

SEAT No. _____

[G2/A-11]

SARDAR PATEL UNIVERSITY

B Sc SEMESTER III EXAMINATION : NOV-2019

ELEMENTS OF MICROBIOLOGY

(US03CMIC21: MICROBIOLOGY)

Date: 02/12/2019

Time: 2:00 to 5 :00 PM

Day: Monday

Total marks: 70

N.B: Figures on the right indicate marks.

Multiple Choice Questions: -

10

Q.1

Answer both code and word compulsorily.

- 1 H Schroder and T von Dusch has initiated the technique of plugging the bacterial culture with _____.
 (a) Silk (b) Cotton
 (c) Rubber (d) Cork
- 2 The principle of immunization was demonstrated with _____.
 (a) Bird flu (b) Chicken cholera
 (c) Swine flue (d) Chicken mycosis
- 3 Which of the following bacteria produces cyst _____?
 (a) Azospirillum (b) Azotobacter
 (c) Rhizobium (d) Entamoeba
- 4 Bacterial cell without flagellum is known as _____.
 (a) Atrichus (b) Monotrichus
 (c) Amphitrichus (d) Lophotrichus
- 5 The prostheca functions in _____.
 (a) absorb nutrients (b) locomotion
 (c) Survival (d) All of above.
- 6 Acid fast staining is used for the preliminary diagnosis of _____.
 (a) AIDS (b) Syphilis
 (c) Leprosy (d) Malaria
- 7 The magnification through high power objective would be _____ X.
 (a) 100 (b) 10
 (c) 40 (d) 400
- 8 5% Nigrosin can be used as
 (a) Positive stain (b) Special stain
 (c) Differential stain (d) Negative stain
9. Which of the following represents highest taxonomic rank?
 (a) Family (b) Order
 (c) Class (d) Genus

10. In Latin language Taxa means _____
 (a) Genus (b) Order
 (c) Species (d) None

20

**Q.2 Give short answers to the following questions.
 Attempt Any Ten**

- 1 What is the contribution of Burrill and Mayer in microbiology?
- 2 Write in brief on molecular biology.
- 3 Who observed the microorganisms first? Elaborate the historical perspective of the event.
- 4 What is the importance of intracellular granules?
- 5 What is cytoplasmic membrane; write its importance.
- 6 Differentiate between bacterial and fungal spore.
- 7 Enlist components of microscope.
- 8 Write advantages of smear fixation.
- 9 Define and give example of Acidic, Basic and Neutral dyes.
- 10 Write significance nomenclature.
- 11 Give brief view on Hackel's classification.
- 12 Write importance of numerical taxonomy.

Answer following LONG Question:-

Q.3 Give detailed account on germ theory of disease. 10

OR

Q.3 a Enlist applied fields of microbiology, narrate any three in detail. 06

b Write note on germ theory of fermentation. 04

Q-4 Describe in detail about bacterial flagella. 10

OR

Q-4 Write a note on bacterial cell-wall. 10

Q-5 Write detailed note on electron microscopy. 10

OR

Q-5 a Write procedure of acid fast staining. 05

b What are the mordants? Write methods for its applications. 05

Q-6 Enlist criteria for classification of bacteria. 10

OR

Q-6 Write short notes on: 05

a N.A.hybridization 05

b r-RNA cataloguing.

—X—