

**M. SC. (MEDICAL BIOTECHNOLOGY) SEM-I (CHOICE
BASED CREDIT SYSTEM) : SUMMER - 2018**

SUBJECT: HUMAN PHYSIOLOGY

Day: **Monday**
Date: **09/04/2018**

S-2018-1162

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** remaining questions from Section-I and Section-II each.
- 3) Answers to both the sections should be written in the **SEPARATE** answer book.
- 4) Figures to the right indicate **FULL** marks.

SECTION-I

- Q.1** Answer Any **FIVE** of the following questions in brief: **[10]**
- a) Differentiate between skeletal muscle and cardiac muscle.
 - b) Define action potential and enlist its phases.
 - c) Enlist functional areas of cerebral cortex.
 - d) Define cardiac cycle and enlist phases of ventricular systole.
 - e) Name the muscles of respiration.
 - f) Name the proteins involved in muscle contraction.
- Q.2** Answer the following questions: **[10]**
- a) Write a note on connective tissue disorders.
 - b) Write a note on spermatogenesis with a well-labeled diagram.
- Q.3** Explain the following: **[10]**
- a) Draw a labeled diagram of a lead II ECG and add a note on PR interval.
 - b) Write a note on lipid digestion and absorption.
- Q.4** Write short notes on **ANY TWO** of the following: **[10]**
- a) Describe any two functions of hypothalamus.
 - b) Enumerate the steps in neuromuscular transmission at NMJ.
 - c) Write functions of plasma proteins.

SECTION-II

- Q.5** Answer the following: **[10]**
- a) Describe the three steps in urine formation by nephron.
 - b) Describe the physiological action of thyroid hormone.
- Q.6** Answer **ANY TWO** of the following: **[10]**
- a) Nutrigenomics
 - b) Anemia
 - c) Role of minerals in diet
- Q.7** Write short notes on the following: **[10]**
- a) Various methods of collection of blood
 - b) Renal function tests.
- Q.8** Answer any **ONE** of the following: **[10]**
- a) Describe maternal nutrition during pregnancy.
 - b) Explain metabolism of calcium and mention its functions.

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