

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – MICROBIOLOGY

MICROBIAL DIVERSITY AND TAXONOMY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. The five-kingdom classification was proposed by
 - (i) Whittaker
 - (ii) Linnaeus
 - (iii) Roxberg
 - (iv) Virchow
2. Who is regarded as the “Father of Indian Phycology”
 - (i) Prof. M.O.P. Iyenger
 - (ii) Prof. J.N. Mishra
 - (iii) Prof. R.R. Mishra
 - (iv) Prof. R.N. Singh
3. According to Bergey’s Manual of Systematic Bacteriology, prokaryotes that lack a cell wall belong to the group?
 - (i) Gracilicutes
 - (ii) Firmicutes
 - (iii) Tenericutes
 - (iv) Mendosicutes
4. The bacteria which can survive at high concentration of salt is called as _____
 - (i) Thermophiles
 - (ii) Osmophiles
 - (iii) Acidophiles
 - (iv) Halophiles
5. The symmetry of T4 phage is _____
 - (i) Icosahedral
 - (ii) Helicil
 - (iii) Complex
 - (iv) Binal

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. (a) Explain about Whittaker’s five kingdom concept.
OR
(b) List out the physiological and morphological characters used in taxonomy.
7. (a) Concise the importance of Sulfur bacteria
OR
(b) Produce the general characters of Anoxygenic photosynthetic bacteria?
8. (a) Write short note on importance of Actinomycetes.
OR
(b) Narrate volume of the Bergy’s manual actually deals with what type of bacteria?
9. (a) How the organization of phenotypic and genetic characters of Archea differ from a eubacteria?
OR
(b) Define Methanogens and its importance.
10. (a) What is an enveloped virus? Explain.
OR
(b) How does classify the virus based on genetic material? Explain.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 (a) Name the classification that is done based on mode of nutrition. How different is it from the Hackel's system of classification.

OR

(b) Discuss about the phylogenetic studies and its role in taxonomy.

12.(a) Elaborate on the general characteristics of Cyanobacteria. Add a note on its commercial Importance.

OR

(b) Summarize the general characteristics features of photosynthetic bacteria.

13(a) Elucidate the general characteristics features of Enterobacteriaceae bacteria.

OR

(b) Chlamydiae is an organism that is intermediate form of bacteria and virus- justify.

14.(a) Write a detail account on importance of hyperthermophiles in biotechnology.

OR

(b) Discuss the mechanisms survival of barophilic microorganisms and their Importants.

15.(a) Discuss on the morphology and general characteristics of TMV.

OR

(b) Draw a neat diagram of Bacteriophage and mention their classification.

Z-Z-Z END