

SEAT No. _____

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[87/A-10]

SARDAR PATET UNIVERSITY
B. Sc. Semester- III Examination, JANUARY - 2021
SUBJECT : MICROBIOLOGY Subject code : US03CMIC21
(Elements of Microbiology - I)

DATE : 5-01-2021 TIME: 2:00 PM TO 4:00 PM

TOTAL MARKS: 70

Q-1 Select the Right answer

[10]

1. What is the contribution of Joseph lister ?
 - a. Discovered phagocytosis
 - b. Discovered complement fixation reaction
 - c. Introduced use of antiseptic
 - d. Discovered nitrogen fixing bacteria

2. _____ invented microscope.
 - a. Paul Ehrlich
 - b. Elie Metchnikoff
 - c. Joseph lister
 - d. Antoine van Leeuwenhoek

3. In classification, a group of similar division are placed in one _____.
 - a. Kingdom
 - b. Order
 - c. Family
 - d. None of these

4. As per Whittaker's five kingdom classification, fungi is classified in _____.
 - a. Monera
 - b. Protista
 - c. Plant
 - d. None of these.

5. The bacterial cell produces the Endospore for its _____.
 - a. Reproduction
 - b. Survival
 - c. Motility
 - d. Growth

6. A film of a specimen on a microscope slide is called _____.
 - a. Smear
 - b. Layers
 - c. Coating
 - d. All of these

7. In Bacteria _____ is responsible for permeability of chemicals.
 - a. Cell membrane
 - b. Flagella
 - c. Pili
 - d. All of these

8. Flagella are made up of _____ Protein
 - a. Flagellin
 - b. Albumin
 - c. Globulin
 - d. Piliin

9. Bacteria consisting of a single polar flagellum are termed as _____.
 - a. Lophotrichous
 - b. Amphitrichous
 - c. Peritrichous
 - d. Monotrichous

10. The eyepiece of the microscope provides magnification of _____.
 - a. 40X
 - b. 20x
 - c. 10X
 - d. None of the above

[1]

[P.T.O.]

Q-2 Fill in the blanks with appropriate word.

[08]

1. Smallpox vaccine was discovered by _____
2. Congo red is an example of _____ dye.
3. The chemical nature of bacterial capsule is _____
4. _____ is science of biological classification.
5. H. Schroder and T. Van Dusch used _____ to pass germ free air into flasks containing heated broth.
6. Presence of barrier filter & exciter filter are special features of _____ microscopy.
7. Strain derived from single parent cell are known as _____
8. Basic taxonomic group is known as _____

Q-3 Answer the following in brief (Any Ten)

[20]

1. Define pure culture.
2. Write the contribution of Antony van Leeuwenhoek.
3. Draw a labelled diagram of typical bacterial cell.
4. Explain the roll of decolorizer in Gram staining.
5. What is pili?
6. Write the functions of cell membrane.
7. Enlist different types of bacterial flagellar arrangement.
8. Define: Resolving power and magnification.
9. Explain: Numerical aperture.
10. Enlist name of kingdom included in Haeckel's classification.
11. What is Nomenclature? Give its advantage.
12. Enlist name of divisions included in Bergey's manual.

Q-4 Answer the following questions (Any Four)

[32]

1. Explain experiments that supports biogenesis concept.
2. Explain germ theory of disease.
3. Describe the ultra-structure and function of bacterial flagella.
4. Explain difference between Gram +ve and Gram -ve bacterial cell wall.
5. Explain in detail about Gram staining.
6. Explain difference between light microscopy and electron microscopy.
7. Describe major characteristics used for classification of bacteria.
8. Discuss in detail genetic methods used for classification of bacteria.

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[20]