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Reg. No.

Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 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 let go current.
2. State the color coding of centralized gas supply lines in hospital.
3. Define biosensor.
4. List the components of a biotelemetry system.
5. Define biomedical engineering.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain the physiological effect of electric current in the human body.
2. State the need of incinerator.
3. Explain operation of pure tone audiometry.
4. List the application of tele medicine.
5. State the duties and responsibilities of biomedical engineer.
6. Classify different types of sterilization.
7. Explain the benefits of video conferencing.

(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 operation of circuit breaker with diagram. 8
 (b) Summarize hospital organization chart. 7

OR

- IV (a) Describe the architecture of a hospital. 8
 (b) Explain EMI filter with diagram. 7

UNIT — II

- V (a) Explain double chamber autoclave with diagram. 8
 (b) Elaborate the safety requirements of gas supply system in hospital. 7

OR

- VI (a) Explain the operation of liquid oxygen plant in the hospital. 8
 (b) Explain the operation of single chamber autoclave with diagram. 7

UNIT — III

- VII (a) Explain the operation of Doppler foetal heart rate monitor. 8
 (b) Describe blood glucose sensor using ISFET. 7

OR

- VIII (a) Describe audiometer with block diagram. 10
 (b) Explain the operation of a glucometer. 5

UNIT — IV

- IX (a) Summarize the operation of multi-channel telemetry system with diagram. 9
 (b) List the applications of bio telemetry system. 6

OR

- X (a) Elaborate the basic parts of a tele-radiography system. 8
 (b) Describe the working of single channel telemetry system. 7