

**M. Sc. (Medical Biotechnology) Sem-I (Choice Based Credit System) :**

**SUMMER - 2019**

**SUBJECT : HUMAN PHYSIOLOGY**

Day : Thursday  
Date : 04/04/2019

**S-2019-1500**

Time : 02.00 PM TO 05.00 PM  
Max. Marks : 60

**N.B.:**

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.**
- 2) Attempt **ANY TWO** questions from Section – I from Q.2 to Q.4 and **ANY TWO** questions from Section – II from Q.6 to Q.8.
- 3) Answers to both the sections should be written in '**SAME**' answer book.
- 4) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** Attempt **ANY FIVE** of the following: [10]
- a) Mention the functions of platelets.
  - b) What are the functions of frontal lobe?
  - c) Draw a neat and well labeled diagram of neuromuscular junction.
  - d) Name the proteins involved in muscle contraction.
  - e) Define action potential and enlist its phases.
  - f) Draw and label the waves of ECG in lead II.
- Q.2** Answer the following questions: [10]
- a) Give a complete account of spermatogenesis.
  - b) Describe oxygen dissociation curve.
- Q.3** Explain the following: [10]
- a) Five types of muscle disorder.
  - b) Compare and contrast sympathetic nervous system and parasympathetic nervous system.
- Q.4** Write short notes on **ANY TWO** of the following: [10]
- a) Changes in female body during pregnancy
  - b) Excitation – contraction coupling
  - c) Structure and functions of digestive system

**SECTION – II**

- Q.5** Answer the following: [10]
- a) Describe sources, action and deficiency disorders of vitamin A.
  - b) Define GFR and mention the factors affecting GFR.
- Q.6** Answer **ANY TWO** of the following: [10]
- a) Describe the various methods of blood collection.
  - b) Discuss various renal function tests.
  - c) Describe Renin-Angiotensin-Aldosterone mechanism.
- Q.7** Write short notes on the following: [10]
- a) Iron deficiency anemia
  - b) Thyroid function test
- Q.8** Answer **ANY ONE** of the following: [10]
- a) Discuss lipid profile tests.
  - b) Discuss the mechanism of action of protein hormones.

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