ট মানি	কাজ শেষ করার মেয়াদ
(ক)	ঢাকাস্থ পিলখানায় বাংলাদেশ রাইফেলস এর জন্য ৪০০ শত জনের (সিংগেল মেন ব্যারাক) বাসস্থান নির্মাণ এবং তৎসহ সেনিটারী ও পানি সরবরাহের ব্যবস্থা (সিড়িকোটা সহকারে) গ্রুপ নং-১ =	টাকা=৫৫,৯৬,৪৫৯/=	টাকা=১,১১,৯২৯/=	= ১০ (দশ) মাস
(খ)	ঐ ঐ ঐ ঐ ঐ (সিড়ি কোটা ব্যতিত) গ্রুপ নং-২	টাকা=৪৯,৮৬,৯৫৫/=	টাকা=৯৯,৭৩৯/=	১০ (দশ) মাস

২। নিম্ন স্বাক্ষরকারীর কার্যালয় ছাড়াও ঢাকা গণপূর্ত বিভাগ নং-১,৩ এবং নগর গণপূর্ত বিভাগ এর অফিস চলাকালীন প্রচলিত মূল্যে টেন্ডার ফরম সিডিউল অফ আইটেমস ও শর্তাবলী ইং ২৬/৭/৮৪ --- তারিখ পর্যন্ত দেখা ও ক্রয় করা যাইতে পারে (ক্রয় মূল্য ফেরৎ যোগ্য নহে)।

চলিল।

Table 39

Government of the People's Republic of Bangladesh
Office of the Executive Engineer,
Dhaka P.W.D.Division NO.II,Dhaka.

NOTICE INVITING TENDERS.
(To be submitted along with tenders).

1.Sealed tenders in Bangladesh form No.2911 are hereby invited from Class-1(one) and Class-'A' enlisted and approved(Bldg.and Sanitary) contractors of P.W.D. for the undermentioned work and be received by the undersigned and the Executive Engineer Dhaka P'W.D.Division NO.I,III & City PWD Division,Dhaka upto 12.00 noon on 28/7/84 and will be opened on the same day at 12.15 P.M. in presence of tenderers if thereby any.No tender form will be sold after 26/7/84.

2.Name of Work:- Gr.No.I. Construction of 400 men accommodation (Single man barrack) at BDR,Peelkhana,Dhaka,including sanitary and water supply arrangement(Half portion including stair)

Gr.NO.II.Do- -do- -do-
(Half portion excluding stair)

3.Estimated amount:- Gr,No.1=Tk. 55,96,459/- Gr.NO.II= Tk.49,86,955/-

4.Earnest money:- Gr.NO.I=Tk./Tk.1,11,929/- Gr.NO.II=Tk. / 99,739/-

5.Time allowd for completion of work is 10(ten)months from the date of issue of work order for each group.

6.The tender form No.2911 togdther with the schedule of items,addl.terms and conditi etc. can be seen and obtained from the office of the undersigned and the Executive Engineer,Dhaka P W.D.Division NO.I,III & City PWD Division,Dhaka during office hours on payment of usual charges of Tk.3/-per page(non-refundable) for schedule of items of works,special terms and conditions notice etc. and a sum of Tk.25/-per copy of tender form No.2911(Non-refundable).

7.The intending tenderers must produces his registration book of enlistment letter bearing the photo and full signature of the real contractor duly attested by an Executive Engineer,of this deptt.along with challan for depositing the current renewal fees at the time of purchasing of the tender form as in absence of which no tender for will be sold.No complain in this respects will be entertained.

8.The tender fom may be purchased by the contractor himself or his representative on production of authorised letter bearing the signature of the representative duly attested by the contractor.

9.The tender notice,schddule of rates,addl.terms and conditions etc.supplied by the Deptt. shall have to be attached with the tender form duly signed on all pages in appropriate places by the tenderer otherwise the tender is liable for rejection.

10.Notice inviting tenders,schedule of rates ,addl.terms and conditions etc.duly signe by the tenderer in every pages will form a part of the tender and be binding upon the tenderer.

11.Earnest money asper clause No.4 in pratirakha sanchay patra,5 years B.D.sanchay patra or Bonus sanchay patra duly pledged T.C.or B.D. from any scheduled Bank of Bangladesh in favour of the Executive Engineer,Dhaka P.W.D.Division NO.II,Dhaka must accompany each tender.Those who have fixed deposit with this deptt. must quote reference to that effect clearly with which F.D.is lying as in absence of which the tender shall be rejected.Balance earnest money beyond the amount of fixed deposit shall have to be furnished along with the tender in the form of B .D.or T.C.or pratirakha sanchay patra or five years B.D.sanchay patra and bonus sanchay patra duly pledged in favour of the Executive Engineer,Dhaka P'W.D.Division NO.II,Dhaka,otherwise the tender shall be rejected.

12.Tender will be declared informal and will be summerily rejected on the following grounds:-

a).If it is incomplete.

b).If the tenderer has not signed the tender form and the tender schedule of items where rates have been quoted.

c).If there is any descirpency over writting,ambuigity or omission in quoting rates or if correction in the rates is not duly initialled by the tenderers.

d).If any additional condition is inserted by the tenderer.

e).If the requisite earnest money asper clause 4 & 11 above are not furnished along with the tender.

f) .Tender which work out to be more than 5%(five percent) less(Overall) than the estimated cost put to tender will be summarily rejected.

13.The contractor note that the rates containing more than two figures after decimal point will be treated as informal as such type of coins are not vouge.

14.The successful tenderers will have to enter into formal agreement with the deptt. for the purpose he/they will be required to submit duplicate copy of tender in complete form as specified in the clause within 3(three) days from the date of issue of letter communicating the acceptance of his.their tender,failing which his/ their tender will be cancelled and earnest money will be forfeited.In case of fixed deposit holders an amount equivalent to the earnest money will be forfeited as panalty from his/their fixed deposit.Work order will be issued only after execution of the formal tender agreement.

15.In case the tenders are invited afresh for this xxxx particulars work for any reasons the tender of this call will remain valid either for three months or till the final disposal of fresh tender by the competent authority whichever is earlier. Any tenderer other than the lowest one may be allowed to take back his/their earnest money if he.they so like on condition that he/they will re-deposit the same if his/ their tender is accepted.

16.Fixed deposit holder contractor/firm should only be entitled to submit in 2(two) groups at a time in a call of tender which may comprise a number of groups.If a contractor/firm intends to submit tender more than two groups he/they shall deposit earnest money for all other groups except the two groups stated above.

17.The contractor/firm should note that the estimated amount will always be round figures in itemwise and minimum Tk.0/50 will bbe calculated as Tk.1/-(Tk.One) only. In preparing the C.S.the contractor quoted amount will be worked upto paisa to find out the exact position.Figures beyind two digits after decimal point will not be takon into consideration.

18.The rates shall be quoted both in figures and in words on percentage basis i.e. "ATPAR" ?ABOVE OR %LESS" than the rates shown in schedule of items in the 2nd page of B.D.form No.2911 or 1st page of abbreviated form as in absence of which the tender will be rejected.

19.The acceptance of the tender wwill rest with the competent authority of the deptt. who does not bind himself to accept the lowest tender and reserves the right to reject any or all the tenders received without assigning any reasons.

Table 39

20.The intending tenderer will follow the clause No.17 amendments for refund of security money.

21. The tender form No.2911 and specification,addl.terms and conditions will form a part of the contract and be binding upon the contractor.

(MD.ABU NASAR)
Executive Engineer,
Dhaka PWDDivn.II,DA.

Memo.No. Dated.

Copy submitted to:-

1. Chief Engineer,Public Works Department,Bangladesh,Dhaka for favour of kind information.

2.The Superintending Engineer,Dhaka P.W.D.Circle-I,Dhaka with schedule of items (in duplicate) for favour of information and Circulation.

3.Copy to the Executive Engineer,P.W.D.Division.NO.I/III/& City PWD Division,Dhaka with schedule of items 4(four) copies for Sale.

4.Copy to the S.D.E.I/II/III/IV/D.A./H.A./Notice board of this Division and also to Cashier of this Division with 10 copies of schedule of items for Sale.

Name of Work:- Construction of 400 man accommodation (Single man-barrack) at BDR,Pealkhana,Dhaka in/c.sanitary and water supply arrange-
a). Gr.NO.I. } gement(Half portion in/c.stair).
} Estimated amount:=Tk.55,96,459/-
b). Gr.NO.II. } -do- -do- (Half portion excluding stair) Estimated Amount:=Tk.49,86,955/-

Description of items.	Quantity.	Unit.	Rate in Fig & Words.
1). Earth work in excavation of all kinds of mould of foundation trenches including levelling, dressing and preparing the base,bailing out water, if necessary.providing centre line and bench mark with pillers,removing the spoils etc.&x to a lead not exceeding 200-0" upto 5'-0" depth.			
Gr.NO.I.	=28,973 Cft.	Per thousand Cubic feet.	@Tk.371/-(Tk.Three hundred seventy one)Only.
Gr.NO.II.	=27,000 Cft.		
2). One layer of brick flat soling in foundation or floor with 1st class or picked jhama bricks,preparation of bed and filling the interestics with local sand.			
Gr.NO.I.	=10,404 Sft.	Per hundred Square feet.	@Tk.457/-(Tk.Four hundred fifty seven)Only.
Gr.NO.II.	=10,000 Sft.		
3). Reinforced concrete works(4:2:1) with cement best quality coarse sand(2/3rd quantity of best quality local sand(F.M.1.5) and 1/3rd quantity of sylhet or coarse sand of equivalent(F.M.2.5) picked jhama chips in/c.breakir xxxx chips,screening,centering,shuttering,placing of rod in position,mixing the aggregates,casting in forms,compacting and curing(excluding the cost of reinforcement and its fabrication)(in individual continous footing of columns,rafts and floor slab at plinth level.			
Gr.NO.I.	=5305.12 Cft.	Per Cubic foot.@Tk.45/65(Tk.Forty five Paisa sixty five)Only.	
Gr.NO.II.	=4686.24 Cft.		
4).(6:3:1) mass concrete work in foundation with best best quality coarse sand and picked jhama chips,breaking chips,screening,mixing,laying, compacting to level and curing etc.complete.			
Gr.NO.I.	=401 Cft.	Per hundred Cubic feet.	@ Tk.3,400/-(Tk.Three thousand four hundred)Only.
Gr.NO.II.	=350 Cft.		
5). Reinforced concrete works(4:2:1) with cement, best quality coarse sand(2/3rd quantity of best quality local sand(F.M.1.5) and 1/3rd quantity sylhet sand or coarse sand of equivalent(F.M.2.5) ,picked jhama chips in/c.breaking chips and screening,centering, shuttering,placing of rods in position,mixing the aggregates,casting in forms,compacting and curing (excluding the cost of reinforcement and its fabrication)In Tie beams and lintels.			
G.F. Gr.No.I.	=2188 Cft.	Per Cubic foot.@Tk.56/-(Tk.Fifty six)Only.	
Gr.NO.II.	=2000 Cft.		

1	2	3	4	5
1st floor.				
	In Gr.NO.I. =217 Cft. @ In Gr.NO.II. =200 Cft. @		Per Cubic foot. @Tk.57/-(Tk.Fifty Seven)Only.	
2nd Floor.				
	Gr.NO.I. =217 Cft. @ Gr.NO.II. =200 Cft. @		Per Cubic foot. @Tk.58/-(Tk.Fifty eight)Only.	
3rd floor.				
	Gr.NO.I. =217 Cft. @ Gr.NO.II. =200 Cft. @		Per Cubic foot.@Tk.59/-(Tk.Fifty nine)Only.	
3). Reinforced concrete works(4:2:1) with cement, best quality course sand(2/3rd quantity of best quality sand(F.M.1.5) and 1/3rd quantity of sylhet or coarse sand or equivalent(F.M.2.5)picked chips in/c.breaking chips,and screening, ...ing,shuttering,placing of rod in position, ... the aggregates,casting informs,compacting ... curing(excluding the cost of reinforcement ... fabrication)In Pedestail,columns,capitals ... walls and walls.				
a). At low plinth level and in Ground floor.				
	Gr.NO.I. =748 Cft. @ Gr.NO.II. =600 Cft. @		Per Cubic foot.@Tk.67/30(Tk.Sixty seven & Paisa thirty)Only.	
b). First floor.				
	Gr.NO.I. =748 Cft. @ Gr.NO.II. =600 Cft. @		Per Cubic foot.@Tk.68/30(Tk.Sixty eight & Paisa thirty)Only.	
c). 2nd floor.				
	Gr.NO.I. =748 Cft. @ Gr.NO.II. =600 Cft. @		Per Cubic foot.@Tk.69/30(Tk.Sixty nine & Paisa thirty)Only.	
d). 3rd floor.				
	Gr.NO.I. =748 Cft. @ Gr.NO.II. =600 Cft. @		Per Cubic foot. @Tk.70/30(Tk.Seventy & Paisa thirty)Only.	
7). R.C.C.Works(4:2:1)	-do-	-do-		
...do...	-do-	-do-		
In Tee beams,ELL Beams,Rectangular beams, (Exposed breadth and width of ribs to be measured only).				
a). Ground floor.				
	Gr.NO.I. =1670 Cft. @ Gr.NO.II. =1500 Cft. @		Per Cubic foot. @Tk.66/75(Tk.Sixty six & Paisa seventy five)Only.	
b). 1st floor.				
	Gr.NO.I. =1670 Cft. @ Gr.NO.II. =1500 Cft. @		Per Cubic foot. @Tk.67/75(Tk.Sixty seven & Paisa seventy five)Only.	

1	2	3	4	5
c).2nd floor.				
	Gr.NO.I. =1670 Cft.)		Per Cubic foot.	@Tk.68/75(Tk.Sixty eight & Paisa seventy five)Only.
	Gr.NO.II. =1500 Cft.)			
d).3rd floor.				
	Gr.NO.I. =1658 Cft.)		Per Cubic foot.	@Tk.69/75(Tk.Sixty nine & Paisa seventy five)Only.
	Gr.NO.II. =1500 Cft.)			
8).Reinforced concrete works(4:2:1) with cement, best quality coarse sand(2/3rd quantity of best quality local sand(1.5) and 1/3rd quantity of sylhet sand or coarse sand of equivalent(F.M.2.5),picked jhama chips in/c.breaking chips and screening,centering, shuttering,placing of rods in position,mixing the aggregates,casting informs,compacting and curing (excluding the cost of reinforcement and its fabrication)in sunsheds,cornices,railing,drop walls,louvers and fins for all floors(av.2½" to 3¼" thick).upto 3rd floor.				
	Gr.NO.I. =9000 Cft.)		Per Square foot.	@Tk.18/85(Tk.Eighteen & Paisa eighty five)Only.
	Gr.NO.II. =3098 Cft.)			
9).R.C.C.Works(4:2:1)		-do-	-do-	
-do-		-do-	-do-	
In stair case slabs and steps for all floors.				
	Gr.NO.I. =410 Cft.)			
	Gr.NO.II. =Nil)		Per Cubic foot.	@Tk.62/75(Tk.Sixty two & Paisa seventy five)Only.
10.Reinforced concrete works(4:2:1)		-do-		
-do-		-do-	-do-	
In roof slab of all types,cantilever slabs and drop panels,excluding floor slab of ground floor at plinth level.				
a).Groun d floor.				
	Gr.NO.I. =2000 Cft.)		Per Cubic foot.	@Tk.59/30(Tk.Fifty nine & Paisa thirty)Only.
	Gr.NO.II. =1824 Cft.)			
b).1st floor.				
	Gr.NO.I. =2000 Cft.)			
	Gr.NO.II. =1824 Cft.)		Per Cubic foot.	@Tk.60/30(Tk.Sixty & Paisa thirty)Only.
c).2nd floor.				
	Gr.NO.I. =2000 Cft.)		Per Cubic foot.	@Tk.61/30(Tk.Sixty one & Paisa thirty)Only.
	Gr.NO.II. =1824 Cft.)			
d).3rd floor.				
	Gr.NO.I. =2167 Cft.)		Per Cubic foot.	@Tk.62/30(Tk.Sixty two & Paisa thirty)Only.
	Gr.NO.II. =2000 Cft.)			

1	2	3	4	5
11. Supplying, fabrication and fixing to details asper design mild steel rod reinforcement in concrete or brick work of wherever prescribed with straightening and cleaning the rust if any, binding in position with supply of wires for all floors. upto 3rd floor.				
	Gr.NO.I. =2250 Cwt.) Gr.NO.II. =2000 Cwt.)		Per Cwt.	@ Tk.790/-(Tk.Seven hundred ninty)Only.
12. Brick work with 1st class bricks in cement mortar(6:1) in foundation and plinth, raking out joints and curing etc.complete.				
	Gr.NO.I. =2460 Cft.) Gr.NO.II. =2400 Cft.)		Per hundred Cubic feet.	@ Tk.2330/-(Tk. Two thousand three hundred Thirty)Only.
13. Brick work walls of width one brick or one and a half brick length with 1st class bricks in cement mortar(6:1) in superstructure, raking out joints, scaffolding and curing(measurement to be given as 10" width for one brick length and 15" for one and a half brick length).				
a). Ground floor.	Gr.NO.I. =2325 Cft.) Gr.NO.II. =2150 Cft.)		Per hundred Cubic feet.	@ Tk.2407/-(Tk.Two thousand four hundred & seven)Only.
b). 1st floor.	Gr.NO.I. =2325 Cft.) Gr.NO.II. =2150 Cft.)		Per hundred Cubic feet.	@ Tk.2432/-(Tk.Two thousand four hundred thirty two)Only.
c). 2nd floor.	Gr.NO.I. =2325 Cft.) Gr.NO.II. =2150 Cft.)		Per hundred Cubic feet.	@ Tk.2457/-(Tk.Two thousand four hundred fifty seven)Only
d). 3rd floor.	Gr.NO.I. =2325 Cft.) Gr.NO.II. =2150 Cft.)		Per hundred Cubic feet.	@ Tk.2482/-(Tk.Two thousand four hundred eighty two)Only.
e). 4th floor.	Gr.NO.I. =1310 Cft) Gr.NO.II. = Nil)		Per hundred Cubic feet.	@ Tk.2507/-(Tk.Two thousand five hundred & Seven)Only.
14. 5" thick brickwork with 1st class bricks, in cement mortar(6:1) making bond with connected walls, scaffolding, raking out joints and curing in all floor.				
	Gr.NO.I. =1552 Sft.) Gr.NO.II. =1500 Sft.)		Per hundred Square feet.	@ Tk.1105/-(Tk.One thousand one hundred & five)Only.
15. Minimum ½" thick cement plaster(6:1) to walls both innerand outer surfaces, finishing corners and edges and curing in all floors.				
	Gr.NO.I. =21,184 Sft.) Gr.NO.II.)20,000 Sft.)		Per hundred Square feet.	@Tk.278/-(Tk.Two hundred seventy eight)Only.

1	2	3	4	5
16. Minimum ¼" thick cement plaster(4:1) to ceiling, R.C.C.columns,beams,surfaces of stair case,sunsheds, cornices,railing,drop walls,louvers and fins in/c. cleaning the surfaces,finishing corners and edges and curing in all floors.				
	Gr.NO.I. =61,896 Sft.) Gr.NO.II. =60,000 Sft.)	Per hundred Square feet.	@Tk.203/-(Tk.Two hundred three)Only.	
17. 1½" thick damp proof course(4:2:4) in cement concrete with cement,sand,picked jhama chips in/c. breaking chips,screening,centering,shuttering, casting and curing finished witha coat of bitumen.				
	Gr.NO.I. =112 Sft.) Gr.NO.II. =108 Sft.)	Per hundred Square feet.	@ Tk.670/-(Tk.Six hundred seventy)Only.	
18.a).Sand filling in foundation trenches and plinth with fine local sand in 6" layers,watering. and consolidating each layer upto finished level.				
	Gr.NO.I. =25,000 Cft.) Gr.NO.II. =23,000 Cft.)	Per hundred Cubic feet.	@ Tk.200/-(Tk.Two hundred)Only	
18(b).Earth filling in foundation trenches and plinth in 6" layer with earth available within 300 ft.of the building site in/c.watering,consolidating each layer upto finished level.				
	Gr.NO.I. =14,900 Cft.) Gr.NO.II. =13,000 Cft.)	Per thousand Cubic feet.	@ Tk.352/-(Tk.Three hundred fifty two)Only.	
19.3" thick cement concrete flooring with cement best quality coarse sand and picked jhama chips ~~in/c.picked jhama chips~~ in/c.breaking chips, screening,mixing,laying,compacting and curing etc.complete.				
	Gr.NO.I. =4910 Sft.) Gr.NO.II. =4500 Sft.)	Per hundred Square feet.	@ Tk.878/-(Tk.Eight hundred seventy eight)Only.	
20. 1½" thick artificial patent stone(4:2:1) flooring with cement,best quality coarse sand(2/3rd quantity of best local sand (F.M.1.5) and 1/3rd quantity of sylhet sand or coarse sand of equivalent(F.M.2.5) and picked jhama chips in/c.breaking chips,screening, laying the concrete in alternate panels,compacting and finishing the top with neat cement and curing. in all floors.				
	Gr.NO.I. =19,186 Sft.) Gr.NO.II, =19,000 Sft.)	Per hundred Square feet.	@ Tk.677/-(Tk.Six hundred seventy seven)Only.	

1	2	3	4	5

21.1/4" thick(finished) silver grey situ mosaic with one part of marble chips and one part of mixture of white cement, marble dust and grey cement in proportion(1:1½:3) on 1" thick artificial patent stone flooring(4:2:1) with cement best quality local sand(F.M.1.5) and 1/3rd quantity of sylhet sand or coarse sand of equivalent(F.M.2.5), and picked jhama chips, in/c.breaking chips, screening, laying the concrete in alternate panels, compacting, curing, polishing the top with pumic stone and finishing with oxalic acid and wax polish in all floors

Gr.NO.I.	=4617 Sft.	Per Square foot.	@Tk.22/90(Tk.Twenty two & Paisa ninty)Only.
Gr.NO.II.	=4500 Sft.		

22.¼" thick(finished) Silver grey situ mosaic with one part of marble chips and one part of mixture of white cement, marble dustand grey cement in proportion(1:1½:3) on minimum ½" thick cement plaster(4:1) to walls in/c.finishing corners and edges, curing, polishing the top with pumic stone and finishing with oxalic acid and wax polish in all floor(in/c.supply of all materials).

Gr.NO.I.	=7645 Sft.	Per Square foot.	@Tk.21/15(Tk.Twenty one & Paisa fifteen)Only.
Gr.NO.II.	=4500 Sft.		

23.Brick work with 10 holes machine made brick of approved size having uniform colour, carefully laid in cement mortar(4:1)in superstructure with uniform width and depth joints thrice to vertical and horizontal line in/c.raking out joints, scaffolding curing and pointing with cement mortar(2:1) for all floor upto 4th floor.

Gr.NO.I.	=2924 Cft.	Per hundred Cubic feet.	@Tk.3581/-(Tk.Three thousand five hundred eighty one)Only.
Gr.NO.II.	=2800 Cft.		

24.Minimum ½" thick cement plaster(4:1) to dado and plinth wall upto 6" below ground level, neat cement finishing and finishing edges and corners and curing in all floors.

Gr.NO.I.	=1000 Sft.	Per hundred Square feet.	@ Tk.338/-(Tk.Three hundred thirty eight)Only.
Gr.NO.II.	=990 Sft.		

25.Supplying, fitting and fixing M.S.flat bar clamps 1-9"x1½"x¼" bifurcated ends to door and window frames with screws encasing inside the walls with cement concrete(4:2:1) etc.

Gr.NO.I.	=785 Nos.	Each.	@Tk.21/-(Tk.Twenty one)Only.
Gr.NO.II.	=760 Nos.		

1	2	3	4	5

26.Labour charge for fitting,fixing doors Chowkat (to be supplied by the Depratment) painting two coats of coalter to the surface in contact with the walls, and cutting grooves in chowkats,fitting and fixing in position mending good the damages etc.complete asper direction of the E/Ch. in all floor.

Gr.NO.I. =146.66 Cft.) Per Cubic foot.@Tk.20/-(Tk.Twenty)Only.
Gr.NO.II. =148.74 Cft.)

27.Labour charge for fitting and fixing 1½" thick flush door or penal door shutter(shutters to be supplied by the Deptt.) in/c.supplying of ½" dia 1-0" long tower bolts,9" long socket bolts,brass handle,hinged cleats,4" long hinges,buffer blocks and iron rings etc.complete asper direction of the E/Ch. in all floor. ∠ 4 Nos. in each leaf hined cleats.

Gr.NO.I. =2590 Sft.) Per Square foot. @Tk.10/-(Tk.Ten)Only.
Gr.NO.II. =2600 Sft.)

28.Supplying,fitting and fixing window grills of any design made of mild steel ra section(¾"x1/8") with outer frame of F.I.bar(1"x¼"),fabricating, welding or revetting and painting two coats of paint over a coat of priming for all floors.

Gr.NO.I. =1530 Sft.) Per Square foot. @Tk.40/90(Tk.Forty & Paisa ninty)Only.
Gr.NO.II. =1530 Sft.)

29.Supplying,fitting and fixing steel glazed window shutter with frame asper design having ¾"x¾"x1/8" 'Z' section in frame and 'T' section for horisental dividers shutters and 1"x1/8" F.I. bar for middle vertical members of frames in/c. all cost of charges for dabrication and manufacture by welding,revetting etc.supplying all essential fittings like stopper handle,12" long adjustable cleats,iron pins,hinges,clamps for fitting frame in/c.supplying and fitting fixing 3 m.m.glass panes by pucca putty and painting the window 2 coats of synthetic enemal paint over a coat of anticorrosive priming,making necy.holes in walls and R.C.C.works and filling with C.C.(4:2:1)and mending good the damages in/c.all cost of carriage and labour in fitting fixing etc.all complete asper direction of the E/Ch. and asper drawing and design.

Gr.NO.I. =1530 Sft.) Per Square foot.@Tk.97/65(Tk.Ninty seven & Paisa sixty five)Only.
Gr.NO.II. =1530 Sft.)

30.Supplying fan hook of 5/8" dia mild steel rod,fabrication,and fixing in position in all floors.

Gr.NO.I. =80 Nos.) Each. @Tk.24/-(Tk.Twenty four)Only
Gr.NO.II. =80 Nos.)

1	2	3	4	5
51. Supplying and laying of single layer polythene sheet weighing one pound per thirty square feet in floor below cement concrete, reinforced concrete slab etc. complete in all respects asper direction of the E/Ch.				
	Gr.NO.I. =26,670 Sft. () Gr.NO.II. =26,000 Sft. ()	Per hundred square feet.	@ Tk.155/-(Tk.One hundred fifty five)Only.	
52. Average 4" thick beaten lime terracing(7:2:2) on roof slab, mixing, laying to slopes and consolidating, making ghoondy, neat finishing with ½" thick lime mortar(2:1) and curing.				
	Gr.NO.I. =1916 Cft. () Gr.NO.II. =1800 Cft. ()	Per hundred Cubic feet.	@ Tk.3833/-(Tk.Three thousand eight hundred thrity three)Only	
53. White washing three coats with slaked lime, supply of gum, blue pigment and necessary cleaning before and after the wash for all floors.				
	Gr.NO.I. =75,432 Sft. () Gr.NO.II. =73,800 Sft. ()	Per thousand Square feet.	@ Tk.190/-(Tk.One hundred ninty)Only.	
54. Colour wash with yellow orchre two coats over one coat of prime coat of white wash with slaked lime, supply of gums, necy. cleaning before and after the wash for all floors.				
	Gr.NO.I. =7000 Sft. () Gr.NO.II. =6700 Sft. ()	Per thousand Square feet.	@Tk.300/-(Tk.Three hundred) only.	
55. Painting to doors and window frames and shutters two coats with synthetic enemal ready mixed paint of best quality and approved colour over a coat of priming in/c. finishing and polishing with sand paper. in all floor.				
	Gr.NO.I. =7424 Sft. () Gr.NO.II. =7448 Sft. ()	Per hundred Square feet.	@Tk.255/-(Tk.Two hundred fifty five)Only.	
56. Supplying 4" dia cast iron rain water down pipes fitted and fixed in position with sockets, head and shoe bends, champs and nails for all floors.				
	Gr.NO.I. =1024 Rft. () Gr.NO.II. =1000 Rft. ()	Per Running foot.	@Tk.65/35(Tk.Sixty five & Paisa thirty five)Only.	
57. Construction 1-0" clear width depth upto 12" brick work masonary surface drain with 5" thick check wall in cement mortar(6:1) on 3" thick cement concrete(6:3:1) over one layer of brick flat soling the surface having minimum ½" thick cement plaster(3:1) and neat cement finishing, curing in/c. excavation of all kinds of soils back filling with fine sand, consolidating and dressing.				
	Gr.NO.I. =202 Rft. () Gr.NO.II. =200 Rft. ()	Per Running foot.	@Tk.56/-(Tk.Fifty six)Only.	

1	2	3	4	5

38. Providing apron with 2" thick cement concrete (4:2:1) with cement, coarse sand and picked jhama chips in/c. breaking chips and one layer of brick flat soling at bottom with 1st class or picked jhama bricks in/c. cutting earth for preparation of bed and filling the interestics with local sand in/c. finishing the top surface with neat cement finishing, curing etc. complete.

Gr.NO.I. =400 Sft.) Per hundred @Tk.1444/-(Tk.One thousand
Gr.NO.II. =365 Sft.) Square feet. four hundred forty four) Only.

39. Pre-cast ventilator (1" thick) of any design with cement mortar (2:1) fitted and fixed in position finished with cement plaster (6:1) and curing in all floors.

Gr.NO.I. =40 Sft.) Per Square foot. @Tk.23/-(Tk.Twenty three) Only.
Gr.NO.II. =40 Sft.)

40. Carriage of materials such as cement, M.S. rod by Motor truck, bullock carts or any other means in/c. loading, unloading at both ends as per direction of the E/Ch. (Distance upto 3 miles).

Gr.NO.I. =1517 Ton.) Per Ton. @Tk.40/50(Tk.Forty & Paisa
Gr.NO.II. =1415 Ton.) fifty) Only.

41. Providing drip course/Nosing/throating at the edge of sunshed or cornice with cement mortar (2:1) with finishing in/c. scaffolding curing etc. complete in all floor.

Gr.NO.I. =275 Rft.) Per Running foot. @Tk.3/40(Tk.Three &
Gr.NO.II. =225 Rft.) Paisa forty) Only.

42. Providing ornamental Moulding (1:2:4) cement concrete and finished with ½" thick cement plaster in/c. neat cement finishing rounding corners and edges and curing etc. all complete in all floor.

Gr.NO.I. =150 Rft.) Per Running foot. @Tk.12/-(Tk.Twelve) Only.
Gr.NO.II. =50 Rft.)

43. Weighing of M.S. rod at both ends as per direction of the Engineer-in-charge.

Gr.NO.I. =105 Ton) Per Ton. @Tk.25/-(Tk.Twenty five) Only.
Gr.NO.II. =100 Ton.)

44. Constructing expansion joints 1½" gap in R.C.C. slab or beam with 10" high shoulders on both side of the gaps cast monolitic, providing copper sheet with loop rotch and inserted 6" in concrete shoulder, the gap being filled up with mixture of hot bitumen and sand (2:1) with surface finished with minimum ½" cement plaster (4:1) in all floor.

Gr.NO.I. =228 Rft.) Per Running foot. @Tk.149/-(Tk.One hundred
Gr.NO.II. =Nil) forty nine) Only.

45. Ruled pointing to 5" thick B/Wall with cement mortar (2:1) raking out the joints and curing etc. complete in all floor.

Gr.NO.I. =4929 Sft.) Per hundred @Tk.188/-(Tk.One hundred
Gr.NO.II. =4956 Sft.) square feet. eighty eight) Only.

SANITARY AND WATER SUPPLY ARRANGEMENT.

S.No.	Description of items.	Quantity.	Unit	Rate in Fig & Words.
46.	Supplying fitting and Bangladesh pattern "SUPER" 21" long white pan(530x302 m.m.)Tappared simple type syphone(Bangladeshi made) with vitreous china,in/c.syphone preparing the hole of pan in cement concrete wire net or rods, necy.in all floors in/c.making holes in wall floor where necy.and mending good the damages, supplying fitting fixing 3 gallon capacity C.I. cistern in/c.fitting fixing the same in position with C.I.brackets with brass coupling in/c. supplying of 1¼" dia PVC flush pipe ½" dia plastic connection pipe,½" dia brass stop cock,½" ball cock and pulling chain C.I.coupling complete asper directionof the E/Ch..			
	Gr.NO.I.	=20 Nos.	Each.	@Tk.1315/-(Tk.One thousand three hundred fifteen)Only.
	Gr.NO.II.	=20 Nos.		
47.	Supplying "Super" quality (Bangladeshi made) glazed porcelain foot rest and fitting in position(265x135x30 M.M.)(10½"x5¼"x1-1/5") complete.			
	Gr.NO.I.	=20 pair.	Per pair.	@Tk.131/50(Tk.One hundred thirty one & Paisa fifty)Only.
	Gr.NO.II.	=20 pair.		
48.	Supplying fitting and fixing "Super" White glazed W/H.basin(Bangladesh made) of 24"x16" size (610x410) and fitting fixing the same in position with heavy type C.I. brackets,1½" dia P.V.C.waste pipe with brass coupling(Not exceeding 2-6" length) ½" dia plastic connection pipe,½" dia stop cock,½" dia chromium plated pillar cock, 1¼" dia C.P. basin waste with china plug in/c. making holes in walls abd fitting fixing the wooden blocks,screws and mending good the damages etc.all complete asper direction of the E/Ch.			
	Gr.NO.I.	=20 Nos.	Each.	@Tk.1138/-(Tk.One thousand one hundred thirty eight)Only.
	Gr.NO.II.	=20 Nos.		
49.	Supplying fitting fixing 24"x5" plate glass shelf ¼" thickness with C.P.brackets,screws and frames in/c.making holes in walls and mending good the damages etc.all complete asper direction of the E/Ch.			
	Gr.NO.I.	=20 Nos.	Each.	@Tk.90/-(Tk.Ninty)Only.
	Gr.NO.II.	=20 Nos.		
50.	Supplying fitting and fixing C.P.towel rail 24"x¾" size with C.P.holder in/c.making holes in walls and mending good the damages etc.complete asper direction of the E/Ch.			
	Gr.NO.I.	=20 Nos.	Each.	@Tk.95/-(Tk.Ninty five)Only.
	Gr.NO.II.	=20 Nos.		

1	2	3	4	5
51.Supplying fitting fixing Belgium mirror 18"x12" with hard board at the back in/c.making holes in the walls and mending good the damages etc.all complete asper direction of the E/Ch.				
	Gr.NO.I. =20 Nos. Gr.NO.II. =20 Nos.	Each.	@Tk.100/-(Tk.One hundred) only.	
52.Supplying,fitting fixing 4" dia H.C.I.soil pipe with all fittings and specials like plain bends,Tees, reducing sockets,junctions,door bends,cowles,anti-syphone etc.in/c.gaskit and cement joints,making holes in walls mending good the damages etc.complete asper direction of the E/C.(The rates will be inclusive of 4 cement(6:3:1) alround the soil pipe upto the I.F.only and earth cutting wherever necy.				
	Gr.NO.I. =800 Rft. Gr.NO.II. =800 Rft.	Per Running foot.	@Tk.86/-(Tk.Eighty six) only.	
53.Supplying fitting and fixing 2" dia H.C.I.ventilation pipe with all fittings and specials like plain bends, tees,cowels etc.in/c.gaskit and cement joints and mending good the damages etc.all complete asper direction of the E/Ch.				
	Gr.NO.I. =244 Rft. Gr.NO.II. =244 Rft.	Per Running foot.	@Tk.46/50(Tk.Forty six & Paisa fifty)Only.	
54.Supplying fitting fixing 5" dia C.I.cragings in traps or in drain in/c.making holes in walls and floors and mending good the damages etc.allcomplete asper direction of the E/Ch.				
	Gr.NO.I. =44 Nos. Gr.NO.II. =44 Nos.	Each.	@Tk.12/-(Tk.Twelve)Only.	
55.Supplying fitting fixing 4" dia C.I.traps (syphone trap or P.trap) in/c.making holes in walls and floors and mending good the damages etc.all complete asper direction of the E/Ch.				
	Gr.NO.I. =44 Nos. Gr.NO.II. =44 Nos.	Each.	@Tk.173/-(Tk.One hundred seventy three)Only.	
56.Supplying fitting fixing G.I.pipe with all specials fittings such as bends,elbows,sockets, reducing sockets,tees,unions,junnuts etc.in/c. cutting trenches where necy.and filling the same with earth duly rammed and fixing in walls with holder bats making holes consequent mending good the damages etc.complete in wall and floor and asper direction of the E/Ch.				
a).2" dia.	Gr.NO.I. =463 Rft. Gr.NO.II. =463 Rft.	Per Running foot.	@Tk.50/-(Tk.Fifty)Only.	
b).1½" dia.	Gr.NO.I. =275 Rft. Gr.NO.II. =275 Rft.	Per Running foot.	@Tk.38/80(Tk.Thirty eight & Paisa eighty)Only.	

1.	2	3	4	5
c). 1" dia.				
	Gr.NO.I. =130 Rft. Gr.NO.II. =130 Rft.		Per Running foot.	@Tk.28/90(Tk.Twenty eight & Paisa ninty)Only.
d). ¾" dia.				
	Gr.NO.I. =360 Rft. Gr.NO.II. =360 Rft.		Per Running foot.	@Tk.23/90(Tk.Twenty three & Paisa ninty)Only.
e). ½" dia.				
	Gr.NO.I. =764 Rft. Gr.NO.II. =764 Rft.		Per Running foot.	@Tk.19/25(Tk.Ninteen & Paisa twenty five)Only.
57. Supplying fitting and fix ing best quality and heavy type bib cock ½" dia etc.complete.				
a). C.P. bib cock.				
	Gr.NO.I. =5 Nos. Gr.NO.II. =5 Nos.		Each.	@ Tk.41/-(Tk.Forty one)Only.
b). Brass bib cock.				
	Gr.NO.I. =44 Nos. Gr.NO.II. =44 Nos.		Each.	@Tk.30/-(Tk.Thirty)Only.
58). Supplying fitting and fixing best qulity stop cock (heavy type)				
a). ½" dia brss stop cock.				
	Group NO.I. =16 Nos. Group NO.II. =16 Nos.		Each.	@Tk.30/-(Tk.Thirty)Only.
b). ½" dia C.P.stop cock.				
	Gr.NO.I. =5 Nos. Gr.NO.II. =5 Nos.		Each.	@Tk.47/-(Tk.Forty seven)Only
59). Supplying fitting fixing best quality G.M. peet valve etc.all complete.				
a). 2" dia Peet valve.				
	Gr.NO.I. =1 No. Gr.NO.II. =1 No.		Each.	@Tk.167/-(Tk.One hundred sixty seven)Only.
b). 1½" dia Feet valve.				
	Gr.NO.I. =5 Nos. Gr.NO.II. =5 Nos.		Each.	@Tk.96/-(Tk.Ninty six)Only.
c). 1" dia.				
	Gr.NO.I. =1 No. Gr.NO.II. =1 No.		Each.	@Tk.63/-(Tk.Sixty three)Only
d). ¾" dia.				
	Gr.NO.I. =5 Nos. Gr.NO.II. =5 Nos.		Each.	@Tk.57/-(Tk.Fifty seven)Only
e). ½" dia.				
	Gr.NO.I. =5 Nos. Gr.NO.II. =5 Nos.		Each.	@Tk.43/-(Tk.Forty three)Only.

1 2 3 4 5

60.Supplying fitting fixing 5" dia C.P.shower Rose etc.all complete.

Gr.NO.I. =16 Nos.) Each. @Tk.52/-(Tk.Fifty two)Only.
Gr.NO.II. =16 Nos.)

61.Construction of masonary inspection pits inside measurement(2-0"x2-0") with 10" thick brick work in cement mortar(4:1) and 4" thick R.C.C.top slab(4:2:1) with necy.reinforcement 18" dia R.C.C.(4:2:1)manhole cover in/c.necy.earth work side filling and one brick flat soling,3" thick base(6:3:1) [illegible] base concrete for the preparation of the invert in/c.making invert channel ½" thick C.P.and neat cement finishing etc.all complete upto depth of 2-6"(Including cost of reinforcement and its fabrication)

Gr.NO.I. =10 Nos.) Each. @Tk.1098/-(Tk.One thousand ninty eight)Only.
Gr.NO.II =10 Nos.)

62.Painting C.I.cistern with anticorrosive paint of approved colour and quality etc.all complete.

Gr.NO.I. =20 Nos.) Each. @Tk.17/-(Tk.Seventeen)Only.
Gr.NO.II. =20 Nos.)

63.Painting 2 coats R.C.I.pipes(4" x2" dia) with approved anti-corrosive paint over a coat of priming in/c.cleaning rust etc.all complete.

Gr.NO.I. =1044 Rft.) Per Running foot.@Tk.2/-(Tk.Two)Only.
Gr.NO.II. =1044 Rft.)

64.Painting G.I.pipes 3" to ½" dia/with approved paint over a coat of priming(av.2" dia) including cleaning rust etc.complete .

Gr.NO.I. =1992 Rft.) Per Running foot.@Tk.1/30(Tk.One & Paisa thirty)Only.
Gr.NO.II. =1992 Rft.)

65.Supplying fitting and fixing soap case of best quality asper standard specification etc. complete.

Gr.NO.I. =16 Nos.) Each. @Tk.40/-(Tk.Forty)Only.
Gr.NO.II. =16 Nos.)

66.Making water line connection in R.C.C.over head tank in/c.cutting grooves,mending good the damages with supply of xxx all necessary fittings etc.complete([illegible]) asper direction of the E /Ch.

Gr.NO.I. =8 Nos.) Each. @Tk.250/-(Tk.Two hundred fifty)Only.
Gr.NO.II. =8 Nos.)

67.Supplying fitting and fixing and laying 6" dia R.C.C.pipe over 4" thick cement concrete(6:3:1) at base and sides including single brick flat soling in/c.gaskit and cement mortar joints, cutting and filling trenches asper requirement and as per type plan etc.all complete asper direction of the E/Ch.

Gr.NO.I. =168 Rft.) Per Running foot.@Tk.40/50(Tk.Forty & [illegible]
Gr.NO.II. =168 Rft.) [illegible] fifty)Only

Table 39

1	2	3	4	5
68. Supplying, fitting and fixing and laying 9" dia R.C.C. machine made pipe of tapital bread (1½" thickness) over 3" thick cement concrete (5:3:1) at base and sides in/c. single brick flat soling in/c. gaskit and cement mortar joints, cutting and filling trenches asper requirement and asper type plan etc. complete.				
	Gr.NO.I. =160 Rft. () Gr.NO.II. =160 Rft. ()		Per Running foot.	@Tk.70/-(Tk.Seventy)Only.
69. Supplying, fitting and fixing "SUPER" European type white glazed vitreous standing urinals (497x384 M.M.) (Bangladeshi made) and fitting fixing the same in position after making holes in walls and floors providing 1¼" dia plastic waste pipe upto grating with ½" dia plastic connection pipe, ½" dia brass stop cock, in/c. mending good the damages on the walls and floors etc. complete asper direction of the E/Ch.				
	Gr.NO.I. =4 Nos. () Gr.NO.II. =4 Nos. ()		Each.	@ Tk.855/-(Tk.Eight hundred fifty five)Only.
70. Supplying fitting and fixing "SUPER" white glazed vitreous china squatting or flat urinals (597x355 m.m.)(Bangladeshi made) with flush flashing inlet fitted in cement concrete with cast iron painted body one gallon automatic flushing cistern in each group etc.½" brass controlling valve, 1¼" dia PVC flush pipe, ½" dia plastic connection pipe, in/c. mending good the damages etc. all complete asper direction of the E/Ch.				
	Gr.NO.I. =8 Nos. () Gr NO.II. = 8 Nos. ()		Each.	@Tk.1,572/-(Tk.One thousand five hundred seventy two)Only

1.The work must be carried out strictly in accordance with the specifica[illegible] current in this deptt. and asper drawing,design and direction of the E/[illegible] The contractor/firm shall remain entirely responsible for the quality of [illegible] and finishing the same.

2.The contractor must see the location and site of work thoroughly before submitting tenders as after receiving tender no claim or plea on any grou[illegible] will be entertained by this deptt.

3.The rates to be quoted by the contractor/firm should include [illegible] of all materials and of all operations which are connected with the items of work.In other words,the rates are meant for finished job in all respects and asper pracitice and convention followed by the deptt.Cost of layout, dismentling,site cleaning,scaffolding,cleaning of mosses from bricks, washing dirt/clay from the materials,screening the chips and sand,shingles etc.un-rolling,straightening and removing rust from steel materials and Cost of all local and other taxes,tools and incidential charges will be treated as having been included in the ~~xxxxx~~ ratesof the tender.

4.The quoted rates in the tender will be treated as having included the cost of carriage,weighing,sorting,counting and stacking charges of all materials required for the work to be supplied by the contractor/firm. Local carriage and handling charges of depttl.materials within the work site irrespective of the distance will also have to be done by the contractor/firm himself at his own cost.

5.The successful tenderer will have to submit a time oriented programme to the Executive Engineer concerned within 7(seven) days of communication of the acceptance or the tender.Such programme should be proportionate to time specified in the tender.The programme after acceptance with or with modification ~~xxxxxxxxxx~~ by the Executive Engineer,or Superintending Engineer as the case may be form a part of the agreement.Any deviation of this programme during execution will be treated as failure of contract & action for non-fulfilment of contract will be taken according to the te[illegible] of contract.

6.No mixture machine/vibrator or any other machines required for the wo[illegible] will normally be issued by this deptt.The contractor/firm must have mix[illegible] machine and vibrator machine of their own.

7.No claim in respect of height of ~~floors~~ Bldg./will be entertained by this de[illegible]

8.Thickness of door/window shutters should be correctly maintained as p[illegible] specification after finishing and sand papering etc.For any less in this[illegible] those will be totally rejected.

9.R.C.C. works shall be cured at least 21 days with sufficient wat[illegible] retained with brick work hend and must be well finished.No mud shall be used for curing~~xxxxx~~ purposes and for retaining water.

just

10.If any Govt. materials issued to the contractor is found surplus at work site,contractor will have to deposit the same in the nearest depttl.godown and stack them properly at contractors own cost.No extra payment will be made to the contractor for the same.

11.The following materials will be issued by the deptt. from the places noted against each kind of materials ~~xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~ at the rates against the respective item.The quoted rates inthe tender will be treated as havin[illegible] included cost of carriage,weighing,sorting,counting and stacking charges of the depttl.materials as well as cost of carriage and handling charges of depttl.materials,if delivered any where within the work site willhave to be borne by the contractor himself.Materials to be issued by the deptt.at the work site will delivered within 500 feet of the actual location of the ~~contractor~~.Construction.

Table 39

Name of Materials.	Rate of issue.	Unit.	Place of Delivery.
a). Cement.	Tk. 126/50	Per bag.	Within 500 ft. of the actual location of work site from any godown or stackyard of this Deptt.
b). M.S.Rod.	Tk. 715/-	Per C.W.T.	

12. All materials other than those mentioned above will have to be supplied and carried by the contractor himself for which no extra payment will be made by this department.

13. If the aforesaid materials be not supplied by the deptt. in due time for some unavoidable reasons, no claim for extra payment will be entertained by this deptt, but reasonable extension of time may be allowed to the contractor on application in time.

14. In the preparation of "materials statement" the analysis of rates of Chief Engineer's current schedule of rates inforce shallbe the basis.

15. Minimum 2½%(two and half percent) excess consumption of deptt. materials over those worked out in the manner in clause 14 above for any type of work may be allowed to the contractor at the issue rates of the tender. Consumption beyond the aforesaid limit shall be treated as "Loss" and the cost thereof shall be recoverdd from the contractors bill at double the issue rates as specified under para 4 above.

16. The weight of steel materials(round or deformed) whether foreign made of locally re-rolled will be calculated for payment against the relevant items of works on the basis of British standard weight and no extra claim due to any variation in size and weight will be entertained.

17. The quantities of the work shown in this schedule of items may vary at the time of execution of work for which no extra claim whatsoever will be entertained by this deptt. Also no extra claim will be entertained for any item or items of work of the schedule not executed during actual execution of work.

18. In supersession of clause No.5 of Form No.2911, the Executive Engineer may grant extension of time in specified circumstances upto the excess of 25% (twenty five P.C.) of time allowed asper tender notice. If it is extend further permission of the Superintending Engineer must be sought for with application before hand.

19. No claim of the contractor/firm will be entertained if the work is not taken up at all by this deptt. for any reasons. Also no claim will be entertained for any advance made to labourers or for materials supplied by the contractor/firm.

20. No claim for enhancement of rates of any items of the schedule will be entertained due to fluctuation of market rates for labour and for materials will throughout the period of executionof the work till completion.

21. The contractor/firm shall co-operate with all other trades, whether or not in his contract in permitting the forming and setting of slotes, recesses sleeves, inserts, bolts, opening equipments etc.

22. Verbal instructions whatsoever and from whomsoever will have no bearing. All instructions must be in writting from the E/Ch. and technical officers superior to him in the line.

23. Contractors are strictly forbidden to execute the power of attorny, assigning, execution of work, preparation of bills, collection of bills etc. or mortgage the tender.

24. The contractor shall have to bear the all expanses of all kinds of tools, plants necessary for the work.

25. All the materials supplied by the contractor must be approved by the E/Ch. before use in the work.

26. Without any prejudice to any other terms and conditions of the contract, if any stage of work the tender agreement is required to be determined/ terminated by the Deptt. due to any exgiency, the contractor/firm will get final bill to the extent of work already done at this state. Acceptable and relevant materials issued by the deptt. remain unused in the work may be taken over by the deptt. to the extent of the quantities, already collected and stacked at the site of work as may be found on the day of such stoppage of work for determination/termination of the agreement and payment thereof will be fixed through supplementary tender. The deptt. will not entertain any claim of contractor/firm for any commitment/payment made by him to other agency or any materials which have not been collected at stite on or before the aforesaid day.

27. The security deposit of the contractor/firm shall not be refunded before the expiry of one year after the issue of the certificate of final completion of the work.

28. All clauses and terms of the tender form No. 2911, notice inviting tenders, schedule of items, addl. terms and conditions etc. will be binding upon the contractor. In case of any clause/terms/condition's of the tender form over-ride/confuses/contradicts these terms the notice inviting tender, schedule, adil. terms and conditions etc. will be considered valid.

29. No running bill for final bill will be passed if the period of work thereof is not found to be covered by the time allowed in the tender agreement or by the extension of time already allowed.

30. The successful tenderers while executing the work will execute not less than the estimated quantities shown in the items in which he had quoted low rates. Similarly he will not execute more than the estimated quantity in the items in which he had quoted high rate. The deviation to this terms & conditions can be only with the prior wrteen permission from the Executive Engineer.

31. Form work for concrete in columns, beams, and lintels shall be or fresh wooden planks fitted and fixed with necessary fittings, Shuttering for roofs and floor slab shall have to be done either with planks or plain sheets. No C.I. sheet shuttering will be allowed. The joint between brick wall and shuttering of each floor shall be made water tight by providing a strip of polythene paper having width upto 10".

The form shall not be removed until the concrete is adequately set according to standard Engineering practice.

In the construction of copings, railings and other intricate sections extreme care shall be taken in form work and its removal to ensure true lines.

32. The brick work shall be in English bond, with 1st class bricks. The exact size of brick will be 9½"x4½"x2¾" mortar (cement and sand) in gradients shall be measured by volume in proportion as in the specification in proper gange boxes on plateform. The ingradients being turned over thrice dry and thrice whilst water is added through a rose. Mixing may be made by means of an approved mechanical batch mixture. Sand for the mortar shall have a minimum of fineness modulus 1.5 . Mortar shall be used within 40 minutes after cement has come in contact with water in mix. Mortar thickness shall not exceed 3/8". The contractor will have to collect at the job site a sample of brick work for approval of the E/Ch.

ITEM RATE TENDER AND CONTRACT FOR WORKS.

GENERAL RULES AND DIRECTIONS FOR THE GUIDANCE OF CONTRACTORS.

1. All works proposed for execution by contract will be notified in a form of invitation to tender posted in public places and signed by the Subdivisional Officer/Divisional Officer.

This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work; also the amount of earnest-money to be deposited with the tender, and the amount of the security deposit to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work, signed for the purpose of identification by the Subdivisional Officer/Divisional Officer shall also be opened for inspection by the contractor at the office of the Subdivisional Officer/Divisional Officer during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each member thereof, or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-of-attorney authorizing him to do so, such power-of-attorney to be produced with the tender and save in the case of a firm carried on by one member of a joint family it must disclose that the firm is duly registered under the Indian Partnership Act.

3 Receipts for payments made on account of a work, when executed by a firm, must also be signed by the several partners, except where the contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other persons having authority to give effectual receipts for the firm.

4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, will be liable to rejection. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit a separate tender for each. Tenders shall have the name and number of the work to which they refer written outside the envelop.

5. The Divisional Officer/Subdivisional Officer, or his duly authorized assistant, will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amount of the several tenders in a Comparative Statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest-money forwarded therewith shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule L In the event of a tender being rejected, the earnest-money forwarded with such unaccepted tender shall be refunded within 10 days from the date on which the tender is decided provided the contractor(s) present himself/themselves before the Executive Engineer to take the refund.

6. The accepting authority reserves the right to reject any or all the tenders without assigning any reasons and he will not be bound to accept either the lowest tender or any of the tenders.

7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgment of payment to the Subdivisional Officer/Divisional Officer and the contractors shall be responsible for seeing that he procures a receipt signed by the Subdivisional Officer/Divisional Officer or a duly authorized Cashier.

8. The memorandum of work : tendered for and the schedule of materials to be supplied by the Communications and Works Department and their issue rates, shall be filled in and completed in the office of the Subdivisional Officer/Divisional Officer before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and completed, he shall request the office to have this done before he completes and delivers his tender.

TENDER FOR WORKS.

I/We hereby tender for the execution for the President of the work specified in the under-written memorandum within the time specified in such memorandum at the rates specified therein, and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule I hereof and in clause 11 of the annexed conditions and with such materials as are provided for, by, and in all other respects in accordance with such conditions so far as applicable.

MEMORANDUM

(a) General description

(b) Estimated cost ৳

(c) Earnest-money .. .. .. ৳

(d) Security deposits (including earnest-money) ৳

(e) Percentage, if any, to be deducted from bills ৳ per cent.

(f) Time allowed for the work from date of written order to commence .. months

Item. No.	Item of work.	Unit.	Per.	Rate tendered	
				In figures. Tk.	In words.

N. B. To be continued on additional sheets as found necessary

Should this tender be accepted I/We hereby agree to abide by the fulfil all the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the President or his successors in office the sums of money mentioned in the said conditions.

*Give particulars and numbers.

The sum of Tk. *is herewith forwarded in currency notes as earnest money [(a) the full valu or which is to be absolutely forfeited to the President or his successors in office, without prejudice to any other rights or remedies of the said President or his successors in office, should I/We fail to commence the work specified in the above memorandum, or should I/We not deposit the full amount of security deposit specified in the above memorandum in accordance with clause 1 (A) of the said conditions of contract, otherwise the said sum of Tk shall be retained by the Government as on account of such security deposit as aforesaid; (b) the full value which shall be retained by Government on account of the security deposit specified in clause 1 (B) of the said conditions of contract]

†Strike out (*a*) if no cash security deposit is to be taken.

‡Strike out (*b*), if any security deposit is taken.

Dated the day of 19

†Signature of contractor before submission of tender.

Witness ‡

‡Signature of witness to contractor's signature.

Address

Occupation

The above tender is hereby accepted by me on behalf of the President

Signature of the officer by whom accepted.

Dated the day of 19

CONDITIONS OF CONTRACT

Security deposit.

Clause 1.—The person/persons whose tender may be accepted (hereinafter called the contractor) shall (A) [within one day for a contract of Tk. 1,000 or less, two days for one of Tk 2,000 or less, and so on, up to a limit of ten days of the receipt by him of the notification of the acceptance of his tender) deposit with the Subdivisional Officer/Divisional Officer in cash or Government securities endorsed to the Subdivisional Officer/Divisional Officer (if deposited for more than 12 months) a sum sufficient with the amount of the earnest-money deposited by him with tender to make up the full security deposit specified in the tender]; or (B) [permit Government at the time of making any payment to him for work done under the contract to deduct such sum as will (with the earnest-money deposited by him) amount to per cent. of all moneys so payable such deduction to be held by the Government by way of security deposit]: *provided always* that in the event of the contractor depositing a lump sum by way of security deposit as contemplated at (A) above, then in such case, if the sum so deposited shall not amount to ten per cent. of the total estimated cost of the work, it shall be lawful for Government at the time of making any payment to the contractor for work done under the contract to make up the full percentage of the per cent. by deducting a sufficient sum from every such payment as last aforesaid. All compensation or other sums of money payable by the contract to Government under the terms of his contract may be deducted from, or paid the sale of a sufficient part of his security deposit, or from the interest arising therefrom, or from any sums which may be due or may become due to the contractor by Government on any account whatsoever, and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid the contractor shall within ten days thereafter make good in cash or Government securities endorsed as aforesaid any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof.

Compensation for delay.

Clause 2.—The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence (time being deemed to be of the essence of the contract, on the part of the contractor) and the contractor shall repay as compensation an amount equal to one per cent., or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide on the amount of the estimated cost of the whole work as shown by the tender for every day that the work remains uncommenced or unfinished after the proper dates. And further, to ensure good progress during the execution of the work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month, to complete one-fourth of the whole of the work before one-fourth of the whole time allowed under the contract has elapsed; one-half of the work, before one-half of such time has elapsed, and the three-fourths of the work before three-fourths of such time has elapsed. In the event of the contractor failing to comply with this condition he shall be liable to pay as compensation an amount equal to one per cent or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide on the said estimated cost of the whole work for every day that the due quantity of works remains incomplete: *provided always* that the entire amount of compensation to be paid under the provision of the clause shall not exceed ten per cent on the estimated cost of the work as shown in the tender.

Action when whole of security deposit to be forfeited.

Clause 3.—In any case in which under any clause or clauses of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (whether paid in one sum or deducted by instalments) the Divisional Officer on behalf of the President shall have power to adopt any of the following courses, as he may deem best suited to the interest of Government—

(a) to rescind the contract (of which rescission notice in writing to the contractor under the hand of the Divisional Officer shall be conclusive evidence), and in which case the security deposit of the contractor shall stand forfeited, and be absolutely at the disposal of Government;

(b) to employ labour paid by the Communications and Works Department and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and the price of the materials (of the amount of which cost and price a certificate of the Divisional Officer shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if, it had been carried out by the contractor under the terms of his contract, the certificate of the Divisional Officer as to the value of the work done shall be final and conclusive against the contractor; and

(c) to measure up the work of the contractor, and to take such part thereof as shall be unexecuted out of his hands and to give it to another contractor to complete in which case any expenses which may be incurred in excess of sum which would have been paid to the original contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of Divisional Officer shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by Government under the contract or otherwise of from his security deposit or the proceeds of sale thereof, or a sufficient part thereof.

In the event of any of the above courses being adopted by the Divisional Officer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements, or made any advances on account of, or with a view to the execution of the work or the performance of the contract. In any case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for work therefor actually performed under this contract, unless and until the Subdivisional Officer/Divisional Officer will have certified in writing the performance of such work and the value payable in respect thereof, he shall only be entitled to be paid the value so certified.

Powers to take possession of or require removed of or sell contractor's plant.

Clause 4.—In any case in which of the powers conferred upon the Divisional Officer by clause 3 hereof, shall have become exercisable and the same shall not be exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor for which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit, and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Divisional Officer putting in force either of the powers (*a*) or (*c*) vested in him under the preceding clause he may, if he so desires, take possession of all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof, paying or allowing for the same in account at the contract rates or, in case of these not being applicable, at current market rates to be certified by the Divisional Officer whose certificate thereof shall be final, otherwise the Divisional Officer may by notice in writing to the contractor or his clerk of the works, foreman or other authorized agent require him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice); and in the event of the contractor failing to comply with any such requisition, the Divisional Officer may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and at risk in all respects, and the certificate of the Divisional Officer as to the expense of any such removal and the amount of the proceeds and expense of any such sale be final and conclusive against the contractor.

Extension of time.

Clause 5.—If the contractor shall desire an extension of the time for completion of the works on the grounds of his having been unavoidable hindered in its execution, the contractor shall give an immediate report of such hindrance to the Divisional Officer in writing and if he shall desire an extension of time for completion of the work on the ground thereof he shall apply in writing to the Divisional Officer within 7 days of the date of cessation of such hindrance on account of which he desires such extension as aforesaid and the Divisional Officer shall, if in his opinion (which be final) reasonable grounds be shown thereof, authorise such extension of time, if any, as may in his opinion, be necessary or proper.

Final certificate.

Clause 6.—On completion of the work, the contractor shall be furnished with a certificate by the Subdivisional Officer/Divisional Officer hereinafter called the Engineer-in-charge of such completion, but no such certificate shall be given, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding surplus maerials and rubbish, and cleaned off the dirt from all wood-works, doors, windows, walls, floors or other parts of any building, in upon or about which the work is to be executed, or of which he may have had possession for the purpose of the execution thereof, nor until the work shall have been measured by the Engineer-in-charge whose measurements shall be binding and conclusive against the contractor. If the contractor shall fail to comply with the requirements of the clause as to removal of scaffolding, surplus materials and rubbish, and cleaning off dirt on or before the date fixed for the completion of the work, the Engineer-in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt as aforesaid; and the contractor shall forthwith pay the amount of all expense so incurred, and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

Payment intermediate to be regarded advances.

Clause 7.—No payment shall be made for works estimated to cost less than Taka one thousand, till after the whole of the works shall have been completed and a certificate of completion given. But in the case of the works estimated to the cost more than Taka one thousand the contractor shall on submitting the bill therefor be entitled to receive a monthly payment proportionate to the part thereof then approved and passed by the Engineer-in-charge whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. But all such intermediate payments shall be regarded as payment by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the requiring of bad, unsound and imperfect or unskilful work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due of performance of the contract or any part thereof, in any respect, or the accruing of any claim, nor shall it conclude determine or affect in any way the powers of the Engineer-in-charge under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of the work, otherwise the Engineer-in-charge's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties.

Clause 8.—A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge for all works executed in the previous month, and the Engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified, and the claim, as far as admissible, adjusted, if possible, before the expiry of ten days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the contractor, whose countersignature to the measurement list will be sufficient warrant; and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor in all respects.

Bills to be submitted monthly

Clause 9.—The contractor shall submit all bills on the printed forms to be had on application at the office of the Engineer-in-charge, and the charges in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of this condition and not mentioned or provided for in the tender at the rates hereinafter provided for such work.

Bills to be on printed forms.

Clause 9A—(1) Payments due to the contractor may, if so desired by him be made to his Bank instead of direct to him provided that the contractor furnishes to the Engineer-in-charge—

Payment of contractors bill to Banks.

(i) an authorisation in the form of a legally valid document, *e.g.*, irrevocable power-of-attorney conferring authority on the Bank to receive payment;

(ii) his own acceptance of the correctness of the account made out as being due to him by Government or his signature on the bill or other claim preferred against Government, before settlement by the Engineer-in-charge of the account or claim by payment to the Bank.

While the receipt given by such Bank shall constitute a full and sufficient discharge for the payment, the contractor should, wherever possible, present his bill duly receipted and discharged through his Bankers.

(2) In the case of bills, which the contractors present for payment direct and which are not endorsed in favour of the Bank, while efforts will be made to secure payment to the financing Bank, payments made to the contractor should be accepted as full acquittance so far as Government is concerned. As part of the arrangement the financing Bank should give the Government in letter to his effect.

Note 1.—The procedure will not affect the usual rights to Government to deduct from contractor's bill (whether endorsed in favour of a Bank or not) any sum due to Government on account of penalties, over payments, etc., on this or any other contract with the President of Bangladesh.

Note 2.—Nothing herein contained shall operate to create in favour of the Bank any rights equities *vis a vis* the President.

Stores supplied by Government.

Clause 10.—If the specification of estimate of the work provides for the use of any special description of materials to be supplied from the Engineer-in-charge's stores, or if it is required that the contractor shall use certain stores to be provided by Engineer-in-charge (such materials and stores, and the prices to be charged therefor as hereinafter mentioned being so far as practicable for the convenience of the contractor, but not so as in any way to control the meaning or effect of this contract specified in the schedule or memorandum hereto annexed), the contractor shall be supplied with such materials and stores as required from time to time to be used by him for the purposes of the contract only, and the value of the full quantity of materials and the stores so supplied at the rates specified in the said schedule or memorandum may be set off or deducted from any sums then due or thereafter to become due to the contractor under the contract, or otherwise, or against or from the security deposit or the proceeds of sale thereof, if the same is held in Government securities, the same or a sufficient portion thereof being in this case sold for the purpose. All materials supplied to the contractor shall remain the absolute property of Government, and shall not on any account be removed from the site of the work and shall at all times be open to inspection by the Engineer-in-charge. Any such materials unused and in perfectly good condition at the time of the completion or determination of the contract shall be returned to the Engineer-in-charge's store by a notice in writing under his hand, he shall so require, but the contractor shall not be entitled to return any such materials unless with such consent and shall have no claim for compensation on account of any such materials so supplied to him as aforesaid being unused by him, or for any wastage in or damage to any such materials.

Works, to be executed in accordance with specifications drawings, orders etc.

Clause 11.—The contractor shall execute the whole and every part of the work in the most substantial and workman like manner and both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractors shall also conform exactly fully and faithfully to the designs, drawings and instructions in writing relating to work signed by the Engineer-in-charge and lodged in his office and which the contractor shall be entitled to have access at such office or on the site of the work for the purpose of inspection during office hours and the contractor shall if he so requires, be entitled at his own expense to make or cause to be made copies of the specifications, and of all such designs, drawings and instructions as aforesaid.

Alteration in specifications and designs.

Clause 12.—The Engineer-in-charge shall have power to make any alterations in, omissions from, addition to or substitution for, the original specifications, drawings, designs, and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-charge and such alterations, omissions, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on same condition in all respect on which he agreed to do main work and at the same rates as are specified in the tender for the main work.

Do not invalidate contracts.

Extension of time in consequence of alterations.

The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work, and the certificate of the Engineer-in-charge shall be conclusive as to such proportion. And if the altered, additional or substituted work includes any class of work, for which no rate is specified in this contract, then such class of work shall be carried out of the rates entered in the schedule of rates of the district which was in force at time of the acceptance of the contract minus/plus the percentage which the total tendered amount bears to the estimated cost of the entire work put to the tender; and if the altered, additional or substituted work is not entered in the said schedule of rates, then the contractor shall within seven days of the date of his receipt of the order to carry out the work inform the Engineer-in-charge of the rate which it is his intention to, charge for such class of work, and if the Engineer-in-charge does not agree to his rate he shall, by notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he considers advisable: *Provided always* that if the contractor shall commence work or incur any expenditure in regard thereto before the rate shall have been determined as lastly hereinbefore mentioned, then and in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of a dispute the decision of the Superintending Engineer of the Circle shall be final.

Rates for work not in estimate or schedule.

Clause 12A.—In the case of any altered, additional or substituted work which the contractor is required, under the preceding clause 12, to do at the rates specified in the tender for the main work or on the basis of the rates in the schedule or rates of the district and which involves the employment of additional materials (notwithstanding anything to the contrary in the preceding clause), the contractor may, within seven days from the receipt of the order claim revision of the rates in respect of such additional materials and the Engineer-in-charge may revise such rates having regard to the increase in the market price of such materials. In the event of a dispute the decision of the Superintending Engineer of the Circle shall be final and binding and this contract shall be construed as if the said revised rates for the additional materials had been incorporated in this contract as being applicable to such work.

No compensation for alteration in or restriction of work to be carried out.

Clause 13.—If at any time after the commencement of the work the President shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the Engineer-in-charge shall give notice in writing of the fact to the contractor who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out neither shall he have any claim or compensation by reason of any alteration having been made in the original specifications, drawings designs and instructions which shall involve any curtailment of the work as originally contemplated.

Action and compensation payable in case of bad work.

Clause 14.—If it shall appear to the Engineer-in-charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect, or unskilfully workmanship, or materials of any inferior description or that any materials or articles provided by him for the execution of the work are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with the contract the contractor shall on demand in writing from the Engineer-in-charge specifying the work materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the work so specified in whole or in part, as the case may require, or as the case may be, remove the materials or articles so specified and provided other proper and suitable materials or articles at his own proper charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the rate of one per cent. on the amount of the estimate for every day not exceeding ten days while his failure to do so shall continue and in the case of any such failure the Engineer-in-charge may rectify or remove, and re-execute the work or remove and replace with others the materials or articles complained of as the case may be at the risk and expense in all respect of the contractor.

Works to be open to inspection.

Clause 15.—All work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-charge and his subordinate and the contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his subordinate to visit works shall have been given to the contractor either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing present for the purpose. Order given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

Contractor or responsible agent to be present.

Notice to be given before work is covered up.

Clause 16.—The contractor shall give not less than five days' notice in writing to the Engineer-in-charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured, and correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work and if any work shall be covered up or place beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense, or in default thereof on payment or allowance shall be made for such work or the materials with which the same was executed.

Contractor liable for damage done and for imperfection or 3 months after certificate.

Clause 17.—If the contractor or his work people or servants shall break, deface, injure or destroy any part of a building in which they may be working on any buildings, road, road curbs fence enclosure, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work while in progress for any cause

whatsoever or any imperfections become apparent in it within three months (six months in the case of road work) after a certificate final or other of its completion shall have been given by the Engineer-in-charge, as aforesaid, the contractor shall make the same good at his own expense, or in default, the Engineer-in-charge may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-charge shall be final) from any sums that may be then, or any time thereafter may become due to the contractor, or from the security deposit, or the proceeds of sale thereof, or of a sufficient portion thereof.

The security deposit of the contractor shall not be refunded before the expiry of 3 months (6 months in the case of a road work) after the issue of the certificate final or otherwise of completion of work. Provided that in the case of a road work if in the opinion of the Engineer-in-charge half of the security deposit is sufficient to meet all the liabilities of the contractor under this contract half of the security deposit will be refundable after 3 months and the remaining half after 6 months of the issue of the said certificate of the completion.

The contractor shall be responsible for rectifying defects in asphaltic work noticed within a year from the date of completion of the work and the portion of the security deposit relating to asphaltic work shall be refunded afer the expiry of this period.

Contractors to supply plant, ladders, scaffoldings, etc.

Clause 18.—The contractor shall supply at his own cost materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-charge's stores), plant, tools, appliances, implements, ladders cordage, tackle, scaffolding and temporary works requisite or proper for the proper execution of the work, whether original, altered or substituted and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefor to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works, and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or materials. Failing his so doing the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract, or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof. The contractor shall also provide all necessary fencing and lights required to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or precautions and to any such person or which may with the consent of the contractor be said to compromise any claim by any such person.

And is liable for damages arising from non-provision of lights, fencing, etc.

Clause 18-A.—In every case in which by virtue of the provisions of section 12, sub-section (*1*) of the Workmen's Compensation Act, 1923, Government is obliged to pay compensation to a workman employed by the contractor, in execution of the works, Government will recover from the contractor the amount of the compensation so paid, and without prejudice to the rights of Government under section 12, sub-section (*2*) of the said Act, Government shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Government to the contractor whether under this contract or otherwise.

Government shall not be bound to contest any claim made against it under section 12, sub-section (*1*) of the said Act, except on the written request of the contractor and upon his giving to Government full security for all costs for which Government might become liable in consequence of contesting such claim.

Labour

Clause 19.—No female labourer shall be employed within the limits of a cantonment.

Clause 19-A.—No labourer below the age of twelve years shall be employed on the work.

Clause 19-B.—The contractor should be his labourers wages not less in amount than what considered reasonable for the locality by the Superintending Engineer.

Clause 19-C.—If it is proved to the satisfaction of the Superintending Engineer that any contractor has not paid due wages to the labourers employed by him the Superintending Engineer may ask the Executive Engineer-in-charge of the work to make payment to the labourer and to deduct the amount so paid from the Contractor's bill. The name of the Contractor who fails to pay due wages to his labourers may also be expunged from the list of approved contractors.

Work on Sundays.

Clause 20.—No work shall be done on Sundays without the sanction in writing of the Engineer-in-charge.

Work not to be sublet.

Clause 21.—The contract shall not be assigned or sublet without specific orders from Government in respect of a specified sub-contractor. And if the contractor shall assign or sublet his contract, or attempt so to do, or become insolvent or commence any insolvency proceedings or make any compositions with his creditors, or attempt so to do, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised, or offered by the Contractor, or any of his servants or agents to any public officer or person in the employ Government in any way relating to his officer or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Divisional Officer may thereupon by notice in writing rescind the contract, and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Government, and the same consequences shall ensue as if the contract had been rescinded under clause 3 hereof and in addition the contractor shall not be entitled to recover or be paid for any work theretofore actually performed under the contract.

Contract may be rescinded and security deposit forfeited for subletting, bribing or by contractor [illegible]

Sums payable by way of compensation to be considered as reasonable compensation without reference to actual loss.

Clause 22.—All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Government without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

Changes in constitution of firm.

Clause 23.—In the case of a tender by partners any charge in the constituting of the firm shall be forthwith notified by the contractor to the Engineer-in-charge for his information.

Works to be under direction of Superintending Engineer.

Clause 24.—All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the Circle for the time being who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

Settlement of disputes.

Clause 25.—Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions, hereinbefore mentioned and so to the quality of workmanship or materials used on the work, or as to any other question, claim, right, matter or thing whatsoever, in any way arising out of, or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions, or otherwise concerning the works or the execution or failure to execute the same, whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the arbitration of the Superintending Engineer of the Circle for the time being in the manner provided by law relating to arbitration for the time being in force who after such investigation as he may think proper shall deliver his award which shall be final, conclusive and binding on all parties to this contract.

Stores of European or American manufacture to be obtained from Government.

Clause 26.—The contractor shall obtain from the stores of the Engineer-in-charge of all stores and articles of European or American manufacture which may be required for the work, or any part thereof or in making up articles, required thereof or in connection therewith unless he has obtained permission in writing from the Engineer-in-charge to obtain such stores and articles elsewhere. The value of such stores and articles as may be supplied to the contractor by the Engineer-in-charge will be debited to the contractor in his accounts at the rates, shown in the schedule attached to the contract and if they are not entered in the schedule, they will be debited at cost price which for the purposes of this contract, shall include the cost of carriage incidental charges and storage charges, the last being recoverable in addition and all other expenses whatsoever, which shall have been incurred is obtained delivery of the same at the stores aforesaid.

Lump sum in estimates.

Clause 27.—When the estimate on which the tender is made includes lump sums in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of the work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not in the opinion of the Engineer-in-charge, capable of measurement, the Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate, and the certificate in writing of the Engineer-incharge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of this clause.

Action where no specification.

Clause 28.—In the case of any class of work for which there is no such specification as is mentioned in Rule I, such work shall be carried out in accordance with the district specification and in the event of there being no district specification then in such case the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-charge.

Definition of work.

Clause 29.—The expression "work" or "works" where used in these conditions shall unless there be something either in the subject or context repugnant to such construction be construed and taken to mean the works by or by virtue of the contract contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

Clause 30.—The contractor(s) shall at his/their own cost provide his/their labour with hunting on an approved site and shall make arrangements for conservancy and sanitation in the labour camp to the satisfaction of the local public health and medical authorities. He/they shall also at his/their own cost make arrangements for the laying of pipe lines for water-supply to his/their labour camp from the existing mains whatever available and shall pay all fees, charges and expenses in connection therewith and incidental thereto.

MODEL RULES RELATING TO LAYOUT, WATER SUPPLY, CANTEEN AND SANITATION IN LABOUR CAMPS

Notes—These Model Rules are intended primarily for labour camps which are not of a permanent nature. They lay down the minimum desirable standards which should be adhered as far as possible. Obviously standards in nature should not be lower.

1. Location:

The camp shall be located in an elevated part of the locality and where such a natural elevation is not available, the ground for the camp shall be raised from 2 to 3 ft. above the existing level. The camp area shall be kept dry and free from dense vegetation.

2. Layout:

The barracks shall be constructed in rows with at least 30 ft. space between two rows. The height of the barracks shall be 10 ft. The maximum capacity of each quarters shall not exceed 50 persons and shall guarantee at least 30 sq. ft. floor space to each occupant.

3. **Drainage :**

Suitable arrangement for drainage shall be made to cover the whole of the camp area. Drain should be so constructed as to allow of an easy or self-leaning velocity of sullage water. The drains shall be maintained in good repairs and in clean stage.

4. **Levelling of Ground:**

The ground shall be levelled up. All ditches, pits or depressions where water is likely to accumulate, shall be filled up.

5. **Prevention of Accumulation of Water :**

Any collection of water within a radius of half a mile from the camp shall be sprayed with oil or other anti-malaria liquid once a week to prevent the breeding of mosquito during that part of the year when climatic conditions allow of mosquito to breeding.

6. **Dust-bins :**

Dust-bins shall be provided at suitable places in the camp and residents shall be directed to throw all rubbish into these dust-bins. The dust-bins shall be provided with covers, preferably self-closing foot operated lids, and with pucca platforms on which they could be placed. They shall be cleaned twice daily.

7. **Cleanliness :**

The inside walls and ceiling of all buildings, passage and stair cases shall be lime washed. All beams, rafters, doors, windows, window frames and other steel or wood-work with the exception of floors shall be either lime-washed once a year dating from the period when last lime-washed or shall be varnished or painted once in every three years dating from the period when varnished or painted. The whole of the open space in the camps shall be swept once every day and all rubbish removed. The rubbish shall be burnt or as an alternative dumped in depressions at least 30 ft. away from the camps on leeward side.

8. **Medical Facilities :**

8(a) Every camp where 1,000 or more persons reside shall be provided with a wholetime doctor and a dispensary. If there are women in the camp, a wholetime nurse midwife shall also be employed. (b) Every camp where less than 1,000 but more than 250 persons reside shall be provided with a dispensary and a part-time doctor. If there are women in the camp, a part-time nurse midwife shall also be employed. (c) If there are less than 250 persons in any camp a standard First Aid-outfit shall be maintained there in charge of a wholetime person trained in First Aid. All medical facilities mentioned above shall be available to all residents in the camp (including the dependents of workers, if any) free of cost.

9. **Washing and Bathing Places :**

Separate washing and bathing places shall be provided for men and women. For every 25 persons in the camp shall be one tap and a floor space of 20 ft. at the washing and bathing places. Proper arrangements shall be made for maintaining in a clean and drained condition the areas around the washing and bathing places. Where supply is from an intermittent sources, covered accommodation shall be provided for storage of water for washing and bathing purposes at a scale of 5 gallon per head per day, this quantity being increased during hot weather and when labour is employed on hard work wherever ground storage is necessary, some from of insultation from heat should be assorted.

10. **Drinking Water:**

Adequate arrangement shall be made for the supply of drinking water. If practicable a filtered and colorinated supply shall be arranged.

Where supply is from an intermittent source, covered accommodation shall be provided for the storage of the drinking water at a scale of 1 gallon per head per day.

Where supply is from a well, it shall be pucca protected and of a sanitary type situated at least 200 ft. away from any latrine or other source liable to cause pollution of the water therein. It would be convenient if a hand pump can be provided. The water shall be treated with a suitable disinfectant at least once in every month and shall be tested at least once in every three months to determine its suitability for human consumption.

11. **Canteen:**

If there are 250 or more persons in any camp, a standard canteen shall be run there.

12. **Latrines and Urinals:**

There shall be provided latrines and urinals at least 50 ft. away from the nearest quarter and 600 ft. from the most distant sleeping space, separately for male and female and specially so marked on the following scales:

Latrines—Six latrines shall be provided for every 100 persons. If bore-hole latrines are provided, there shall be 8 per every 100 persons. Each latrine shall be screened off from the rest.

Urinals—One for every 25 persons. Except where the latrines are water-flushed, they shall be provided with receptacles on dry earth system. Those shall be cleaned at least twice daily. They shall be tarred inside and outside at least once a year. In dry zones, bore-hole latrine shall be provided instead of the pan-latrines. The conservancy area shall be concentrated on the lowered side.

13. Disposal of Extra :

Unless otherwise arranged for by the local sanitary authority, arrangement shall be made for proper disposal of extra by burial in deep trenches at a distance of at least 600 ft. down wind from the nearest quarter.

14. Sweepers:

One sweeper for every 50 persons shall be employed.

15. Fire Extinguisher:

There shall be te least 6 buckets in every barrack. Buckets shall be painted red and kept permanently on stands. They shall be kept filled with water or sand.

16. Roads and Paths:

Suitable roads and paths should be provided so that easy movement from barrack to barrack and from the camp to the work-site may be insured.

Penal Clause :

Breach of the aforesaid rule or rules by the contractors employing labours on Government works may make the contract liable to cancellation and forfeiture of security deposit.

Interpretation Clause :

The President means the President of Bangladesh and his successors.

The Divisional Officer means the Divisional Officer for the time being of the Division concerned.

The Subdivisional Officer means the Subdivisional Officer for the time being of the Subdivision concerned.

Works importing the singular number only include the plural number and *vice versa.*

Schedule showing (approximately) materials to be supplied by the Communications and Works Department under Clauses 10 and 26 for work contracted to be executed and the rates at which they are to be charged for.

Particulars.	Rates at which the material will be charged to the contractor.		Place of delivery.
	Unit.	Tk.	

Note 1—The person of firm submitting the tender should see that the rates in the above schedule are filled up the Engineer-in-charge on the issue of the form prior to the submission of the tender.

Signature of Contractor.

Signature of *Subdivisional Officer*
Divisional Officer.

ADDITIONAL CONDITIONS

1. Cement found surplus after the completion of the work should be returned to the Subdivisional Officer, the value of the cement returned to the Department will be credited to the contractor. If any contractor is found to have used the surplus cement for his own purpose or otherwise disposed of it without the written consent of the Executive Engineer or the Subdivisional Officer (if nominated for the purpose by the Executive Engineer) he may be held guilty of theft. In this connection the provision of clause 10 may be referred to where it is clearly stated that all materials issued to the contractors shall remain the property of Government.

2. Contractor shall have to make his own arrangements for water both for the work and use by him, cooly, etc., for steam road rollers and for all tools and plants, etc., required on the work.

3. Contractors will be responsible for the payments of all water charge payable to the Dacca Municipality or any other waterworks authority including a Government department concerned

4. If the contractor shall desire an extension of the time for completion of the work under clause 5 of the contract, no application for such extension will be entertained if it is not received in sufficient time to allow the Divisional Officer to consider it and the contractor will be responsible for the consequences arising out of his negligence in this respect.

5. The contractor will have to leave ducts in walls and floors to run conduit or cables where necessary, and he will not be entitled to any extra payment on this account.

6. Contractors in the course of their work should understand that all materials (*e.g.*, store and other materials) obtained in the work of dismantling excavation, etc., will be considered Government property and will be disposed of to the best advantage of Government.

7. Owing to difficulty in obtaining certain materials in the open market due to war, the Government have undertaken to supply materials specified in the schedule on page.....of the tender form at rates stated therein. There may be delay in obtaining the materials by the Department and the contractor is, therefore, required to keep himself in touch with the day to day position regarding the supply of materials from the Engineer-in-charge and to so adjust the progress of the work that their labour may not remain idle nor may there be any other claim due to arising from delay in obtaining the materials. It should be clearly understood that no claim whatsoever shall be entertained by the Government on account of delay in supplying materials.

8. The minimum period for which a road roller is required to be used by a contractor shall be determined by the Executive Engineer on the basis of the quantity of metal that can be consolidated by a roller per day and the Executive Engineer's decision shall be final. If the roller be required to work for longer period due to bad arrangement of the contractor, shortage of water, etc., additional hire charges shall be levied at the rates specified below under "A—Hire charge" for the additional period the roller works.

9. No compensation for any damage done by rain or traffic during the execution of the work will be made.

10. Wherever a work carried out in a municipal area, electric lights or electric danger signals wherever available shall be provided by the contractors on the barriers as well as paraffin lights. Facilities for electric connection will be made by this Department but the contractor will bear all the expenses.

11. The contractor should quote through rate inclusive of cost of materials and carriage to place of working.

12. The contractor should give complete specifications showing the methods of execution and the quantity and quality of materials they intend to use per hundred ft. area.

13. In cases where water is used by the contractor he will be required to deposit in advance with the Executive Engineer the charges for water which are to be calculated in accordance with the schedule of miscellaneous rates in the Canal Act.

14. It must be clearly understood by the contractor that no claim on account of enhanced rates on those already accepted, due to war fluctuations, will be entertained during the currency of his contract for the work as per schedule attached to the agreement and the additional work, if any, under clause 12 of the contract, if such additional work shall consist of items which have already been quoted for, or, items not quoted for but appearing in District schedule.

15. In the event of emergency the contractor will be required to pay his labour every day and if this is not done Government shall make the requisite payment as would have been paid by the contractor and recover the cost from the contractors.

Inconvenience to the public.

16. The contractor(s) shall not deposit material on any site which will seriously inconvenience to the public. The Engineer-in-charge may require the contractor(s) remove any materials, which are considered by him, to be a danger or inconvenience to the public or cause them to be removed at the contractor's cost.

17. The contractor undertakes to have the site clean, free from rubbish to the satisfaction of the Engineer-in-charge. All surplus materials, rubbish, etc., will be removed to the places fixed by the Engineer-in-charge and nothing extra will be paid.

18. The contractor shall not allow any rubbish or debris to remain on the premises during or after repairs, but shall remove the same and keep the place neat and tidy during the progress of the work. The Engineer-in-charge may get the site or premises clears of debris, etc., and recover the cost from the bill of the contractor, if the latter shows slackness in observing this clause.

19. Materials brought at site shall not be stacked at random. The contractor shall stack all these materials as directed by the Engineer-in-charge.

ADDITIONAL SPECIFICATIONS WHEN ROAD ROLLERS ARE SUPPLIED BY GOVERNMENT.

Road rollers shall be supplied by the Government on hire at the rates and conditions specified below. The contractor should requisition road rollers at least six weeks before the date on which these are required mentioning the dates on which delivery is desired.—

A—Hire charges.

1.	Road rollers, oil or steam driven of 8 tons or over ..	10 per day.
2.	Road rollers of 6 tons or less	8 per day.

1. The rollers will be made over and taken back at the site of work, the charge shall be recovered at prescribed rates from the date the road roller is made over till the date of its return even though the roller may not have been working for any cause except a major break down necessitating its return to the workshops.

2. The hire charges include, free of further charges, the following services:—

(*i*) In the case of steam road rollers—Service of driver, fireman and a cleaner, also lubricating oil, stores for cleaning purposes and steam coal to light up not exceeding 2½ cwt. only on the day when the road roller is made over to the contractor.

(*ii*) Oil driven rollers—Service of driver, one Khallasi or cleaner, also grease lubricating oil and stores for cleaning purpose.

(*iii*) Petrol driven road rollers—Service of driver, also grease and lubricating oil.

(*iv*) Tandum motor road rollers—Services of driver, cleaner also lubricating oil and grease, etc.

3. (*i*) All other charges such as the pay of the Chowkidar to be supplied by Government for guarding the rollers at night, the cost of water of watching the road rollers when on hire shall be borne by the hirers. The roller will be washed out after 100 hours of working in accordance with P.W.D. rules.

(*ii*) Fuel coal steam, petrol and chopped firewood for the working of road rollers, match and kerosene oil required for lighting up will be supplied by the hirer at his expense. In the case of oil driven road rollers however the supply of oil will be made by the Department at the current issue rate by debit to the contractor's account.

(*iii*) The wages of the Chowkidar will be debited at 63 paisa a day.

(*iv*) Rates for hire charges of rollers are liable to revision by Government and the contractor shall be prepared to accept these revised rates, if any, enforced from time to time without prejudice to this contract.

TAR AND BITUMEN.

1. The contractor undertakes to make arrangements for the supervision of the work by the firm supplying the tar or bitumen used.

2. The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formulæ, before the process of painting is started and shall hypothecate it to the Engineer-in-charge against money advanced by Government. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution, for reasons other than authorised charges of specification and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused material as determined by the Engineer-in-charge shall be made and the material returned to the contractors. Although the materials are hypothecated to Government the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from the site of work without the consent of the Engineer-in-charge in writing.

ADDITIONAL CLAUSES.

1. In case where the responsibility of despatch of stores rest with the supplier, but the freight is payable by the purchaser, the supplier should despatch the stores by the most economical method, using the full wagon load whatever it is possible and economical to do so failing which the supplier will render himself liable for the whole or part of any avoidable expenditure caused by such default. The supplier should get in touch with the purchase Officer concerned and in cases of despatch of stores which are the property of the Defence Department at the time of despatch, the supplier may obtain the advice of the "Movement Control Section" Station Staff, Officers or the Controller of Supplies of the station concerned.

2. The contractor will have to make his own arrangement for the carriage of materials.

3. Imported labour may be allotted to contractors at the market rate for labour employed in the locality in cases where the employment of this labour by the contractors is of mutual advantages to Government and the contractors.

But in case where the contractor has failed to secure his own labour, imported labour may be forced on him at the rate to be decided by the Superintending Engineer. The decision of the Superintending Engineer as to circumstances in which the employment of imported labour is of mutual advantage, will be final and binding on all parties to the contract.

In other cases, imported labour need not be forced on contractors but the Executive Engineer should at once give notice in writing to all contractors that if they object to taking labour from the Government now but later required labour to complete their work in time, they will be allotted Government labour as available and will be charged full cost at Tk. 1·50 paisa per cooly per day.

4. Military credit notes will only be issued at the despatching station for materials which are the property of Government at the time of despatch. Ordinary credit notes will be issued by this Department at the receiving station to help contractors in taking delivery and the cost will be recovered from the contractor's bills.

BGP-80/81-10121 1-50,000, 1981.

PUBLIC WORKS DEPARTMENT

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

ANALYSIS OF RATES

(WITH CONTRACTOR'S OWN SUPPLY OF MATERIALS)

FIFTH EDITION

EFFECTIVE FROM
1ST. DECEMBER, 1983

PRICE. : Tk. 150/- only.

PREFACE TO THE ANALYSIS

The detailed analysis incorported in this book is the basis on which the rates in the "schedule" have been arrived at. The exiting labour and market rates of materials have been taken into consideration for preparation of analysis.

The rates of items have been analysed on the basis of specifications detailed survey of materials, labours, equipments etc. required for the work and their prevailing market rates.

The analysis maybe treated as a standard form of analysis of rates and guide line for P. W. D. Engineers and Field staff. Some Appendices have been provided as a ready reckoner of frequently used Engineering data.

A sound knowledge of analysis of rates is a much for every Civil Engineer to optimise cost, time control and quality of works.

(M. H. Khan)
Superintending Engineer (O. S. D.)
Public Works Department.

(A. H. M A. Hai)
Chief Engineer,
Public Works Department.

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LABOUR RATE

1.	Ordinary Labour	... ...	Tk. 25/- per day.
2.	Skilled Labour	....	Tk. 30/- per day.
3.	Head Mason	... ...	Tk. 60/- per day.
4.	Mason	....	Tk. 50/- per day.
5.	Carpenter/Painter	... .	Tk. 55/- per day.
6.	Plumber	....	Tk. 60/- per day.
7.	Rod Mistry	....	Tk. 60/- per day.
8.	Helper to Rod Mistry	....	Tk. 35/- per day.

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