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SARDAR PATEL UNIVERSITY

Bachelor of Science (Semester-3) Examination November 2022
US03CMIC21

Elements of Microbiology-1

Date:19/11/2022

Time:10:00A.M. to 1:00P.M.

Marks:70

- Q:1 Select appropriate answer: 10
1.understood that when pathogenic orgs become old , it loses its pathogenicity but its antigenicity remains as it is!
a) L.Pasteur b)Robert Koch c) Joseph Lister d)Alexander Fleming
 2. Field of Microbiology connected with causative agents of diseases, diagnostic procedures, preventive measures is.....
a) Exo microbiology c)Medical microbiology
b) Immunology d)Aero microbiology
 3.is known as Father of Aseptic surgery.
a) John Tyndal c) Joseph Meister
b) Joseph Lister d)Karl Landstainer
 4. Mesosomes are Bacterial
a) Granules b) vacuoles c)cell membrane invaginations d) ribosomes
 5. Bacterial cell has very high surface area :volume ratio so it can :
a) can take nutrition very fast c)cannot take nutrition very fast
b) do not require cytoplasmic streaming d) a &b
 6.is a semi rigid extension of cell wall and cell membrane of the cell.
a)Capsule b) Stalk c)Sheath d) Prostheca
 7. Acid fast staining is astaining.
a) differential b) monochrome c) negative d) special
 8.is used to obtain ultra structure of a specimen.
a) Fluroscence microscope c) SEM
b) TEM d) compound microscope
 9. Kingdom Monera was suggested by.....
a) Carlous Linnaeus b) Whittaker c) Haeckel d) none of these
 10. A group of similar genera is called
a) Order b) family c) Class d) Division

Q:2 Answer in brief: (any ten)

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1. Who introduced cotton plugging technique?
2. Mention the contribution(s) of John Tyndal.
3. What is Pasteurization?
4. Draw labeled diagram of a Bacterial cell.
5. Define :Protoplast
6. Define : Bacterial granules and mention types of granules.
7. What is limit of resolution?
8. Differentiate between: Cationic dye and Anionic dye
9. Explain in brief: Hanging drop preparation and mention its use.
10. Define :Pure culture
11. Define: %G+C
12. Mention any two rules of nomenclature to write names of bacteria.

- Q:3
- A) Explain Koch postulates. 05
 - B) Explain preparation of Rabies vaccine. 05
- OR
- A) Explain germ theory of Fermentation 05
 - B) Explain developments in agricultural microbiology. 05
- Q:4
- A) Explain Bacterial endospore and draw labeled diagram of sporulation process. 05
 - B) Explain Gram positive bacteria cell wall. 05
- OR
- Q:4
- A) Explain Ultra structure of Bacterial flagella . 05
 - B) Explain giving examples different shapes of bacteria . 05
- Q:5
- A) Explain Phase contrast Microscopy. 05
 - B) Explain TEM 05
- OR
- Q:5
- A) Explain differential staining of bacteria. 05
 - B) Explain Principle and applications of Fluorescence Microscopy 05
- Q:6
- A) Enlist and explain any three major characteristics of micro organisms. 05
 - B) Explain Whittaker's five Kingdom concept. 05
- OR
- Q:6
- A) Explain DNA homology experiment and its application. 05
 - B) Write a note on Bergy's Manual . 05

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