

13 PHYSIOLOGY NIT: 13277/6-12-16

Office of The Head, Department of Physiology, Rajendra Institute of Medical Sciences,
Ranchi

Memo No... 506.....

Date 16/12/16

for 4470 NOTE

OFFICE OF DIRECTOR RIMS, RANCHI
Receiving Date - 16/12/16
No. 289/3

To,

The Director
Rajendra Institute of Medical Sciences,
Ranchi,

Subject: List of required equipment in Physiology department

Reference : Your letter no. 13277 dated 6 12.16

Sir,

In response to your above mentioned letter please find enclosed the list of required medical equipments for my department with specification

Yours faithfully,

(Signature)
16/12/16
(Poonam Singh) Head of
Professor of Physiology
The Department of Physiology
Rajendra Institute of Medical Sciences
Ranchi

(Signature)
17/12/16

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DEPARTMENT OF PHYSIOLOGY

S.No.	Name of equipment	No. of items
1	Hemocytometer counter with silver lining	25
2	Multivolume (variable) autopipettes	3
3	Centrifuse with high speed tachnometer	1
4	Dummy for CPR de4monstration	1
5	Hemoglobinometer	50
6	Spring Dyanamometer	2
7	Equipments for ANS test Laboratory (Should have multichannel polygraph with contineous recording facility of EGC,HR, BP ,Respiration, Recording of Galvanic Skin Response etc.,all on single display with data analysis software,Tilt table . Should have facility for further addition)	1
8	PFT machine , microprocessor based	1
9	Pulse oximeter	2
10	Electronic Perimeter	1
11	Auroscope	4
12	Cardio pulmonary Exercise test System with programmable Ergometer	1
13	Evoked Potential Study Instrument (microprocessor based to study Brain Stem, Visual, Auditory, Somatosensory and Motor functions)	1
14	microprocessor based system for Sleep disorder study	1

Dr. S. S. Srinivasan
16/12/16

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Department of Physiology:-**Specifications for Polysomnography System A. General Specifications:**

1. Complete system with all hardware and software is needed.
2. Should be suitable for both adult and pediatric patients.
3. Power input to be 220-240VAC, 50 Hz fitted with Indian plug.
4. Comprehensive training for lab staff and support services till familiarity with the system to be provided.
5. The system should be US FDA, CE and BIS approved
6. Manufacturers to have ISO certification for quality standards.
7. All standard and essential accessories compatible with the system to be provided.

B. Technical Specifications:**1. Total number of channels should be 66 or more with facility to upgrade.**

- a). EEG automatic sleeping stage classification with 32 inputs or more.
- b). EOG- 2 channels
- c). EMG - leg and chin (3 or more channels)
- d). ECG-7 or more (including physical and derived)
- e). Flow sensor / pressure (nasal cannula) - adult and pediatric
- f). Oral pressure (thermistor) mask pressure.
- g). Thermal flow
- h). Abdominal and Thoracic movements: Z Rip (2) for respiratory effort
- i). Snoring microphone.
- j). Body position.
- k). Pulse rate.
- l). Pulse Transit Time.
- m). CPAP pressure.
- n). Limb Movement: 2.
- o). Pulse wave plethysmography
- p). Integrated pulse oximeter (adult and pediatric)
- q). Differential pressure.
- r). Integrated 2 pressure transducer to measure CPAP and nasal pressure.
- s). Light sensor
- t). Minimum 08 DC channels for external peripherals like capnography, BP monitoring etc.

2. Software Specifications:**A/Application must support somnolyzer for accurate auto scoring**

- b) Should have an in-built software for both automated and manual analysis and scoring of recorded data.
- c) Real-time access to data while the study is in progress should be possible
- d) Should permit storage of uncompressed raw data for future review and re-analysis
- e) Should permit writing of data on storage media such as CD/DVD for review on any computer.
- f) On screen impedance check.
- g) Adjustable gain and notch filter.

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- h) User definable montages, montage changes.
- i) Automated user configurable reports.
- j) Signal resolution/bit: should be 16
- k) Max sampling rate: 2000 Hz
- l) Max storage rate: 500 Hz
- m) Should follow latest AASM guidelines.
- n) **License free software.**
- o) **Free up-gradation of software.**
- p) 3 or more software CD's to be provided

3. Networking and Hardware:

- a) Compatible with high end processing with LAN, blue tooth connectivity.
- b) Interfacing compatible with hospital information system.
- c) Weight of head box/ junction box: should not be more than 550 gm.
- d) Storage capacity: 30 hrs. or more.
- e) **Titration device must have from same manufacture of Polysomnography device for better synchronize** – with modes: CPAP, Auto CPAP, BIPAP, Adaptive ventilator
- f) **Computer:** System should include 1 latest Pentium processor-based computer 8 GB RAM, 1024 GB hard disk memory with a 17 inch flat screen monitor and a laser printer. Should also include pre-loaded genuine Microsoft Windows XP software with UPS with mouse. Should have Screen resolution from 800 × 600 to 1200× 1600.
- g). **Infrared camera** for fully synchronized and integrated patient video recording and monitoring.
- h) **Polysomnography device and therapy device from same manufacture for better configuration.**

4. Additional Accessories:

- a). Titration Machine: Quantity: 1
- b). Oximeter probe: Quantity: 1
- c). Sensor belts: Quantity: 5
- d). Thermistor airflow sensor: Quantity: 1
- e). Pediatric thermistor, saturation probe with pediatric strap: Quantity: 1

C. Terms and Conditions:

1. 5 years comprehensive warranty after installation.
2. CAMC for 5 years after completion of 5 years warranty of the equipment, spare parts/ accessories used.
3. The company should give the certificate that the model quoted is the latest and not obsolete; and spares will be easily available for next 10 years.

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