

Seat No : _____
[20/A-3]SARDAR PATEL UNIVERSITY
S.Y.BSc. EXAMINATION (2019)
USO3 EMIC 01 (SEMESTER III)
SUB: MICROBIOLOGY (E MIC 01)
(Fundamental Microbiology)

Date: 04-12-2019

Time: 02-00 p.m. to 04-00 p.m.

Total Marks: 70
Wednesday

Q-1 Attempt all following multiple choice question.

(10)

- (1) Who invented Microscope?
 - (a) Antony Van Leeuwenhoek
 - (b) Joseph Lister
 - (c) Robert Koch
 - (d) None of these
- (1) What is the contribution of Sergei N. Winogradsky?
 - (a) Discovered Phagocytosis
 - (b) Discovered Nitrogen fixing Bacteria
 - (c) Discovered Complement fixation reaction.
 - (d) Introduced use of Antiseptic
- (3) Attenuated culture of pathogenic bacteria is called
 - (a) Antigen (b) Antibody (c) Vaccines (d) Virulence
- (4) In bacteria these is responsible for permeability of chemicals
 - (a) Pili (b) Cell membrane (c) Flagella (d) All of these.
- (5) Metachromatic granules are composed of
 - (a) Polyphosphate (b) Glycogen (c) Elemental sulfur (d) Poly- β -hydroxy butyrate.
- (6) The oil immersion lens of the microscope provides magnification of
 - (a) 20x (b) 40x (c) 100x (d) None of these
- (7) A film of a specimen on a microscope slide is called
 - (a) Smear (b) Layer (c) Coating (d) Area
- (8) The color of gram negative bacteria after being stained by Gram's method will be seen as
 - (a) Purple (b) Pink (c) Red (d) Green
- (9) Chemoorganotrophs are
 - (a) organisms using chemical compounds for energy and organic compounds as electron source
 - (b) organisms using inorganic compounds as electron donors and radiant energy
 - (c) organisms using radiant energy and organic compounds
 - (d) None of the above
- (10) Phototrophs are
 - (a) organisms which use chemical compounds as source of energy.
 - (b) organisms which use radiant energy.
 - (c) organisms which use inorganic compounds.
 - (d) organisms using organic compounds.

(P.T.O.)

- Q-2 Attempt the following (any ten) (20)
- (1) What is Fermentation?
 - (2) Explain the Term "Phagocytosis".
 - (3) Define: (a) Pure culture (b) Colony
 - (4) Give two example of Cytoplasmic Inclusion.
 - (5) What is Metachromatism?
 - (6) Write two functions of Pili.
 - (7) Why fixation of smear is necessary?
 - (8) What is resolving power?
 - (9) What is meant by acidic dye? Give two example of acidic dye.
 - (10) Distinguish between lithotrophs and organotrophs.
 - (11) Describe selective media with an example.
 - (12) Define: (1) Exponential phase
(2) Autotrophs

- Q-3 (A) Write a note on: "Germ theory of Disease" (06)
(B) Give an account on Molecular Biology. (04)
OR

- Q-3 (A) Write a note on "Laboratory Techniques and Pure Cultures" (06)
(B) Write Koch's Postulates. (04)

- Q-4 Write a note on bacterial Endospore. (10)
OR

- Q-4 Write on: (A) Explain in brief: "Ribosome". (05)
(B) Bacterial Flagella (05)

- Q-5 Enlist component parts of Microscope and write the function of each Component. (10)
OR

- Q-5 (A) Explain gram's staining in detail and gives two examples of gram positive bacteria. (06)
(B) Explain simple staining in detail and give two example of basic dye. (04)

- Q-6 Describe the methods used for isolation of bacteria. (10)
OR

- Q-6 (A) Write a note on common ingredients of culture media. (06)
(B) Describe selective media with an example. (04)

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