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UNIVERSITY HOSPITAL

AND

MEDICAL CENTER PROJECT

SRINAKHARINWIROT UNIVERSITY

BANGSAEN CHONBURI

1985

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#### REQUEST FOR NEW TECHNICAL ASSISTANCE PROJECT

Project Title: University Hospital and Medical Center Project

Requesting Agency: Srinakharinwirot University at Bangsaen

Ministry of University Affairs

Proposed Source of Assistance: Government of Japan

### 1. Background Information and Justification for the Project

Established in 1955, Srinakharinwirot University at

Bangsaen was the first institution of higher learning located
outside of Bangkok. From the small beginning as the College of
Education, today the University offers courses leading to Bachelor's
Degrees in six Faculties, namely Nursing Science, Science, Education,
Humanities, Social Sciences, and Physical Education. The Graduate
School offers four Master of Education degree programs in Educational
Administration, Elementary Education, Counselling Psychology and
Biology. In addition, included in the Sixth Higher Education
Development Flan are four nore Faculties which the University plans
to set up. These are Faculties of Applied Science and Technology,
Health Sciences, Management Science, and Aquatic Science. Besides
teaching, the University also engages in research, community
academic service, and the preservation of arts and culture.

Being the only University in the Eastern Region, Srinakharinwirot University at Bangsaen has in the past contributed toward positive development of the Region. It is now hoped to play an even more active role in the years to come since the Royal Thai Government has launched the massive Eastern Seaboard Development Accordingly, the three Provinces-Chachoengsao, Chonburi, and Rayong-which are the target areas for development will be industrialized. The Royal Thai Government is now building necessary in frastructure to accommodate the plan. This Eastern Seaboard Development Program will inevitably affect the environment of the Region, physically and socially For example, there will be a sezeable increase in population in the three Provinces which are in the target areas for development. This warrants proper plan for education and health care. New schools, new teaching innovation, and new health care centers will be needed. According to a study commissioned by the National Economic and Social Development Board, there will be a need for 3 more community hospitals, 47 more health care centers, and 1,503 more hospital beds during 1981-2001 The University is therefore adapting itself to be in the position to be able to offer services to meet these needs.

Cooper & Lybrand Associates, <u>Eastern Seaboard Study</u>, Interm Report, Main Volume (1 st.), July 1982, p.76.

The University is confident that by building on its present strengths it will be able to produce more graduates in the medicine and public health areas. The University now has qualified instructors in Faculties of Nursing Science, and Science who are ready to assume the more active roles in the above mentioned areas. Also there is a Medical Service Center which is now both an infirmary and training place on campus. For basic or foundation courses, strengths can be drawn from the other four Faculties. So, the University Staff is ready to respond to the needs for more graduates in medicine and public health. But, in order to produce qualified personnel in medicine and public health, a modern hospital is needed Srinakharinwirot University at Bangsaen therefore proposes the establishment of a University

## 2. Details of the Project

#### 2.1 Program Goal

- 2.1.1 To Produce qualified personnel in medicine and public health, and to serve medical needs in the target areas for development of the eastern seaboard region.
- 2.1.2 To provide youths in the Eastern Region with the same opportunity given youths in the other Regions, that is to be able to study medicine at their regional university, without having to go to Bangkok. This in turn will create in these youths the sense

of pride and committment to work for their communities after graduation.

- 2.1.3 To study and research in medicine and public health which will benefit other institutions and the general public.
- 2.1.4 To accommodate the internship of students from the Faculties of Medicine, Nursing Science, Health Sciences, and Medical Science.
- 2.1.5 To offer training courses for personnel in medicine and public health in the Eastern Region.
- 2.1.6 To accord the Royal Thai Government's Eastern Seaboard Development Plan.
- 2.1.7 To cooperate with other medical and public health agencies to service and educate the public.
- 2.1.8 To expand medical service and promote health care to a larger public.

### 2.2 Project Objective

- 2.2.1 To produce (graduate) personnel in medical fields as follows:
  - 160 Physicians a year
  - 400 Nurses (at Bachelor's Degree level) a year
  - 200 Health Scientists a year

- 2.2.2 To train personnel in medical fields as follows:
  - 170 Physicians a year
  - 500 Nurses a year
  - 300 Health Scientists a year
  - 5 Dentists a year
  - 101 Medical Specialists (Physicians) a year
- 2.2.3 To intern students from the following Faculties from Srinakharinwirot University, and others
  - Medicine
  - Nursing Science
  - Health Sciences
  - Medical Science
  - Physical Education
  - Science
  - Education
  - Social Sciences
  - Humanities

### 2.3 Conditions Expected at Completion of Project

It is expected that after the establishment of the University Hospital and Medical Center, there will be following benefits:

- 1. There will be a modern and efficient medical care for the general public, with full referral service to assist the provincial and district hospitals in the Region.
- 2. There will be a center to promote and dissiminate health care news to the public which accords the Royal Thai Government's primary health care policy.
- 3. There will be a modern center to produce and train personnel in medicine and public health.
- 4. There will be an active center to study and research in medicine and public health for development.
  - 2.4 <u>Duration of the Project</u>: 1986-1988
  - 2.5 Project Site: Srinakharinwirot University at Bangsaen
  - 2.6 Project Work Plan and Activities
    - 2.6.1 Work Plan

#### 1986-1987

- 1. Preparation of land for construction of the University Hospital and Medical Center.
  - 2. Beginning of construction.
- 3. Quality inspection of office funiture and medical equipment.
  - 4. Purchasing drugs and medical supplies.
  - 5. Purchasing office supplies.

- 6. Requesting staffing positions from the University Personnel Commission.
- 7. Adjusting the budget and staffing positions to conform with the Sixth National Economic and Social Development Plan.

## 1988

- 1. Staffing the University Hospital and Medical Center
- 2. Preparation for the opening ceremony
- 3. University Hospital and Medical Center opens to serve the public
  - 2.6.2 Time Schedule of Project Activities

- 8 -Project Work Plan

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#### 3. Details of the Implementing Agency

Srinckharinwirot University at Bangsaen is a state institution under the jurisdiction of the Ministry of University Affairs and it is one of the eight campuses which together became Srinakharinwirot University by the Royal Decree in 1974. The other campuses are Prasarnmit, Bangkhen, Palasuksa, and Patumwan in Bangkok, and three provincial campuses in Mahasarakham, Songkhla, and Phitsanulok. The President of the University who is in the Prasarnmit campus office has jurisdiction over all campuses. His authority is delegated to the Vice President in charge of the branch campuses for effective administration. Therfore, the Vice President of Srinakharinwirot University at Bangsaen is the Chief executive officer and is responsible for running the campus.

In 1982, the Faculty of Nursing Science was founded at the Bangsaen campus with the Dean as the head. Dean of Nursing Science maintains an office in Bangsaen, Coordinates with the Vice President of the campus and is a member of the University Council which is a policy making body for all campuses. The Medical Service Center was established in 1984 and is affiliated with the Faculty of Nursing Science. The Dean is therefore acting as chairman of the administrative board of the Medical Service Center also.



In short, the Vice President presides over the administration of all six Faculties and the Medical Service Center. He coordinates with the President in Bangkok and reports to the University Council of which he is a member.

### 4. University Hospital and Medical Center Staff

## 4.1 Staffing needs in 1991

Staff	Availability	Needs	No. Requested
Total Number of Fhysicians	2	31	29
specialist in :-			
- Medicine		4	
- Surgery		7	
- Obstetrics, Gynaecology		3	
- Pediatrics		3	
- Optomology		1	
- Ear, Nose, Throat		1	
- Psychiatry		1	
- Physiotherapy		1	
- Pathology		1	
- Radiology		1	
- Anaesthesia	·	2	
- Community Medicine		1	
- General Fractice		5	

Staff	Availability	Needs	No.Requested
Dentist	1	2	1
Pharmacist	1	2	1
Nurse and Midwifery	3	70	67
Anaesthesia Nurse		10	10
Assistant Nurse		100	100
Nutritionist		1	1
Social Worker		2	2
Fhysiotherapist		3	3
Radiology Technician	1	5	4
Laboratory Medicine Technician	1	10	9
Custodian	8	60	82
Grand Total	17	295	278

4.2 Staffing needs in relation to the expansion of Hospitals and Medical Center

Staff	Availability			No.	Reque	sted	
	1985	1986	1987	1988	1989	1990	Total
Physician	2	_	16	5	5	3	31
Dentist	1		1	-	<b>ca</b>	<b></b>	2
Pharmacist	1	-	1	-	_	etta	2
Nurse and Midwifery	3	***	40	10	10	7	70
Anaesthesia Nurse	-	ero.	. 5	2	2	1	10
Assistant Nurse		***	50	20	20	10	100
Nutritionist		-	1		-	<b>~</b>	1
Social Worker	-	•	1	-	1	-	2
Physiotherapist	659	-	2	1	-	<b>~</b>	3
Radiology Technician	. 1		2	2		<b>5.0</b>	5
Laboratory Medicine							
Technician	.1	479	5	2	- 1	1	10
Custodian	8	<b>**</b> 2	30	10	10	2	60
Grand Total	17		154	52	49	24	296

## 4.3 Administrative staff needed in 1990

Staff	Availability	Needs	No Requested
General Administrator	-	1	1
Administrative Assistant		8	8
Financial Analyst	_	1	1
Financial Clerk		3	3
Accunting Clerk	æs.	. 4	4
Typist	1	3	4
Librarian	-	1	1
Housekeeper	-	2 <sup>.</sup>	2
Public Relations Officer	-	3	3
Grand Total	1	26	27

4.4 Administrative staff needs in relation to the expansion of Hospital and Medical Center

	Availability	Î	īo.Requ	uested			mt
	1986	1987	1988	1989	1990	1991	Total
							1
General Administrator	_	-	1	-	-	-	ĭ
Administrative Assistant		_	4	2	1	1	8
Financial Analyst	***	-	1	-	-	-	1 .
Financial Clerk	-	-	1	1	1 .	<b>65</b>	3
Clerk	-		2	1	1	<b>840</b>	4
Typist	1	•	2	1	-		4
Librarion	4		1	-	-	-	1
Housekeeper	-	-	1	1	-	-	2
Public Relations Officer	<b>50</b>	<b>54</b>	2	1	•••	<b></b>	3
Grand Total	. 1	-	15	7	3	1	26

#### 5. Budget

### 5.1 Sources of budget

It is expected that the budget will come from three sources, namely

- 1. Budget for land purchase will come from the public in the form of cash donation or land donation or University land grant.
- 2. Budget for the hospital construction and equipment will be requested from the Government of Japan in the form of Grant Aid totalling 5,000,000,000 Yen (Five Billions Yen) or 500,000,000 Baht (Five Hundred Millions Baht).
- 3. Budget for staff salary and others will come from the Government of Thailand.

- 17 - 5.2 Annual Budget and Royal Thai Government Counterpart Contribution

				Annual	Budgent Need	s		
		1986	1987	1988	1989	1990	199 <b>1</b>	Total
Salaries	Existing Positions	-	_		5, 122, 140	6,994,238	8,766,380	20,882,758
	New Positions	-	_	2,407,980	768,990	896,070	528,990	4,602,030
Wages	Existing Positions	-	-	_	477,000	661,200	855,600	1,993,800
	New Positions	_	_	22 <b>,</b> 590	75,300	75,300	15,060	188 <b>,</b> 250
Remunerations	3	_	_	2,000,000	2,100,000	2,200,000	2,300,000	8,600,000
Ordinary Expe	erses	-	_	900,000	950,000	1,000,000	1,500,000	4,350,00
Supplies		••	_	15,900,000	16,000,000	17,000,000	18,000,000	66,900,00
Public Utilit	cies	-	_	3,000,000	3,500,000	4,000,000	4,500,000	15,000,00
Total of Oper	rational Budget	-	-	24,230,570	25,493,430	32,826,808	36,466,030	122,516,83
Equipment				Cront	A = 3 - P + 1	C	O T	roo ooo oo
Lands & Const	truction			Grant	ALG FROM THE	Government o	f Japan =	500,000,00
Total of Inve	esting Budget							500,000,00
Grand Total								622,516,83

### 6. Related Activities

The University Hospital and Medical Center will complement or supplement work of the agencies within Srinakharinwirot University and others as follows:

## 6.1 Relation with agencies within Srinakharinwirot University

- 6.1.1 Medical Service Center
- 6.1.2 Faculty of Medicine
- 6.1.3 Faculty of Nursing
- 6.1.4 Faculty of Science
- 6.1.5 Faculty of Physical Education
- 6.1.6 Faculty of Education
- 6.1.7 Faculty of Health Science

## 6.2 Relation with outside agencies

- 6.2.1 Industries in the Eastern sea board Region
- 6.2.2 Provincial Health Offices of Chonburi,
  Chantaburi, Rayong, Trad, Prachinburi, and
  Chachoengsao
- 6.2.3 Chonburi Hospital
- 6.2.4 Red Cross Hospital at Sri Racha
- 6.2.5 Rayong Hospital
- 6.2.6 Prapokklao Chantaburi Hospital
- 6.2.7 Trad Hospital

- 6.2.8 Abaibhulet Prachinburi Hospital
- 6.2.9 Chachcengsao Hospital
- 6.2.10 Venereal Disease Control Center, Region 2
- 6.2.11 Tuberculosis Control Center, Region 2
- 6.2.12 Sukhaphibsl (District Health) Center, Region 2
- 6.2.13 The Occupational Health Center at South
  Samrong
- 6.2.14 Leprosy Control Center, Region 3
- 6.2.15 Asean Primary Health Care Center in Chonburi

### 7. Future Work Plan

The University Plans to set up foundation or trust funds to assist in the administration of the University Hospital and Medical Center

Prepared by: Dr. Boon-earn Milindasuta, Vice President
Srinakharinwirot University Bangsaen, Chonburi 20131
Tel. (038) 376-182, 376-060

Appendix A

Building and Residence

## Building in The Hospital

Hospital, including medical equipments and offices		
furnitures	1	Unit
20 devisions and number of beds	500	
Kitchen Building	1	Unit
Cafeteria	1	Unit
Laundry and Supply	1	Unit
Store and Maintenance	1	Unit
Culvery Building	1	Unit
Oxidation Pond	1	Unit
Redidence		
Nursing Residence	1	Building
Capacity(person)	70	
Physician Residences	1	Building
Capacity (families)	30	
Director's House	1	Building

5

Capacity (person)

## Appendix B

Equipments Required in the University Hospital and Medical Center

- 1 -

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
ADMINISTRATION	1. 2. 3. 4.	ELECTRONIC CASH REGISTRATION MACHINE PLAIN PAPER COPY MACHINE IBM ELECTRIC TYPEWRITER 12 DIGIT CALCULATOR OFF-SET PRINTING MACHINE	3 1 3 6	

- 2 -

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
OPD.	1.	DIAGNOSTIC SET	10	
	2.	EXAMINING TABLE	10	
	3.	X-RAY ILLUMINATOR	11	
	4.	STRETCHER	5	
	5.	WHELLCHAIR	5	
	6.	SPYG.40MANOMETER + STETHOSCOPE	10	
	7.	BABY SCALE	2	
	8.	WEIGHT SCALE	3	
	9.	DRESSING TABLE	2	
	10.	DRESSING SET	20	
	11.	SPECIAL TABLE FOR CASTING	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
ER.	1.	, MINOR SURGICAL I STRUMENT		
	2.	MOVEABLE OPERATING LIGHT	4	
	3.	VAPORIZOR	5	
	4.	SUCTION	5	
1	5.	MAYO TABLE	5	
	6.	AMBUBAG (INFANT)	1	
	7.	AMBUBAG (ADULT)	1	
	8.	LARYNGOSCOPE (INFANT)	1	
	9,	LARYNGOSCOPE (ADULT)	1	
	10.	ENDOTRACHIALS TUBE MANY SIZE	1	
	11.	SET EMERGENCY	1	
	12.	IV PALE	5	
	13.	AUTOMATIC EXTERNAL CARDIAC MASSAGE	1	
	14.	ELECTRONIC CAUTERIZER	1	
	15.	ELECTRIC BOILING APPARATUS	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
LABORATORY AND	1.	PHOTO ELECTRIC SPECTOPHOTOMETER	1	
RESE ARCH	2,6	SPECTO PHOTOMETER SELF RECORDING	2	
	3.	BLOOD PH. BLOOD GAS ANALYZER	1	
	4.	CELL COUNTER AND HEMOGOLBIN ANALYZER	1	
	5.	CO <sub>2</sub> AND CHLORIDE ANALYZER	1	
	6.	FLAME PHOTOMETER (ION SELECTIVE ELECTRODE)	1	
	7.	ELECTROPHORESIS FOR H.A.A AND ABNORMAL		
		PROTEIN	1	
	8,	THERMOSTAT DRIER	1	
	9.	DRY HEAT STERILLIZER	1	
,	10.	BIG BACTERIA INCUBATOR	1	
	<b>11.</b>	MEDIUM BACTERIA INCUBATOR	2	
	12.	CO <sub>2</sub> INCUBATOR	1	
	13.	DEEP FREEZER (-80 C)	1	
	14.	REFRIGERATOR 8-10 CU FT	2	
	15.	CENTRIFUGE 32 HEAD	3	
	16.	DISTILLED WATER PRODUCING INSTRUMENT	1	
	17.	THERMOSTAT WATER BATH, ELECTRIC	2	
	18.	ANAEROBIC INCUBATOR	1	
	19.	PH METER	1	
	20.	RADIOIMMUNO ASSAY (RIA)	1	
	21.	BILLIRUBINOMETER	1	

**-** 5 **-**

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
LABORATORY AND	22.	ANALYTICAL BALANCE	2	
RESEARCH	23.	VORTEXER	3	
	24.	MAGNETIC STIRRER	1	
	25.	DEMINERALIZER	1	
	26.	AUTOMATIC PIPETTE	10	
	27.	PIPETTOR - DILUTOR	1	
	28.	GLUCOSE ANALYZER	1	
	29.	BLOOD BANK REFRIGERATOR	1	
	30.	GLASS DOOR FREEZER	1	
	31.	BLOOD PLASMA FREEZER	1	
	32.	ROTATOR	1	
	33.	DISPENSER	10	
	34.	MICROCENTRIFUGE	2	
	35.	AUTOCLAVE (LARGE)	1	
	36.	COMPUTERIZE SCAN	1	
	37.	ELECTRONMICROSCOPE	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
X-RAYS	1.	X-Ray THREE PHASE 700 MA. AND FLUOROSCOPY	1	
	2.	IMAGE INTENSIFIER UNIT AND T.V. MONITOR	1	
	3.	AUTOMATIC FILM PROCESSOR	1	
	4.	SURGICAL MOBILE X-RAY (C-ARM) & IMAGE T.V.	1	
	5.	MOBILE X-RAY (CONDENSOR)	1	
	6.	WINDOW CASSETTE 8" x 10"	24	
		10" x 12"	24	window cassette
	 	11" x 14"	24	type for I.D.
		12" x 15"	24	Camera
		14" x 17"	24	
		7" x 17"	24	
	7.	INTENSIFYING SCREEN 8" x 10"	24	
		10 <sup>il</sup> x 12 <sup>il</sup>	24	
		11 <sup>a</sup> x 14 <sup>a</sup>	24	
		12" x 15"	24	
		14" x 17"	24	
		7" x 17"	24	
	8.	PROTECTIVE APRON 0.5 MM/PB	6	
	9.	PROTECTIVE GLOVE 0.5 MM/PB	4	
	10.	ID. CAMERA	1	
	11.	VERTICAL BUCKY STAND	1	
	12.	GRID 10" x 12"	2	
		GRID 12" x 15"	1	
		CRID 14" x 17"	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
	13 <b>.</b>	X-RAY FILM DRYING CABINET TOMOGRAM	1	
	15.	DARKROOM EQUIPMENT		
		- X-RAY FILM BINS (HOPPER)	2	for 2
		- SAFELIGHT	2	darkroom
			1	

	<u> </u>		T	
DEPARTMENT		SUPPLY DEPARIMENT	UNIT	REMARK
PATHOLOGY	1.	MICROTOME	2	
	2.	TISSUE PROCESSING MACHINE	1	
	3.	FROZEN SECTION MICROTOME	1	
	4.	TEACHING MICROSCOPE	1	
	5.	MICROTOME SHARPENING ROTER	1	
	6.	MICROSCOPE LIST		
		- BINOCULAR MICROSCOPE	1	
		- TRIOCULAR MICROSCOPE	1	
		- MULTI - PURPOSE MICROSCOPE WITH CAMERA	1	
		- MICROSCOPE, WITH FLUORESCENT UNIT	1	
	7.	SHAKER FOR TISSUE - SAMPLE FIXING	1	
	8.	PARAFFIN MELTING APPARATUS	1	
	9.	PARAFFIN LEUCHER INSTRUMENT	1	

EQUIPMENTS REQUIRE IN UNIVERSITY HOSPITAL AND MEDICAL CENTER

	<del></del>		Ι	1
DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
NURSING	1.	BED		
		- FOWLER'S	200	
		- FOWLER'S FOR CHILDREN	50	
		- NORMAL	200	
		- STRIGER FRAME	10	
		- DELIVERY BED	40	
	2.	REFRIGERATOR 6 CU. FT.	10	
	3.	O <sub>2</sub> TENT FOR CHILDREN	10	
		O <sub>2</sub> TENT FOR ADULT	10	
	4.	INCUBATOR FOR PREMATURE	20	
	5.	OVER BED TABLE	100	
	6.	SUCTION $\frac{1}{4}$ H.P.	30	
	7.	SUCTION 1/2 H.P.	15	
	8.	RESUSCITATOR (MOBILE UNIT)	20	
	9.	RESUSCITATOR FOR CHILDREN .	3	
	10.	STAND	100	
	11.	WHEEL CHAIR	20	
	1			

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DEPARTMENT	V: **	SUPPLY EQUIPMENT	UNIT	REMARK
OBSTETICS AND	1.	FETAL MONITORING UNIT	2	
GYNECOLOGY	2.	INFANT RESUSCITATION UNIT	1	
	Ĭ	ULTRASOUND DIAGNOSTIC DEVICE	1	
	4.	SUCTION UNIT AND VACUUM EXTRACTOR	1	
		DELIVERY TABLE	2	
		AMNIOSCOPE		
		DELIVERY MONITORIND UNIT	1	
		STETHOSCOPE	1	
		DOPTONE	5	
			1	
		FORCEPS	2	
		DELIVERY INSTRUMENT SET	3	
	12.	MAJOR SURGICAL INSTRUMENT SET	1	
	13.	MINOR SURGICAL INSTRUMENT SET	2	
	14.	PELVIC EXAMINATION TABLE	2	
	15.	P.V. INSTRUMENT SET	2	
	16.	CURETTAGE SET	2	
	17.	LAPAROSCOPE	1	
	18.	CRYO SURGICAL INSTRUMENT AND		
		CAUTERIZATION	1	
	19.	SPHYGMOMANOMETER	2	
	20.	AMBU BAGC RESUSCITATION SET	1	

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DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
SURGERY	1.	BRONCHOSCOPE	1	
	2.	CYSTOSCOPE	1	
:	3.	ESOPHAGOSCOPE	1	
	4.	GASTROSCOPE	1	
	5.	SIGMOIDOSCOPE	1	
	6.	INTERMITTENT DRAINAGE	1	
	7.	RESUSCITATOR	1	
	8.	AUTOCLAVE (SMALL)	1	
	9.	SURGICAL TABLE	4	
	10.	LARGE SURGICAL TABEL	2	
	11.	OPERATING CEILING LIGHT	6	
	12.	MOBILE OPERATING LIGHT	2	
	13.	ELECTRO CAUTERY UNIT	4	
•	14.	CARDIAC DEFIBRILLATOR	1	
	15.	BINOCULAR OPERATING MICROSCOPE	1	
	16.	EKG & MONITORING SYSTEM	4	
	17.	CURVE SURGICAL INSTRUMENT TABLE	4	
	18.	SMALL SURGICAL INSTRUMENT TABLE	4	
	19.	I.V. POLE	10	
	20.	DERMATOME	1	
	<u> </u>			<u> </u>

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DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
SURGERY		ELECTRIC SUCTION MICROSURGICAL INSTRUMENTS SET	<u>6</u> 1	
	23.	SPHYGMOMANOMETER	6	
	24.	BONE - OPERATING INSTRUMENT	1	
	25.	OPERATING INSTRUMENT SET	1	
	26.	STERILIZING BOARD STAND	7	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
ANESTHETICS	1.	SPHYGMOMANOMETER	4	
	2.	CARDIAC RESPIRATION RATE		
		MONITOR	4	
	3.	ANESTHETIC MACHINE FOR CHILDREN	1	
	4.	RESUSCITATOR FOR CHILDREN	1	
	5.	ANESTHETIC MACHINE	3	
	6.	ANESTHETIC INSTRUMENTS FOR G.A. AND		
		REGIONAL ANESTHESIA	2	
	7.	DIFIBRILLATOR	1	
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DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
MEDICINE	1	RESUSCITATOR SET		
, mp to tive			2, 2	
	2.	SUCTION	10	
	3.	BIRD RESPIRATOR	4	
	4.	PLEURAL BIOPSY SET	2	
	. 5.	FIBER OPTIC BRONCHOSCOPE	1	
	6.	EKG	2	
	7.	DIFIBRILLATOR	1	
	8.	PERICARDIAL TAPPING SET	1	
	9.	PERITONIAL DIALYSIS SET	1	
	10.	KIDNEY BIOPSY SET	1	
	11.	EMG	1	
	12.	EEG	1	
	13.	AMBUBAG	2	
	14.	DIAGNOSTIC SET	2	
	15.	LUNG FUNCTION TESTING APPARATUS	1	

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DEPARIMENT		SUPPLY EQUIPMENT	UNIT	REMARK
π.·C.√u.	1.	CARDIAC MONITOR 10 SCOPE	10	
	2.	DEFIBRILLATER AND CARDIAC PACEMAKER	1	
	3.	PORTABLE ELECTRO CARDIOGRAM	2	
	4.	BEDSIDE RESUSCITATOR	2	
	5.	OXYGENOMETER	1	
	6.	BIRD'S RESPIRATOR	4	
	7.	VOLUME CONTROL RESPIRATOR	2	
	8.	PRESSURE CONTROL RESPIRATOR	2	
	9•	FUSION I.V. PUMP	1	
	10.	JET NEMBULIZER	1	
	11.	SUCTION	10	
	12.	REFRIGERATOR 7 CU. FT.	1	
	13.	FOWLER BEDS C BED RAIL	10	

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DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
PEDIATRICS	1.	INCUBATOR	20	
	2.	PHOTOTHERAPY APPARATUS	10	
	3.	EKG	1	
	4.	RESUSCITATOR SET	2	
	5.	SUCTION	1	
	6.	C.P.A.P.	4	
	7.	BIRD RESPIRATOR & J.CIRCUIT	2	
·	8.	RADIANT WARMER.	5	
	9.	REFRIGERATOR 10 CU.FT.	1	
	10.	MICROBILLIRUBINOMETER	1	
	11.	MICROCENTRIFUGE WITH SCALE READING	1	
	12.	I.V. INFUSION PUMP	2	
	13.	CRIB	20	
	14.	I.V. POLE	20	
	15.	RESPIRATOR FOR INFANT	2	
			.	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
REHABILITATION	1.	SHORT WAVE DIATHERMY	5	
	2.	ULTRAVIOLET LAMPS	3	
	3.	ULTRASOUND	5	
	4.	INFRARED LAMP	3	
	5.	HYDROCOLLATOR	3	
	6.	PARAFFIN BATH	3 <sub>e</sub> :	
	7.	HUBBARD TANK	2	
	8.	SWIMMING POOL	1	
	9.	ELECTRIC TILT TABLE	1	
	10.	FULL BODY SUSPENSION WALKER	2	
	11.	WHEEL CHAIR EXERCISE UNIT	1	
	12.	EXERCISE UNIT WITH TABLE	1	
	13.	HEAVY DUTY MODEL KNEE EXERCISE UNIT	1	
	14.	ANKLE & LEG EXERCISERS	1	
	15.	BICYCLE EXERCISER	3	
	<u> </u>		!	

DEPARTMENT	SUPPLY EQUIPMENT	UNIT	REMARK
ENT	<ol> <li>AUDIOMETER</li> <li>FACIAL NERVE STIMULATOR</li> <li>MICRO OPERATING SET</li> </ol>	1 1 1	

DEPARTMENT	SUPPLY EQUIPMENT	UNIT	REMARK
OPTHALMOLOGY	1. GENERAL DIAGNOSTIC SET	1	
	- SLIT LAMP		
	- GOLDMAN 3 - MIRROR (GONICLENS)		
	- DIRECT OPHTHALMOSCOPE		
	- RETINOSCOPE		
	- SNELLEN CHART		
	- NEAR VISION CHART		
	- PIN HOLE		
	- OCCLUDER		
	- TRIAL LENS SET		
	- TRIAL FRAME		
	- SCHIOTZ TONOMETER		
	- PSEUDOISOCHROMATIC PLATE		
	(ISHIHARA TEST)		
	- TENSOMETER		
	■ INDIRECT OPHTHALMOSCOPE		
	2. GENERAL THERAPEUTIC SET	1	
	- SET FOR CATARACT SURGERY WITH		
	CRYOPROBE		
	- SET PTERIGIUM		
	- SET CHALAZION		
	- SET LACRIMAL SURGERY (OPTION)		
	- STRONTIUM (X - RAY)		

EQUIPMENTS REQUIRE IN UNIVERSITY HOSPITAL AND MEDICAL CENTER

DEPARTMENT	SUPPLY EQUIPMENT	ÜNIT	REMARK
C.S.S.D. AND LAUNDRY	1. BIG SIZED ELECTRIC AUTO  2. WASHER (65.75 KG.)  3. HYDRO EXTRACTOR (MAX. 6	3	
	OPEN - END TUMBER (MAX		
	3. FLAT - WORK ISONER	1	
	3 ROLL (5 M/ MIN)	1	
	4. DRENIVY DRUM		
	18" Ø DIAMETER	20	
	12" "	20	
	10" "	10	
	Su u	10	
	5. INSTRUMENT TRAY		
	12" x 18"	20	
	8" x 12"	40	
	6" x 8"	30	
	4" x 8"	4,0	
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DEPARTMENT	SUPPLY EQUIPMENT	UNIT	REMARK
FOOD SERVICE	1. LARGE BOILING POT	4	
	2. LARGE FREEZER	4	
	3. LARGE MEAT GRINDER	2	
	4. LARGE BLENDER	2	
	5. WATER COOLER	3	
	6. MICROWAVE COOKER	2	
	7. ICE CUBE MAKER	2	
	8. LARGE PRESSURE COOKER	2	
	9. STERILIZER CABINET	5	
	10. GAS RANGE	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
DENTAL		DENTAL UNIT & CHAIR	6	
		HIGH SPEED AEROTER	12	
	3.	MICROMOTOR (BALL BEARING HANDPIECES) WITH		
	:	STANDARD CONTRANGLE & STRAIGHT	6	
	4•	DENTAL X-RAY	1	
	5.	PANORAMIC X-RAY	1	
	6.	PROPHY ANGLE	3	
	7.	LABORATORY MICROMOTOR WITH FOOT		
		CONTROLLER FOR VARIABLE SPEED	2	
	8.	ULTRASONIC SCALER	3	
	9.	STRAIGHT AND ANGLE DENTAL HANDPIECES	1	
	10.	BONE RONGEUR NO. 4	1	
	11.	OSTEOTOMES, STOUT, ASSORTED	1	
	12.	OSTEOTOME, SINGLE-BEVEL	1	
	13.	PERIOSTEOTOME, BLUNT, LANE, 19.5 CM.	1	
	14.	CURETS, MOLT, STRAIGHT, NO S-2 AND 4	1	
	15.	MALLET, METAL	1	
	16.	RETRACTOR, SET, GENERAL OPERATING	2	
	17.	RETRACTOR, VEIN, CUSHING	1	
	18.	RETRACTOR, TRACHEA, HUPP, 3-PRONG,		
		BLUNT, 16 CM.	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
DEN PAL	19.	RETRACTOR, TRACHEA, KNY-SCHEERING,		
		3-PRONG, BLUNT, 16 DM.	1	
	20.	HOOK, SKIN, DURAL-ADSON	2	
	21.	FORCEPS, STRAIGHT, HEMOSTATIC,		
		ROCHESTEROCHSNER 19 CM.	2	
	22.	HOLDER, NEEDLE, MAYO-HEGAR, 17.5 CM.	1	
	23.	HOLDER, NEEDLE, STERZ - BROWN, 14 CM.	1	
	24.	FORCEPS, HEMOSTATIC, STRAIGHT,		
		HALSTED (MOSQUITO) 12.5 CM.	2	
	25.	FORCEPS, HEMOSTATIC DURVED, HALSTED		
		(MOSQUITO) 12.5 CM.	2	
	26.	HOLDER, NEEDLE, MAYO-HEGAR, 15 CM.	1	
	27.	FORCEPS, HEMOSTATIC, KELLY, CURVED,		
		14 CM.	2	
	28.	FORCEPS, TISSUE, STRAIGHT, ALLIS, 15 CM	, 2	
	29.	FORCEPS, HEMOSTATIC, STRAIGHT,		
		ROCHESTEROCHSNER, 14 CM.	2	
	30.	FORCEPS, HEMOSTATIC, CURVED,		
		ROCHESTER-PEAN, 15.5 CM.	4	
	31.	FORCEPS, TOWEL, BACKHAUS, 8.3 CM.	4	
	32.	SCISSORS, GENERAL SURGICAL, CURVED,		
9		AUFRICHT, 14. CM.	1	

DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
DENTAL	• 33.	SCISSORS, GENERAL SURGICAL, CURVED, AUFRICHT 14 CM.	1	
	34.	FORCEPS, FIXATION, STRAIGHT, FRAEFE,		
		11, 5 CM.	2	
	35•	FORCEPS, TISSUE, BROWN-ADSON, 11.5 CM.	2	
	36.	FORCEPS, DRESSING, STRAIGHT, 13.2 CM.	2	
	37.	SUCTION TIP, ANTRUM	1	
	38.	SUCTION TIP, LARYNGEAL	1	
	39•	RUBBER SUCTION TUBING	3	
	40.	MOUTH PROP, JENNINGS	1	
	41.	MOUTH PROP, DENHARDT	1	
	42.	EXTRACTING FORCEPS NO. 150	10	
	43.	EXTRACTING FORCEPS NO. 151	10	
	44.	EXTRACTING FORCEPS NO. 23 (COW HORN)	5	
	45.	STRAIGHT ELEVATORS	10	
	46.	ANGLE ELEVATORS (LEFT, RIGHT)	10	
	47.	BIYONETTE ELEVATORS (LEFT, RIGHT)	3	
	48.	ROOT TIP ELEVATORS	5	
	49.	BONE FILES	3	
	50.	TONGUE & CHEEK RETRACTOR	3	
	51.	3 PRONG STERILIZING FORCEPS	3	
	<del> </del>			

DEPARTMENT	SUPPLY EQUIPMENT	UNIT	REMARK
DENTAL	52. PERIODONTIA INSTRUMENTS	3	
	53. ENDODONTIC INSTRUMENTS	3	
	54. EXCAVATORS	5	
	55. AMALGAMATOR (AMALGAM MIXER)	2	
	56. CARTRIDGE SYRINGE	10	
	57. ALGINATE TRAY(RIM LOCKED TRAY)		
	No. 11, 12, 13, 14, 15, 16	5	
	58. MODEL TRIMMER	1	
	59. VACUUM MIXER	1	
	60 STERILIZER	5	
	61. VIBRATOR	2	
	62. LIGHT CURED RESTORATIVE SET	1	
	63. AMALGAM INSTRUMENTS	5	
	64. CAVITY PREPARATION INSTRUMENTS	5	
	65. RUBBER DAM PUNCH AND CLAMP FORCEPS	2	
	66. PLASTIC FILLING INSTRUMENTS	5	
	67. SHARPENINE STONES	2	
	68. WIRE(BAND) PUSHER	5	
	69. WIRE CUTTERS, TWISTERS & SCISSORS	3	
	70. WIRE BENDING PLIER SET	3	

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DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
COMMUNITY MEDICINE	1.	COLOR T.V. SET & VIDEO CASSETTE	1	
AND OCCUPATIONAL		RECORDER & COLOR VIDEO CAMERA	1	
HEALTH	2.	16 SOUND CINEMA PROJECTOR AND		
		CINEMA CAMERA	1	
	3.	PICTURE PROJECTORS & CASSETTE		
		TAPE RECORDERS	2	
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DEPARTMENT		SUPPLY EQUIPMENT	UNIT	REMARK
PHARMACY		LIQUID FORM FILLING MACHINE STD, EQUIPMENT FOR PREPARING THE	1	
		PRESCRIPTION	2	
	3.	HOT PLATE	1	
	4. 1	WATER SOFTENER	1	
	_	EMULSION MILL WITH STAINLESS STEEL TANK		
		30L, 10L	2	
	6.	COLLOID MILL	1	
	7.	DEMINERALIZER	1	
	8. 1	WATER DISTILLATION MACHINE	1	
	9•	TORSION BALANCE	1	
	10.	ELECTRONIC BALANCE	1	
	11.	HOT AIR OVEN	1	
	12.	MIXED WITH STAINLESS STEEL TANK	1	
	13.	STERILIZING FILTER WITH AUTOMATIC		
		FILLING MACHINE	1	
	14.	I.V. FLUID CLOSING MACHINE	1	
	15.	PLASTIC SEALER	1	
	16.	GAS STERILIZER	1	
	17.	AUTOCLAVE "RAPID COOLING SYSTEM"	1	