

**Scheme – I**  
**Sample Question Paper**

**Program Name** : Diploma in Medical Electronics  
**Program Code** : MU  
**Semester** : Third  
**Course Title** : Human Anatomy and Physiology  
**Marks** : 70

22347

**Time: 3 Hrs.**

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**Instructions:**

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

**Q.1) Attempt any FIVE of the following.**

**10 Marks**

- a) List any two functions of blood.
- b) Define blood pressure and mention its normal value.
- c) List the diseases related to respiratory system. (any two).
- d) State any two functions of kidney.
- e) Give the function of Progesterone.
- f) Draw the structure of neuron.
- g) Name the instrument that can be helpful to the doctor for examine the digestive tract.

**Q.2) Attempt any THREE of the following.**

**12 Marks**

- a) Describe the conduction system of heart.
- b) State the function of following parts of respiratory system.
  - (i) Larynx
  - (ii) Trachea
  - (iii) Pharynx
  - (iv) Bronchi
- c) Calculate the cardiac output, if a person has the resting heart rate of 70 beats/minute and resting stroke volume of 70ml/beat. Judge whether person will need medication on the basis of provided data.
- d) Name any two hormones along with its functions secreted by the pituitary gland.

**Q.3) Attempt any THREE of the following.**

**12 Marks**

- a) Choose the blood group in the case of medical emergency, where there is unavailability or shortage of patient's blood group and justify the choice.
- b) Draw the female reproductive system and state any two function of female reproductive system.
- c) Explain the function of epithelial tissue and Nervous tissue.
- d) Define the following terms and give its normal range:
  - i. Cardiac output.
  - ii. Heart rate.

**Q.4) Attempt any THREE of the following.**

**12 Marks**

- a) Give reason for inhaling oxygen through nose is said to be healthier than through the mouth.
- b) A patient is found to have abnormally high concentration of glucose in his urine. Identify the portion of nephron that is most likely the cause of this excess concentration of glucose with justification. Also draw a labeled diagram showing structure of nephron.
- c) Higher proportions of people living in hilly region are suffered from goiter. Justify it
- d) Draw the labelled structure of a cell showing various organelles.
- e) Compare between CNS & ANS (any four points).

**Q.5) Attempt any TWO of the following.**

**12 Marks**

- a) Explain digestive system with labeled diagram.
- b) Explain anatomy of eye with neat sketch.
- c) Describe the mechanism of human hearing.

**Q.6) Attempt any TWO of the following.**

**12 Marks**

- a) Describe the formation of urine.
- b) Describe gas exchange in respiratory system.
- c) A person after consuming alcohol walks clumsily. Justify it. And describe main parts of brain in short.

**Scheme – I**  
**Sample Test Paper - I**

**Program Name** : Diploma in Medical Electronics  
**Program Code** : MU  
**Semester** : Third  
**Course Title** : Human Anatomy and Physiology  
**Marks** : 20

22347

**Time: 1 Hour**

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**Q.1 Attempt any FOUR.**

**08 Marks**

- a) Name the different types of tissue. (Any four)
- b) List any four instruments related to heart.
- c) Define any two respiratory parameters.
- d) Draw the labelled structure of cell.
- e) Choose the instrument is helpful during patient cannot breath properly and give its function.
- f) State any two cardiac properties.

**Q.2 Attempt any THREE.**

**12 Marks**

- a) Identify the function of following parts of cardiovascular system.
  - (i) SA node.
  - (ii) AV valve.
  - (iii) Aorta.
  - (iv) Pulmonary artery.
- b) Describe the composition of blood.
- c) Draw labelled diagram of respiratory system. (R) 3
- d) Compare artery and vein.
- e) A person having respiratory disorders then Identify the instruments which are helpful for examine disorders and explain any two.
- f) Classify joints with examples.

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**Q.1 Attempt any FOUR.**

**08 Marks**

- a) List any four organs related to digestive system.
- b) State any two functions of kidney.
- c) Define endocrine gland. Name any two glands.
- d) Draw the structure of eye.
- e) Give two functions of skin.
- f) List any two instrument related nervous system.

**Q.2 Attempt any THREE.**

**12Marks**

- a) Explain cerebellum and give its two functions.
- b) Mention any two juices secreted by digestive organs and give their functions.
- c) Describe the process image formation.
- d) List any two hormones secreted by male reproductive organs with functions of each.
- e) Describe the structure of skin with labelled diagram.
- f) Give the location of thyroid gland. Mention its function.