

Roll No. : .....

Total No. of Questions : 16 ]

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# **EMIC-329**

**M.Sc. (IIIrd Semester) Examination, Jan.-2023**

## **MICROBIOLOGY**

Paper - FS-MIC-CE-304(A)

**(Human Physiology)**

*Time : 3 Hours ]*

*[ Maximum Marks : 40*

The question paper contains *three* Sections.

### **Section-A**

**(Marks : 1 × 10 = 10)**

*Note :-* Answer all *ten* questions (Answer limit **50** words). Each question carries **1** mark.

### **Section-B**

**(Marks : 3 × 5 = 15)**

*Note :-* Answer any *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries **3** marks.

### **Section-C**

**(Marks : 5 × 3 = 15)**

*Note :-* Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries **5** marks.

### **Section-A**

1. (i) Which are the *two* organelles that create their own protein ?
- (ii) What is Erythropoiesis ?

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- (iii) What proteins are found in blood plasma ?
- (iv) Write the function of HCl in stomach.
- (v) Define Ultrafiltration.
- (vi) What is Hamburger's effect ?
- (vii) What are the hormones secreted by stomach ?
- (viii) Where is bipolar neuron found ?
- (ix) What is the function of hypothalamus ?
- (x) What is Graafian follicle ?

### **Section-B**

#### **Unit-I**

- 2. Explain double circulatory system in heart.
- 3. Write a note on blood corpuscles.
- 4. Explain structure and function of endoplasmic reticulum.

#### **Unit-II**

- 5. Describe histology and hormones secreted from pancreas.
- 6. Describe the cross section of kidney with diagram.
- 7. Discuss the role of diaphragm and intercostal muscles in inhalation and exhalation.

#### **Unit-III**

- 8. Explain histology of testis and ovary with diagram.
- 9. Write brief note on Lobes of Cerebral Cortex.
- 10. Describe the structure and function of Thyroid gland.

## **Section-C**

### **Unit-I**

11. Describe the mechanism of transport of substances across plasma membrane.
12. Explain internal structure and physiology of heart.

### **Unit-II**

13. Describe the mechanism and regulation of digestion and absorption of food in small intestine.
14. Discuss in detail the mechanism of urine formation.

### **Unit-III**

15. Explain the feedback mechanism of hormone regulation.
16. Write a detailed note on comparison of sympathetic and parasympathetic autonomic nervous system.