647510 **0301105C1010** **Seat No :_____**

B.Sc. Semester - 1 (*CBCS*) Examination
Jan/Feb.-2022 (OLD COURSE)
MICRO BIOLOGY(CORE)

Time: 1:30 Hours **Marks: 42**

Instructions:

1. Figures to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

Q.1 (A) Answer the following (One mark each) **4**

1. Define Archaea.
2. Explain the contribution of Louis pasture.
3. Who first identified the Anthrax disease?
4. Define biogenesis.

Q.1 (B). Answer in detail (Any one out of two) **2**

1. Describe the applied area of microbiology.
2. Discuss the microorganism in the living word.

Q.1 (C). Answer in detail (Any one out of two) **3**

1. Describe the Groups of Microorganisms.
2. Discuss the contribution of scientist in microbiology.

Q.1 (D). Write a note on (Any one out of two) **5**

1. Explain the germ theory of disease in detail
2. Discuss spontaneous generation theory.

Q.2 (A) Answer the following (One mark each) **4**

1. DAPI is used for fluorescent microscopy- True/False.
2. What are the uses of bright field microscopy?
3. Explain the advantage of Confocal microscopy.
4. Explain the role of fixative in staining.

Q.2 (B). Answer in detail (Any one out of two) **2**

1. Explain the function of condenser in microscopy.
2. Explain the preparation of light microscopy.

Q.2 (C). Answer in detail (Any one out of two) **3**

1. Write a short note on dark field microscopy.
2. Explain the phase contrast microscopy.

Q.2 (D). Write a note on (Any one out of two) **5**

1. Explain the principle and application of fluorescent microscopy.
2. Explain basic principle and application of electron microscopy.

Q.3 (A) Answer the following (One mark each) **4**

1. What is the function of flagella in bacteria?
2. What is protoplast? Explain.
3. Define the function of outer membrane.
4. Explain the characteristics of spore.

Q.3 (B). Answer in detail (Any one out of two) **2**

1. Define the sheath and stalk.
2. What are vacuoles? Explain.

Q.3 (C). Answer in detail (Any one out of two) **3**

1. Discuss the cytoplasm and its function in detail.
2. Write difference between spheroplast and protoplast.

Q.3 (D). Write a note on (Any one out of two) **5**

1. Explain the structure and composition of gram-positive bacteria.
2. Write short note sporogenesis.

Q.4 (A) Answer the following (One mark each) **4**

1. Define carbon source.
2. Potato dextrose agar used to cultivate the ascomycetous fungus- True/False.
3. Define the term oxygen toxicity.
4. Bacteria grow at optimum pH 9 called as alkaliphiles - True/False.

Q.4 (B). Answer in detail (Any one out of two) **2**

1. Write the media composition of MacConkey agar.
2. State the importance of pH in growth media.

Q.4 (C). Answer in detail (Any one out of two) **3**

1. Write note on bacterial media.
2. Write note on selective culture conditions.

Q.4 (D). Write a note on (Any one out of two) **5**

1. Explain the types of physical conditions required for the growth.
2. Explain the differential and complex media.

Q.5 (A) Answer the following (One mark each) **4**

1. Explain the growth rate.
2. Asexual reproductive system performed by bacteria- True/False.
3. What are the three types of oxygen requirements in bacteria?
4. What is death phase?

Q.5 (B). Answer in detail (Any one out of two) **2**

1. Define non-synchronize growth.
2. Write about generation time.

Q.5 (C). Answer in detail (Any one out of two) **3**

1. Write note on mode of cell division.
2. Write note on synchronize culture condition.

Q.5 (D). Write a note on (Any one out of two) **5**

1. Discuss bacterial growth curve and explain it phases in detail.
2. Explain continues growth in detail.

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