

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

HOSPITAL SYSTEMS

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Define Hospital Engineering
2. State the process of sterilization.
3. List the types of membrane electrodes.
4. State any two applications of telemedicine.
5. Name the physiological parameters adaptable to bio-telemetry. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. List the duties and responsibilities of Biomedical engineer in a hospital.
2. Give an account on the importance of uninterrupted power supply in Hospital.
3. List the characteristics of theatre lighting systems.
4. Write a note on different types of sterilization.
5. Explain the construction of an enzyme electrode.
6. Give an account on the basic parts of a teleradiography system.
7. Explain the block diagram of an audiometer. (5×6 = 30)

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Explain the physiological effect of electrical currents. 10
 (b) Give an account on surge protector. 5

OR

- IV (a) Explain the Hospital Organization chart with neat diagram. 10
 (b) Describe protective relays. 5

UNIT — II

- V (a) Write a note on operation of Centralised vacuum supply system in hospitals. 9
 (b) Describe the importance of incinerator. 6

OR

- VI (a) Explain single and double chamber autoclave. 9
 (b) Describe the safety requirements of gas supply systems in hospitals. 6

UNIT — III

- VII (a) Explain the principle and operation of speech audiometer. 8
 (b) Give an account on membrane electrodes. 7

OR

- VIII (a) Describe the working of incubator. 8
 (b) Describe the principle and operation of Doppler foetal monitor. 7

UNIT — IV

- IX (a) Explain telemedicine and its medical applications. 8
 (b) Describe the physiological parameters adaptable to bio-telemetry. 7

OR

- X (a) Explain multichannel telemetry system. 9
 (b) Write a note on teleconferencing. 6