

Seat No.....

Total No. of pages. 02

[18/A-22]



SARDAR PATEL UNIVERSITY  
SUBJECT: MICROBIOLOGY  
SEMESTER III B.Sc.

USO3CMIC01 Fundamental of Microbiology-1

Date: 22/9/2022

Marks :70

Time: 12:30 PM to 2:30 PM

Q:1 Select most appropriate option:

10

1. ....discovered simple Microscope .  
a) Lazzaro Spallanzani b) Anton Von Leeuwenhoek  
c) Alaxender Fleming d) None of them
2. ....is considered as Father of Aseptic surgery  
a) Joseph Lister b) Louis Pasteur c) Robert Koch d) Paul Ehrlich
3. Blood Grouping system was given by .....  
a) Karl Landstainer b) W.Stanely  
b) Elie Metchnikoff d) Frederick Loeffler
4. ....is basic dye .  
a) Congo red b) Methyleneblue c) Malachite Green d) both b and c
5. ....is mordant in Gram staining procedure.  
a) Alcohol b) Gention violet c) Gram's iodine d) None of these
6. In .....staining , cell is stained and background is colorless.  
a) Positive b) Negative  
c) in a & b both d) in none of these
7. Number of chromosome(s) is .....in prokaryotic cell.  
a) 2 b) 22 c) 23 d) 1
8. Bacterial .....are made up of storage nutrients.  
a) Granules c) Capsule b) Mesosomes d) Vacuoles
9. ....is used to obtain information of surface topography of a specimen.  
a) TEM b) SEM c) Vital staining d) Supra vital staining
10. In ..... microscopy, even a single bacterial cell can be observed.  
a) Fluorescence c) Phase contrast b) Dark field d) Bright field

P.T.O.

(1)

- Q:2 A) Fill in the blanks: 04
1. Joseph Lister used ..... technique to get pure culture of bacteria.
  2. Use of alcohol is as a ..... in Gram staining .
  3. Invagination of cell membrane in prokaryotic cell is known as .....
  4. Magnification power of oil immersion lens is .....
- B) Answer as True or False: 04
1. Goose neck flask was prepared by Edward Jenner.
  2. Acid fast staining is a differential staining
  3. Bacterial cell organelle "Fimbriae" is used for the transfer of genetic material between bacteria through cell-to-cell contact.
  4. TEM works in vacuum.
- Q:3 Answer in brief:(any Ten) 20
1. Who introduced cotton plugging technique?
  2. What is Pasteurization?
  3. Define :Pure culture
  4. Differentiate positive staining and negative staining.
  5. Mention principle of Fluorescence Microscopy.
  6. Define : Dye & write its components.
  7. Write any two functions of a bacterial capsule.
  8. Define: Protoplast
  9. Draw a labeled diagram of a prokaryotic cell.
  10. Define : light microscopy & electron microscopy.
  11. Mention application(s) of Fluorescence Microscopy.
  12. Mention types of light microscopy.
- Q:4 Answer any four: 32
1. Explain: Germ theory of disease.
  2. Write a note on: Developments of laboratory techniques in microbiology.
  3. Explain: Gram staining
  4. Describe: Theory of staining & Steps in staining process
  5. Explain Gram positive bacterial cell wall
  6. Explain: Explain Bacterial Endospore and draw figure of bacterial sporulation.
  7. Explain: compound microscope.
  8. Explain: TEM

.....X.....