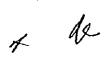
			P	riorit	y
No.	Equipment name	Department	A	В	C
1:ECG Monitor		Anaesthesia & Recovery Unit	1	0	
	scope (teaching type)	Angioplasty Dep.			X
3 Kidney machin	ne, Hemodialysis Unit	Artificial Kidney Unit	0		
4:Sterilizing Uni		Artificial Kidney Unit	0		
5 Burns Bath	i, isty them	Burns Plastic Surgery Dep			×
6iDermatome El	actria	Burns Plastic Surgery Dep			х
		Burns Plastic Surgery Dep	$\dashv$		<u> </u>
7'Equipment for		Burns Plastic Surgery Dep	— <u>i</u>		·: <u>:-</u>
8'Lower air loss		Cardiology Clinic	0		
9 Electrocarding	raph, 3 channel /without Analyzer			0	
	fonitor/ with non invasive pacemaker	Cardiology Dep		0	
11 ECG Monitor/		Cardiology Dep			
12 Echo Colored		Cardiovascular Surgery Dep		0	
13 Bed side moni		CCU Dep		0_	
14 Central monito	oring system	CCU Dep			X
15 Automatic Info	usion Pump	CCU Dep	0		
16 Syringe Pump		CCU Dep		0	
17 Electrocardiog	raph	CCU Dep		0	
18 Glucose Analy	<u> </u>	CCU Dep		0	
19 Ventilator		CCU Dep		0	
	Testing equipment (Spirometer)	Chest Disease Dep		o	
21 Chair Dental v		Dentofacial Surgery Dep	o		
	1 Unit General Purpose	Dentofacial Surgery Dep	0		
		Emergency Dep	}~	0	
23 Light Examina		Emergency Dep		<u>-</u> -	-
24 Radiographic	Unit General purpose		<u> </u>	0	
25 Sterilizing Uni	it Dry Heat	Emergency Dep		<u> </u>	
26 Audiometer		ENT Clinic	Lo_	ļ. <u> </u>	
27 Magnifier		ENT Clinic	ļ	0	
28 ENT Treatmen	at Unit	ENT Clinic	0	<u> </u>	
29 Colonoscope		Gastrointestinal Dep	L	0	
30 Gasteroscope		Gastrointestinal Dep		0	ļ
31 Scanner Ultras	sonic General Purpose	Gastrointestinal Dep		0	
32 Sterilizing Un		Gastrointestinal Dep	0		l
33 Suction Unit A		Gastrointestinal Dep	0		
	ning of the Endoscopy Equipment	Gastrointestinal Dep	0		Ĭ
35 Bedside monit		General ICU Dep	0		i
36 Blood Gas An		General ICU Dep		0	
	Monitor/ with non invasive pacemaker	General ICU Dep		0	l '
38 Electrocarding		General ICU Dep		0	
	nalyzer Ion-Selective	General ICU Dep		o	
401Glucose Analy		General ICU Dep	0	<u> </u>	-
		General ICU Dep	Ť		Х
	utress with Automatic Pump	General ICU Dep		0	
42 Automatic Inf				ļ	
43 Syringe Pump		General ICU Dep	<u> </u>	0	
	or blood elements)	General Operation ward	l - <u>-</u> -		X
45 Centriluge, Ta	<u> </u>	Labo. (Bacteology)  Labo. (Bacteology)	0		<u> </u>
46 Distilling Unit		1	0	ļ	<u> </u>
47 Sterilizing Un	it Vapor	Labo. (Bacteology)	0		ļ
48 Spectrophotor	neter U.V./Visible	Labo. (Biochemistry)	0		
49 Automatic Dil	uter	Labo. (Biochemistry)		0	
50 Automatic Pig		Labo. (Biochemistry)	1	0	L
51 Automatic Tit		Labo. (Biochemistry)		0	
	perature Circulating Bath	Labo. (Biochemistry)	T	0	Γ
	nalyzer Na,K,Cl /at least	Labo. (Biochemistry)	0	T ·	
	n Analytical Balance	Labo. (Biochemistry)	1	0	1
55 Laboratory A		Labo. (Biochemistry)	1	0	
	ucourte	Labo. (Biochemistry)	t	0	
56 Osmometer		Lago. (Biochemistry)	<u> </u>	Ι.υ.	1



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No.	Equipment name	Department	Λ	riorit B	C		
57	Water Demineralizer	Labo. (Biochemistry)		0			
	Distilling Unit	Labo. (Blood bank)	0				
	Refrigerator Blood Bank	Labo. (Blood bank)	0				
	Centrifuge Microhematocrit	Labo. (Blood bank)	0				
	Centrifuge, Tabletop	Labo. (Blood bank)		0			
	Automatic Pipette	Labo, (Blood bank)	-	0			
	Automatic Titration Device	Labo. (Blood bank)		0			
	Constant Temperature Circulating Bath	Labo. (Blood bank)		0			
	High Precision Analytical Balance	Labo. (Blood bank)		0			
	Laboratory Autoclave	Labo. (Blood bank)		o			
	Pipette Washer/ Dryer	Labo. (Blood bank)		0			
	Electrophoresis Equipment	Labo. (Electrophoresis)		0			
	Automatic Pipette	Labo. (Hematology)		0			
	Automatic Tipento  Automatic Titration Device	Labo. (Hematology)		0			
	Coagulometer	Labo. (Hematology)		0			
	Constant Temperature Circulating Bath	Labo. (Hematology)		0			
12	Electronic Differential White Cell Counter	Labo. (Hematology)		0	<b></b> -		
		Labo. (Hematology)		ŏ	<del> </del>		
	High Precision Analytical Balance	Labo. (Hematology)		0			
	Laboratory Autoclave			0			
	Pipette Washer/ Dryer	Labo. (Hematology)	<u> </u>		$\vdash$		
	Trinoculor Microscope	Labo. (Hematology)		0			
	Hemalocrit Centrifuge	Labo. (Hematology)	<b> </b>	0	<b> </b>		
	Automatic Pipette	Labo. (Hormone)	-	0	ļ—-{		
	Automatic Titration Device	Labo. (Hormone)		0	<b>  </b>		
	Constant Temperature Circulating Bath	Labo. (Hormone)	ļ. <u></u>	0			
	High Precision Analytical Balance	Labo. (Hormone)	<u> </u>	0			
	Laboratory Autoclave	Labo. (Hormone)		0			
	Pipette Washer/ Dryer	Labo. (Hormone)		0	<u> </u>		
85	Centrifuge Refrigerated	Labo. (Hormone)	0				
86	Centrifuge Table top	Labo. (Hormone)	0				
87	Diluter	Labo. (Hormone)	0	1			
88	Incubator Laboratory Thermocycling	Labo. (Hormone)	0				
89	Mixer Clinical Laboratory	Labo. (Hormone)	0		<u> </u>		
90	Automatic Pipette	Labo. (Immunology)	L	0			
91	Automatic Titration Device	Labo. (Immunology)		0	<u> </u>		
92	Constant Temperature Circulating Bath	Labo. (Immunology)		0			
	High Precision Analytical Balance	Labo. (Immunology)		0			
	Laboratory Autoclave	Labo. (Immunology)		0			
	Pipette Washer/ Dryer	Labo. (Immunology)	i	0			
	Microscope Laboratory	Labo. (Immunology)	0				
	Sterilizing Unit Dry Heat	Labo. (Immunology)	O				
	Automatic Pipette	Labo. (Pathology)		0			
	Automatic Titration Device	Labo. (Pathology)		0			
	Constant Temperature Circulating Bath	Labo. (Pathology)		0			
	High Precision Analytical Balance	Labo. (Pathology)	1	0			
	Histology Staining Station	Labo. (Pathology)	T	ō	1-		
	Laboratory Autoclave	Labo. (Pathology)	1	0			
	Microtome (Rotary)	Labo. (Pathology)	1	0			
	Microtome (Sledge)	Labo. (Pathology)	†	10	-		
	Paraffin Oven	Labo. (Pathology)	$\vdash$	0			
		Labo. (Pathology)	+	0	┼		
	Pipette Washer/ Dryer	Labo. (Pathology)	+-	0			
	Shaker for Tissue Fixation	Labo. (Pathology)	1	0	$\vdash$		
	Slide Warmer		╁	0	<del> </del>		
	Trinoculor Microscope	Labo. (Pathology)	+		+-		
	Deep Freezer	Labo. (Pathology)		0	+		
112	. Wax Dispenser	Labo. (Pathology)		0	<u> </u>		



			P	riorit	v
No.	Equipment name	Department	A	В	ć
	Balance Electronic	Labo. (Pathology)	0		
- 114	Bath Paraftin Physical Therapy	Labo. (Pathology)	0		
	Microtome Cryostat	Labo. (Pathology)	0		
	Tissue Processor	Labo. (Pathology)	0		
117	Morgue Refrigerator	Morgue Unit		0	
	Bedside monitor	Neuro ICU Dep		o	
. 119	Defibrilator/ Monitor/ with non invasive pacemaker	Neuro ICU Dep		O	
	Electrocardiograph	Neuro ICU Dep		0	
	Glucose Analyzer	Neuro ICU Dep	0		
	Pneumatic Mattress with Automatic Pump	Neuro ICU Dep			Х
	Ventilator	Neuro ICU Dep		0	
	Sterilizing Unit Dry Heat	Neurosurgery Dep		0	
	Anaesthesia Unit	Neurosurgery Ward	<del> </del>	0	
	EEG/Multiple channel	Neurosurgery Ward		ō	
	Electrosurgical Unit General Purpose	Neurosurgery Ward		Ō	<b> </b>
•	Head Light	Neurosurgery Ward	<del> </del>	0	
	Hydraulie Surgical Microscope	Neurosurgery Ward	<b> </b>	0	
	Kovetron (Coagulator for brain)	Neurosurgery Ward		ō	
	Light Examination	Neurosurgery Ward	<del>                                     </del>	0	
	Radiographic Unit Mobile	Neurosurgery Ward	<del> </del> —	ŏ	
	Table Operating	Neurosurgery Ward	0	<u> </u>	
		Ophthalmolo-surgery Ward	-	0	
	Head Light	Ophthalmology Clinic	-	0	
	Chart Eye Visual Acuity		<u>-</u>	0	
	Extractor Metal Magnetic	Ophthalmology Clinic	<del> </del>		
	Keratonometer (javal)	Ophthalmology Clinic	<u> </u>	0	
	Lensometer	Ophthalmology Clinic	<b> </b>	0	
	Ophthalmoscope Direct	Ophthalmology Clinic	<u> </u>	0	
	Ophthalmoscope Indirect	Ophthalmology Clinic	ļ	0	
•	Perimeter Automatic	Ophthalmology Clinic		0	
	Retinoscope (Skiascope)	Ophthalmology Clinic	<u> </u>	0	
	Slit Lamp	Ophthalmology Clinic	ļ	0	<u> </u>
	Trial Lens Set Ophthalmic	Ophthalmology Clinic	<u> </u>	0	
	Table Operating	Ophthalmology Dep	L	0	
·	Cast Cutter	Orthopedic Operation Dep	0	ļ	
	Drill air pressure	Orthopedic Operation Dep		0	
148	Saw Air pressure Oscillator	Orthopedic Operation Dep		0	
	Electrosurgical Unit General purpose	Orthopedic Operation Ward	0		
	Head Light	Orthopedic Operation Ward	<u></u>	0	
	Table Operating Orthopedic	Orthopedic Operation Ward	0		
	Blood Exchange Incubator	Pediatric Dep	<u> </u>	0	
	Glucose Analyzer	Pediatric Dep	0	L	<u> </u>
	Head Box	Pediatric Dep	0		
	Light Examination	Pediatric Dep	0		
	Nebulizer	Pediatric Dep	0		l
	Neonatal Ventilator Unit	Pediatric Dep	L	0	
	Pulse Oximeter	Pediatric Dep	0	Í	]
159	Bath Praffin Clinical -	Physical Therapy r	0		
160	Exerciser Neck	Physical Therapy	0		
161	Heating Unit Hot Pack	Physical Therapy	0	l	
162	Light Infrared	Physical Therapy	0		
	Muscle Stimulator Neuromuscular	Physical Therapy	0	Ī	
	Short Wave Physical Therapy	Physical Therapy	0	l —	
	Ultrasound Physical Therapy	Physical Therapy	o		
	Automatic Gas Sterilizer	Sterilization Dep		0	
	High Speed Sterilizer	Sterilization Dep		0	1
	Steam Sterilizer for Biborons	Sterilization Dep	1-	0	<b>!</b>
		L	<b>└</b>	L	L



			P	rioril	 .y
No.	Equipment name	Department	A	В	C
	Ultrasonic Cleaner	Sterilization Dep	0		
	Washing Machine for Instrument	Sterilization Dep	0		
	Electrosurgical Unit General Purpose	Surgery Dep		0	
	Glucose Analyzer	Surgery Dep		0	<u> </u>
	Sterilizing Unit Dry Heat	Surgery Dep	0	L	
174	Surgical Endoscopy Set (Mediastinalscope)	Thoracic Operation Ward	l	0	
175	Surgical Endoscopy Set (Thoracicendoscope)	Thoracic Operation Ward	L	0	
176	Anesthesia Unit	Thoracic Surgery Ward		0	L
177	Electrosurgical Unit General purpose	Thoracic Surgery Ward	0		
	Head Light	Thoracic Surgery Ward		0	l
	Sterilizing Unit Dry Heat	Thoracic Surgery Ward	0		
	Suction Unit Aspirator	Thoracic Surgery Ward	0	L	<u> </u>
	Table Operating	Thoracic Surgery Ward	. 0		
	Scanner Ultrasonic General purpose	Urology Clinic		0	ļ
	Sterilizing Unit Dry Heat	Urology Dep		0	
184	Cystoscope without TUR set	Urology Dep		0	<u> </u>
185	Radiographic /Fluoroscopic Unit General Purpose	X-ray Dep	0		Ĺ
	CPR mannequin with monitor	Training equipment	L	0	
	CPR mannequin (child and adult)	Training equipment		0	<u> </u>
188	Air way management trainer (child and adult)	Training equipment		0	
189	IV trainer arm	Training equipment		0	
190	Complete set of emergency injuries model	Training equipment		0	1_
191	Resuscitation emergency bag	Training equipment		0	_
	Dressing emergency bag	Training equipment		0	ļ
19.	3 Auto ventilator	Training equipment		0	1
19	1 Carousel slide projector	Teaching material		0	1_
19:	Overhead projector	Teaching material		0	<u> </u>
	5:Laser pointer	Teaching material		0	1_
	7: VHS video cassette recorder	Teaching material		0	$\downarrow$ _
193	B:VHS movie camera	Teaching material		О	_
	9.TV set	Teaching material		0	
200	O Audio mixer	Teaching material		0	_[_

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#### Annex-II

#### Criteria for equipment selection

#### Policy of Basic Design Team

- Replacing or supplementing of the essential and fundamental equipment which is necessary for medical activities of Damascus Hospital
- Replacing or supplementing of the essential and fundamental equipment which is necessary for teaching and training activities of Damascus Hospital
- Determining the items and quantities attaching importance to appropriateness in medical technique, maintenance, budgetary plan and others
- Designing the project so that it meets the scheme of Japan's ODA

#### Priority Set Up in Selection of Equipment

1 Replacement of Equipment

Replacement of equipment, which is used in daily medical and/or teaching/training activities but aged and in poor condition

ex.) over 10 years old equipment, discontinued medical equipment, frequently repaired medical equipment, inaccurate laboratory equipment equipment insufficient in quantity, etc.

2 Supplement of Equipment

Supplementing the equipment of which the necessity can be justified by the expansion of medical and/or teaching/training activities.

Those equipment should be justified by condition of rehabilitation and renovation work of Damascus hospital, medical demands, leading diseases, personnel and so on.

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3 Newly-Introduced Equipment

Introducing the equipment, which is essential in the hospital's medical and/or teaching/training activities and necessary in the increased or newly-established departments.

The following conditions should be practically satisfied.

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readiness of facility,

medical demands, technical level, personnel, budgetary plan of maintenance, etc.

#### Examples of Equipment to be Selected

- Equipment which is fundamental for medical activities of Damascus Hospital
- Equipment which is appropriate for technical level of Damascus Hospital
- Equipment which is appropriate for medical demands shown by the number of patients or tests in Damascus Hospital

- Equipment for which Damascus Hospital and/or MOH has appropriate budgetary plans for maintenance

#### Examples of Equipment to be Excluded from the Project

- Important requirement on request form
- Urgent requirement No. 2 on request form
- Equipment newly developed, and its reliability, effectiveness and maintenance cost have not been clearly determined
- Equipment of which maintenance cost is so big that the sustainability would be obstructed
- Equipment of which consumable, spare parts and maintenance services of manufacturer can not be provided in Syria
- Consumable
- Equipment for departments or rooms of which construction plans of Syrian side can not be clearly and practicably presented in the basic study phase
- Equipment which violate the regulation or law of medical disposable and radiographic control
- Equipment which expect low cost benefit

- Duplication or overlapped equipment (Existing equipment and other donation)





#### ON JAPAN'S GRANT AID PROGRAM

#### 1. Japan's Grant Aid Procedures

- (1) The Japan's Grant Aid Program is executed by the following procedures.
  - -Application (request made by a recipient country)
  - -Study ()Preliminary Study / Basic Design Study conducted by JICA)
  - -Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
  - -Determination of Implementation (Exchange of Notes between both Governments)
  - mplementation (Implementation of the Project)
- (2) Firstly an application or a request for a project made by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to see whether or not it is suitable for Japan's Grant Aid. If the request is deemed suitable, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, HCA conducts the Study (Basic Design Study), using a Japanese consulting from. If the background and objective of the requested project are not clear, a Preliminary Study is conducted prior to a Basic Design Study.

Thirdly, the Government of Japan appraises to see whether or not the Project is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA and the result are the submitted for approval by the Cabinet.

Fourthly, the Project approved by the Cabinet becomes official when pledged by the Exchange on Notes signed by both Governments.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

#### 2. Contents of the Study

(1) Contents of the Study

The purpose of the Study (Preliminary Study / Basic Design study) conducted on a project requested by JICA is to provide a basic documents necessary for appraisal of the project by the Japanese Government, The contents of the Study are as follows:

- (a) to conform background, objectives, benefits of the project and also institutional capacity,
- (b) to evaluate appropriateness of the Project for the Grant Aid Scheme from a technical social and economical point of view,

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- (c) to confirm items agreed on by both parties concerning a basic concept of the project,
- (d) to prepare a basic design of the project,
- (e) to estimate cost involved in the project.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request.

Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

#### (2) Selecting (a) Consulting Firms(s)

For smooth implementation of the study, JICA uses (a) consulting firms(s) registered. JICA selects (a) firm(s) through proposals submitted by firms which are interested. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference made by JICA.

The consulting firms(s) used for the study is (are) recommended by JICA to a recipient country after Exchange on Notes, in order to maintain technical consistency and also to avoid possible undue delay in implementation caused if a new selection process is repeated.

#### (3) Status of a Preliminary Study in the Grant Aid Program

A Preliminary Study is conducted during the second step of a project formulation & preparation as mentioned above.

A result of the study will be utilized in Japan to decide if the Project is to be suitable for a Basic Design Study.

Based on the result of the Basic Design Study, the Government would proceed to the stage of decision making process (appraisal and approval).

It is important to notice that at the stage of Preliminary Study, no commitment is made by the Japanese side concerning the realization of the Project in the scheme of Grant Aid Program.

#### 3. Japan's Grant Aid Scheme

#### (1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services for economic and social development of the country under the following principles in accordance with relevant laws and regulations of Japan. The Grant Aid is not in a form of donation or such.

### (2) Exchange on Notes (E/N)

the Japan's Grant Aid is extended in accordance with the Exchange of Notes by both Governments, in which the objectives of the Project, period of execution, conditions and amount of the Grant, etc. are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedure such as

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Exchange of Notes, concluding a contract with (a) consulting firms(s) and (a) contractor(s) and a final payment to them must be completed.

(4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country origin.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)

(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude into contracts in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. The "Verification is deemed necessary to secure accountability to Japanese tax payers.

- (6) Undertakings required to the Government of the recipient country In the implementation of the Grant Aid, the recipient country is required to undertake necessary measures such as the following:
  - (a) to secure land necessary for the sites of the project and to clear and level the land prior to commencement of the construction work.
  - (b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
  - (c) to secure buildings prior to the installation work in case the Project is providing equipment,
  - (d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
  - (e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
  - (f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein fro the performance of their work.

(7) "Proper Use"

The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for their operation and maintenance as well as to bear all expense other than those to be borne by the Grant Aid. 20

(8)"Re-export"

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

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- (9) Banking Arrangement (B/A)
  - (a) The Government of the recipient county or its designated authority shall open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payment in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the contracts verified.
  - (b) The payment will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to pay issued by the Government of the recipient country or its designated authority.

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#### Annex-IV

Necessary measures which shall be taken by the Government of Syria

- (1) To secure the completion of building rehabilitation work prior to the procurement of the equipment.
- (2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- (3) To secure buildings prior to the procurement in case the installation of the equipment.
- (4) To ensure all the expenses and prompt execution for untoading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
- (5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified contracts.

#### (6) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchanged bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under authorization to pay issued by the Government of the recipient country or its designated authority.

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#### Annex-V

# Contents of drawings

- (1) Outpatient Clinic and Laboratory (Present)
- (2) Service Building (Present)
- (3) Outpatient Clinic and Laboratory (Modified)
- (4) Service Building (Modified)
- (5) Hospital Main Building from basement to third floor. (Proposed)

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#### MINUTES OF DISCUSSIONS

ON

#### **BASIC DESIGN STUDY**

ON

# THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT OF DAMASCUS HOSPITAL

IN

# THE SYRIAN ARAB REPUBLIC (CONSULTATION ON DRAFT REPORT)

In September 1996, the Japan International Cooperation Agency (JICA) dispatched a Basic Design study team on the Project for Improvement of Medical Equipment of Damascus Hospital in the Syrian Arab Republic (hereinafter referred to as "the Project"), and through discussions, field survey, and technical examination of the results in Japan, the team has prepared the draft report of the study.

In order to explain and to consult the Syrian side on the components of the draft report, JICA sent to Syria a study team, which is headed by Dr. Katsuhiro YOSHITAKE, Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health and Welfare, and is scheduled to stay in the country from December 11 to December 20, 1996.

As a result of discussions, both parties have confirmed the main items described on the attached sheets.

Damascus, December 18, 1996

Dr. Katsuhiro Yoshitake

Leader

Draft Report Explanation Team

Japan International Cooperation Agency

H. E. Or. M.Eyad Chatty

Minister

Ministry of Health

Government of the Syrian Arab Republic

Dr. Mohamed Dyrani

Director of Damascus Health Directorate

#### ATTACHMENT

1. Components of draft report

The Government of the Syrian Arab Republic has in principal agreed and accepted the components of the draft report proposed by the Team.

2. Items requested by the Government of the Syrian Arab Republic

The procurement of the equipment described in ANNEX-I, which finally requested by the Government of the Syrian Arab Republic is for the consideration by the Government of Japan to be provided under the Grant Aid.

The requested items shall be re-examined and referred to on finalizing the Basic Design Study Report.

3. Presentation of the Final Report

JICA will make the final report according to the confirmed items, and send it to the Government of the Syrian Arab Republic around March 1997.

- 4. Japan's Grand aid system
  - 1) The Government of the Syrian Arab republic has understood the system of Japan's Grant Aid explained by the team. (See ANNEX-II)
  - 2) The Government of the Syrian Arab Republic will take necessary measures, described in ANNEX-III for smooth implementation of the Project on condition thatch the Grant Aid by the Government of Japan is extended to the Project.
- 5. Monitoring of the Equipment Project

Damascus Hospital has the responsibility in monitoring progress of the Project based upon the indicators given in ANNEX - IV and reporting it to the JICA Syria Office annually through Hospital Coordination Office of the Ministry of Health.

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- 6. Other Relevant Issues
  - 1)Renovation Work

The Government of the Syrian Arab Republic will allocate the necessary budget for the Renovation Work. And will provide necessary information including Drawings, Work Schedule, those indicate contents and progress of renovation work to JICA for securing suitable and proper implementation of the project.

2) Upgrading of System Functions

The Japanese Mission will strongly suggest that;

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- 1- the Syrian Side will establish the system that differentiate between the out-patients and the emergency patients for all involved parties.
- 2- the Syrian Side shall take all measures to establish the access control system.
- 3- the Syrian side shall undertake the implementation of the proper delivery system for laboratory.
- 4- the Syrian side shall modify the emergency zone in order to secure more proper access to the emergency department.
- 5- The Syrian side shall modify the existing system in order to reduce the congestion of the Hospital.
- 3) System Development of the Hospital
- 1- Japanese side suggested Syrian side to take this opportunity as to formulate the project title as "Project for Improvement of Damascus Hospital Functions". (herein after define "the Hospital Improvement Project") (See ANNEX V)
- 2- Japanese side suggested Syrian side that the Hospital Improvement Project should include whole programs and activities related to the upgrading of the hospital functions and improvement of the patient referral system within Damascus City and Damascus Suburb area.
- 4) Monitoring and Evaluation of the "Hospital Improvement Project"
- 1- To know the impact and efficiency of "Hospital Improvement Project," Japanese side suggested the Syrian side to analyze the several baseline indicators that show the current situation of the function of Damascus Hospital periodically.
- 2- Recommended indicators are as follows.

Statistics of the Damascus Hospital from 1991 to 1996

- Patient Number (Inpatient, Outpatient Total / Each Department)
- Admission rate of general OPD (Total / Each Department)
- Admission rate of emergency OPD (Total / Each Department)
- Bed Occupancy Rate (Total/ Each Department)
- Mortality rate ( Total / Each Department )
- Average Duration of Admission Day (Total / Each Department)
- Disease Pattern (Total / Each Department)
- Average Time being shared for a outpatient (Total / Each Department)

**Questionnaire Study about** 

- Patient's Satisfaction (Outpatient and Inpatient, Department wise)
- Staff's Satisfaction

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Hospital Statistics in Damascus city and surroundings from 1991 to 1996 except for Damascus Hospital.

- Patient Number (Inpatient, Outpatient Total / Each Department)
- Admission rate (Total / Each Department)
- Bed Occupancy Rate (Total)
- Mortality rate (Total / Each Department)
- Duration of Admission Day (Total / Each Department)

Annual statistics of Population from 1991 to 1996

- in Whole Nation
- in Damascus City
- in surrounding area
- 3- Japanese side suggested to Syrian side that indicators above mentioned should be checked three years after the installation of the equipment and five years after the implementation of the Damascus Hospital Project and be reported to the JICA Syria Office
- 4- Syrian side agreed the concept and the contents which mentioned in the following paragraph.

6-1),2),3),4)

5- Syrian side will carry out above mentioned activities and analysis for the improvement of the functions of the medical service system.



Department name	No	Equipment Name	Qʻty	Previous Item No.
and the second s	28	Colonoscope	2	29
Gastrointestinal Dept	49	Endoscopy Cleaning Cart	1	34
		Gasteroscope	3	30
	102	Scanner Ultrasonic General Purpose	1	31
	109	Sterilizing Unit Dry Heat	2	32
	111	Suction Unit	2	33
		Table for Endoscopy Equipment Cleaning	1	34

Department name	No	Equipment Name	Qty	Previous Item No.
	13	Bed Side Monitor	14	13 35 118
ICU Dept	16	Blood Gas Analyzer	1	36
1	22	Central Monitor	2	14
1	34	Defibrillator	2	37_119
	42	Electrocardiograph	4	17 38 120
	43	Electrolyte Analyzer	1	39
	57	Glucose Analyzer	4	18 40 121
	66	Infusion Pump	14	15 42
	94	ICU bed	14	
	115	Syringe Pump	14	16 43
		Ventilator	6	19 123

Department name	No	Equipment Name	Qʻty	Previous Item No.
Surgery Dept	57	Glucose Analyzer	2	172

Department name	No	Equipment Name	Qty	Previous Item No.
	54	Eye Chart	1	135
Ophthalmology Clinic	68	Keratonometer	1	137
1 01	71	Lensometer	1	138
ł	84	Ophthalmic Diagnostic Table Unit	1	401
		Ophthalmic Magnet	1	136
·		Ophthalmoscope Direct	2	139
		Ophthalmoscope Indirect	1	140
	91	Perimeter	1	141
İ		Retinoscope	1	142
		Stit Lamp	1	143
	119	Trial Lens Set Ophthalmic	1	144

Department name	No	Equipment Name		Previous Item No.
	13	Bed Side Monitor	4	501
Emergency Dept	52	Examination Light	3	23
		Infusion Pump	4	504
	96	Radiographic Unit General Purpose	1	24
	109	Sterilizing Unit Dry Heat	1	25
i	115	Syringe Pump	4	503
	123	Ventilator	1	502

-	Department name	No	Equipment Name	Q\y	Previous Item No.
		73	Lung Function Testing Equipment	1	20
	Chest Disease	131	Bronchoscope	1	

Department name	No	Equipment Name	Oty	Previous Item No.
Lab (Bacteriology)		Centrifuge Tabletop	2	45
120 (Bustations)		Constant Temperature Circulating Bath	i	52
i ·		Distilling Unit	1	46
-	69	Laboratory Autoclave	1	47

Department name	No	Equipment Name	Qty	Previous Item No.
Lab (Biochemistry)	8	Automatic Diluter	1	49
	29	Constant Temperature Circulating Bath	1	52
	44	Electrolyte Analyzer Na,K,Cl	1	53
		High Precision Analytical Balance	2	54
		Laboratory Autoclave	1	55
		Pipette Set	1	50
		Spectrophotometer /Visible	1	48
	128	Water Demineralizer	1	57
Department name	No	Equipment Name	Qty	Previous Item No.
Lab (Blood bank)	23	Centrifuge hematocrit	1	60
•		Centrifuge Tabletop	1	61
		Constant Temperature Circulating Bath	2	64
		High Precision Analytical Balance	1	65
-		Laboratory Autoclave	1	66
		Pipette Set	1	62
		Refrigerator Blood Bank	2	59
		And the state of t	·	THE PERSON NAMED IN COLUMN TWO
Department name	No	Equipment Name	Qty	Previous Item No.
		Electrophoresis Equipment	1	68
Lab (Electrophoresis)	"	Carried Timers		
TWO IT AND A STORY AND	J		ني پيري بجائد وجي	
Department name	No	Equipment Name	Oty	Previous Item No.
Lab (Hematology)	NAME OF TAXABLE PARTY.	Binoculor Microscope	7	77
Dio (Heimiology)		Blood Cell Counter	<del>-</del>	73
		Centrifuge hematocrit		78
		Coagulometer		71
	20	Constant Temperature Circulating Bath	1 2	72
	23	Distilling Unit		58
			$\frac{1}{2}$	74
		High Precision Analytical Balance		
•		Laboratory Autoclave	<u>-</u>	75 69
	1 32	Pipette Set		L 03
Department name	No	Equipment Name	Qty	Previous Item No.
Department name		Automatic Diluter	170	
Lab (Harman)				87
Lab (Hormone)		Automatic Titration Device		80 85
		Centrifuge Refrigerated		<del></del>
		Centrifuge Tabletop		86
		Constant Temperature Circulating Bath	2	81
		High Precision Analytical Balance	2	82
-		Incubator Laboratory Thermocycling	1	88
		Laboratory Autoclave		83
	79	Mixer Clinical Laboratory	1 1	89
	1 92	Pipette Set		79
	77			
Department name	No	Equipment Name	<u>Q'y</u>	Previous Item No.
Lab (Immunology)		Binoculor Microscope	<u>-</u> - <u>-</u>	96
		Constant Temperature Circulating Bath	2	92
		High Precision Analytical Balance	2	93
		Laboratory Autoclave		94
		Pipete Set		90
Life of the American of the International Control of the American of the Ameri	109	Sterilizing Unit Dry Heat		97
	ستمتعب	ner av tambet av tambaren av treinen værdandet ende et en eg eller modelationskapsarksam eller er flytte folk		
		Equipment Name	Qty	Previous Item No.
Department name	No			
	10	Balance Electronic		113
Department name  Lab (Pathology)	10 11		1 1	113 114 110

	29	Constant Temperature Circulating Bath	1	100
		Deep Freezer	Ī	111
		High Precision Analytical Balance	2	101
	63	Histology Staining Station	1	102
		Laboratory Autoclave	1	103
	76	Microtome (Rotacy)	1	104
		Microtome (Sledge)	í	105
		Microtome Cryostat	1	
		Paraffin Oven	i	106
	92	Pipette Set	1	98
		Pipette Washer	1	107
		Shaker for Tissue Fixation	1	108
		Slide Warner	1	109
•		Tissue Processor	1	116
		Wax Dispenser	1	112
والمراجع		and the second s	more brokening	Control of the Contro
Department name	No	Equipment Name	Qty	Previous Item No.
<u>. The challest common request. If the difference and the charge that the charge of the difference and the charge of the charge </u>		Gra Sterilizer		166
Sterilization Dept		High Pressure Steam Sterilizer		167
		Ultrasonic Cleaner	1	169
	127	Washing Machine for Instrument	1	170
		Disinfector for Medical Waste	1	
	l-	ing panggang mangkat garapang pangganggang kapatagan kantang bahatat Melahasan, mengangkangangkapangkapangan p Pangganggang mangkat garapang pangganggang pangganggang kapatang bahatat Melahasan, menganggang pangganggang p		
Department name	No	Equipment Name	Qty	Previous Item No.
		Dental Chair Unit	ī	21
		Electrosurgical Unit Dental	i	22
Dental Clinic		Dental X-ray unit	1	
en e		in die maaring gegen aan emalik groopse van die verseer in bloomse van gevon een verseer van die besche maar ma Oor		
Department name	Ño	Equipment Name	Qty	Previous Item No.
	6	Avdiometer	1	26
ENT Clinic	50	ENT Treatment Unit	1	28
	74	Magnifier	1	27
Department name	No	Equipment Name	Qty	Previous Item No.
	17	Blood Warmer	1	152
Pediatric Dept	52	Examination Light	1	155
•		Glucose Analyzer	i	153
	58	Head Box	10	154
	82	Nebulizer	4	156
	95	Pulse Oximeter		158
	108	Sterilizer for Nursing Bottle	2	168
<u> </u>		Ventilator Neonatal		157
		mat may day to other process and a bill of the first of t		
Department name	No	Equipment Name	Qty	Previous Item No.
		Defibrillator	i i	10
Cardiology Dept		Electrocardiograph	1	9
		Scanner Ultrasonic Cardiac	1	12
Department name	No	Equipment Name	Qty	Previous Item No.
		EEG		126
Neurosurgery Ward		Examination Light	1	131
······································		Pagain or and an activative response for the second of the hands and the second of the		
Department name	No	Equipment Name	Qty	Previous Item No.
Burns Plastic Surgery Dept		Burns Bath		5

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72 Lower Air Loss Bed 51 Refregirator for skin bank

Department name	No	Equipment Name	Q'ty	and the same of the State of th
	102	Scanner Ultrasonic General Purpose	1	182
Urology Clinic	109	Sterilizing Unit Dry Heat	1	183

Department name	No	Equipment Name	Qty	Previous Item No.
	60	Hemodialysis Unit	3	3
Artificial Kidney Unit	109	Sterilizing Unit Dry Heat	1	4
Morgue Unit	80	Morgue Refrigerator	1	117
	12	Bath Praffin Clinical	1	159
Physical Therapy Dept	53	Exerciser Neck	2	160
	59 Heating Unit Hot Pack		2	161
	65	frared Light		162
	81	Muscle Stimulator	3	163
		Short Wave Physical Therapy	1	164
	122	Ultrasound Physical Therapy	3	165
X-ray Dept	132	Radiographic & Floroscopic Unit General Purpose	2	183
	133	Film Processor	1	

Department name	No	Equipment Name	Qty	Previous Item No.
	3	Air Way Management Trainer (child)	2	188
·		Air Way Management Trainer (adult)	5	
Training Equipment	7	Auto Ventilator	4	193
1	30	CPR Mannequin (child)	2	187
	135 CPR Mannequin (adult)		5	
	31	CPR Mannequin with Monitor	1	186
-	39 Dressing Emergency Bag 48 Emergency Injuries Model		4	192
			4	190
	67	IV Trainer Arm	4	189
1	99	Resuscitation Emergency Bag	4	191

Department name	No	Equipment Name	Qty	Previous Item No.
		Vidéo Projector	2	200
Teaching Equipment	19	Carousel Stide Projector	4	194
	89	Overhead projector	4	195
Ì	120	TV Set	5	199
	125	VHS Movie Camera	2	198
	126	VHS Video Cassette Recorder	5	197

Department name	No	Equipment Name	Qıy	Previous Item No.
	1	Air Pressure Drill	1	147
Operation Word	2	Air Pressure Oscillating Saw	1	148
•	4	Anaesthesia Unit	12	125 176
	20	Cast Cutter	1	146
	26	Coagulator	1	130
	32	Cystoscope	1	184
		Dermatome Electric	1	6
	40	ECG Monitor	12	1 11
	47	Electrosurgical Unit General Purpose	12	127 149 171 17
	51	Equipment for Skin Bank		7
	83	Operating Light	12	128 134 150 17
		Radiographic Unit Mobile	1	132
	109	Sterilizing Unit Dry Heat	3	124 173 179
	110	Suction Unit	12	180
	112	Surgical Microscope	1	2
		Surgical Microscope	1	129
		Table Operating	12	133 151 181 14
		Thoracicendoscope	1	175

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#### ON JAPAN'S GRANT AID PROGRAM

#### 1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.

-Application (request made by a recipient country)

-Study Preliminary Study and Basic Design Study conducted by JICA

-Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)

-Determination of Implementation (Exchange of Notes between both Governments)

- Implementation (Implementation of the Project)

(2) First an application or a request for a project made by the recipient country will be examined by the Government of Japan (the Ministry of Foreign Affairs) to see whether it is suitable for Japan's Grant Aid. If the request deemed suitable, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Second, JICA conducts the Study (Basic Design Study), using a Japanese consulting frim. If the background and objective of the requested project are not clear, a Preliminary Study will be conducted before a Basic Design Study.

Third, the Government of Japan appraises to see whether the Project is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA and the result is submitted for approval by the Cabinet.

Fourth, the Project approved by the Cabinet becomes official when pledged by the Exchange on Notes signed by both Governments.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

#### 2. Contents of the Study

(1) Contents of the Study

The purpose of the Study (Preliminary Study and Basic Design study) conducted on a requested project by JICA is to provide basic documents necessary for appraisal of the project by the Japanese Government, The contents of the Study are as follows:

(a) to confirm background, objectives, benefits of the project and also institutional capacity,

(b) to evaluate appropriateness of the Project for the Grant Aid Scheme from a technical social and economical points of view,

(c) to confirm items agreed on by both parties concerning a basic concept of the project,

(d) to prepare a basic design of the project,

(e) to estimate cost involved in the project.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request.

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Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which itemized on Exchange of Notes.

(2) Selecting (a) Consulting Firms(s)

For smooth implementation of the study, JICA uses (a) consulting firms(s) registered. JICA selects (a) firm(s) through proposals submitted by firms that interested. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a

report, based upon terms of reference made by JICA.

The consulting firms(s) used for the study recommended by JICA to a recipient country after Exchange on Notes, to maintain technical consistency and to avoid possible undue delay in implementation caused, If a new selection process repeated.

(3) Status of a Preliminary Study in the Grant Aid Program

A Preliminary Study conducted during the second step of a project

formulation & preparation as mentioned above.

A result of the study will utilize in Japan to decide if the Project is to be suitable for a Basic Design Study.

Based on the result of the Basic Design Study, the Government would

proceed to the stage of decision making process (appraisal and approval).

At the stage of Preliminary Study, It is important to notice that no commitment made by the Japanese side concerning the realization of the Project in the scheme of Grant Aid Program.

#### 3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services for economic and social development of the country under the following principles according to relevant laws and regulations of Japan. The Grant Aid is not in a form of donation or such.

(2) Exchange of Notes (E/N)

The Japan's Grant Aid extended in accordance with the Exchange of Notes by both Governments, in which the objectives of the Project, period of execution, conditions and amount of the Grant, etc. confirmed.

- (3) "The period of the Grant Aid" means one Japanese fiscal year that the Cabinet approves the Project for. Within the fiscal year, all procedure such as Exchange of Notes, concluding a contract with (a) consulting firms(s) and (a) contractor(s) and a final payment to them must be completed.
- (4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.

  When the two Governments deem it necessary, the Grant may use for the purchase of products or services of a third country origin.

  However the prime contractors, namely, consulting, contractor and procurement firms, limited to "Japanese nationals". (The term "Japanese nationals" means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)

(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts in Japanese yen with Japanese nationals. Those contracts shall be

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verified by the Government of Japan. The "Verification" deemed necessary to secure accountability to Japanese tax payers.

- (6) Undertakings required to the Government of the recipient country In the implementation of the Grant Aid, the recipient country is required to undertake necessary measures such as the following:
  - (a) to secure land necessary for the sites of the project and to clear and level the land prior to commencement of the construction work.
  - (b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
  - (c) to secure buildings prior to the installation work in case the Project is providing equipment,
  - (d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
  - (e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
  - (f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein fro the performance of their work.
- (7) "Proper Use"

  The recipient country required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for their operation and maintenance as well as to bear all expense other than those to be borne by the Grant Aid.
- (8)"Re-export"

  The products purchased under the Grant Aid shall not be re-exported from the recipient country.
- (9) Banking Arrangement (B/A)
  (a) The Government of the recipient county or its designated authority shall open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payment in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the contracts verified.
  - (b) The payment will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to pay issued by the Government of the recipient country or its designated authority.

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ANNEX-III Necessary measures which shall be taken by the Government of Syria
(1) To secure the completion of building rehabilitation work prior to the procurement of the equipment

- (2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites
- (3) To secure buildings prior to the procurement in case the installation of the equipment
- (4) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of products purchased under the Grand Aid.
- (5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified contract
- (6) Banking Arrangements (B/A)
- a) The government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchanged bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under Verified Contracts.
- b) the payments will be made when payment requests are presented by the Bank to the Government of Japan under authorization to pay issued by the Government of the recipient country or its designated authority.

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## ANNEX-IV Monitoring and Reporting of the Project

Damascus Hospital will collect necessary indicator for analyzing the Improvement of Hospital Functions.

The following indicators should be reported to JICA Syria Office by Damascus Hospital through the Hospital coordination Office of the Ministry of Health.

- Annual statistics of Population in Damascus and surrounding area
- Hospital Statistics in Damascus city and surroundings
  - Patient Number (Inpatient, Outpatient Total / Each Department)
  - Admission rate (Total / Each Department )
  - Mortality rate (Total / Each Department)
  - Duration of Admission Day (Total / Each Department)
  - Disease Pattern ( Total / Each Department )
  - Treatment Hours for Outpatient (Total / Each Department)

#### -Equipment Data

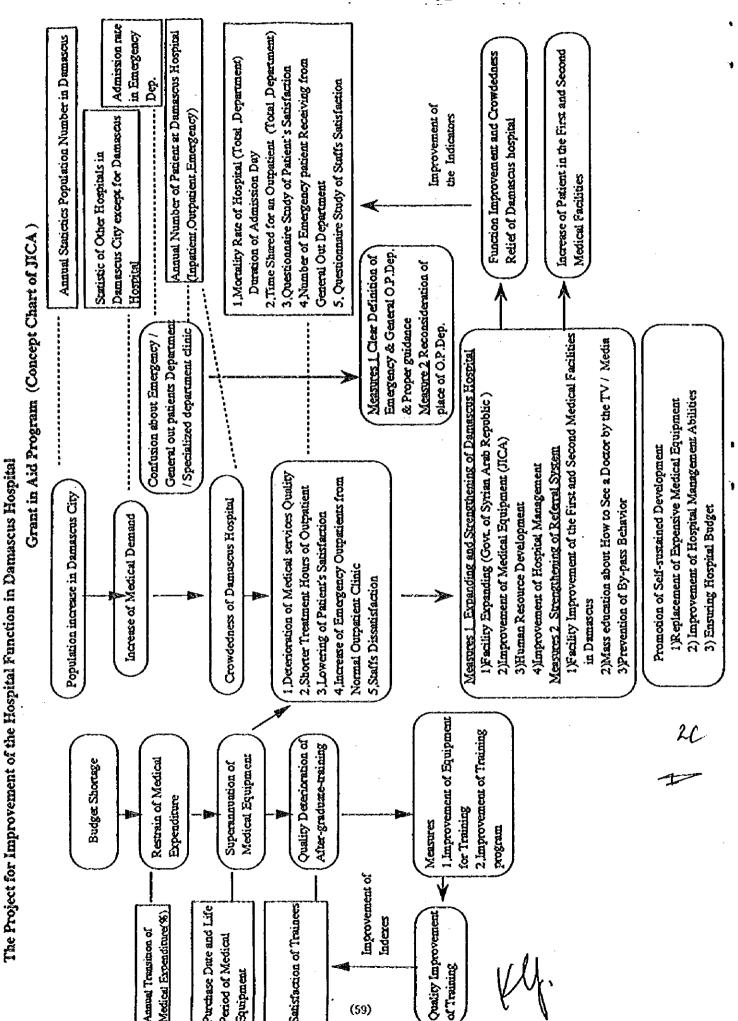
No. of Examination, Periodical Maintenance Report, Equipment Layout

For the confirmation of Renovation work progress, HCO shall provide following information to JICA.

- January Detail Building Plan
- February- Budget and Detail work schedule
- Monthly work progress report

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# 7. ブロジェクト概念説明図

December 1996 Dr. K. Yoshitake renovation of the construction renewal or procurement of physical improvement of equipment regiverment of hopital organization abilities of financial management Tasility management of mdical records maintenance system of facility Project for Improvement of Damascus Hospital Function command / supervising system cleaninng and medical waste, and eqpuipment hospital management. central supply library / IEC pharmacy landry kitchen cental function To instravorqual ÎΟ Function improvement hospital function improvement of regular meeting with representatives in each department integration with PHC activities collaboration / cooperation with medical service system abilities of paramedics quantiy and quality of other medical facilities clinical research abilities of nurses abilities of doctors patient refferal system medical service Improvement of and medical status of contribution to the enprovement health Camascus area sosteraduate training facilities / equipment treining carriculum training system for training (60)

