

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

BASIC MEDICAL SCIENCE

[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. Name any four types of receptors and their location in body.
2. Define cardiac output.
3. Identify the cells which perform haemodialysis.
4. Name the cells present in the retina.
5. List any two cold applications in medicine.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Draw and label a human cell.
2. Identify different types of EEG electrodes.
3. Explain pulmonary circulation with a schematic.
4. Classify different types of arrhythmias.
5. Draw a spirogram and mark the lung volumes and capacities.
6. Describe the process of maintaining equilibrium balance.
7. Explain the visual process.

(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) Classify the elementary tissues and give their functions. 8  
 (b) Describe the structure and function of taste sensor with a labeled sketch. 7

OR

- IV (a) Describe the conduction of impulse through nerve fibers. 8  
 (b) Give an account on the electrodes used for EMG recording. 7

## UNIT — II

- V (a) Draw an ECG waveform and relate it with the mechanical events of heart. 8  
 (b) Describe the general organization of brain. 7

OR

- VI (a) Explain the electrical activity of brain. 8  
 (b) Explain electromyography. 7

## UNIT — III

- VII (a) Describe the structure and function of a nephron. 9  
 (b) Explain the anatomy of human respiratory system. 6

OR

- VIII (a) Summarize the water balance process in human body. 8  
 (b) Explain the mechanism of ventilation. 7

## UNIT — IV

- IX (a) Describe the anatomy of human digestive system. 8  
 (b) Explain the process of hearing. 7

OR

- X (a) Explain the digestive process. 8  
 (b) Explain the structure of eye with a neat sketch. 7