

AU – 2559

Third Semester B. E. (Biomedical Engineering) (CGS) Examination

HUMAN PHYSIOLOGY

Paper – 3 BM 02

(USC – 10099)

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) Separate answer book must be used for each section in the subject Geology, Engineering material of civil branch and Separate answer book must be used for Section A and B in Pharmacy and Cosmetic Tech.
- (2) All questions carry equal marks.
- (3) Answer **Three** questions from Section A and **Three** questions from Section B.
- (4) Due credit will be given to neatness and adequate dimensions.
- (5) Assume suitable data wherever necessary.
- (6) Illustrate your answer wherever necessary with the help of neat sketches.

SECTION A

1. (a) What is resting membrane potential and action potential ? Explain in brief. 7
- (b) Explain :
- (i) RIA
- (ii) Gibbs-Donnan Equilibrium. 6

OR

2. (a) Write a note on autoradiography. 6
- (b) Define and explain Gel electrophoresis with its biological application. 7
3. (a) What is Genetical relation of albinism ? 7
- (b) Differentiate between DNA and RNA. 7

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OR

4. (a) What is Gene mutation ? How it is classified ? Explain it. 7
(b) Write in brief about RNA with labelled diagram. 7
5. (a) Explain 'ABO' blood group system. 7
(b) Give the brief idea about bone marrow. 6

OR

6. What is anaemia ? Write down its morphological and etiological classification. Also write its causes and symptoms. 13

SECTION B

7. (a) Explain Heart sound and their types in detail. 6
(b) Differentiate between skeletal, smooth and cardia muscles. 7

OR

8. (a) What is fatigue ? Explain muscle fatigue in detail. 7
(b) What is sarcotubular system ? 6
9. (a) What are the different forms of Receptors ? 7
(b) Difference between automatic and somatic nervous system. 7

OR

10. (a) Explain neuromuscular junction. 7
(b) Write in brief about ANS. 7
11. (a) Explain the Anatomy of Heart with neat labelled diagram. 6

- (b) Write down the functions of kidney and explain the counter current system.

7

OR

12. (a) What are the blood composition and its functions ?

7

- (b) Explain in brief :

(i) Cardiac output

(ii) Blood vessels.

6



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