

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2023
(First Semester)**

Branch – APPLIED MICROBIOLOGY

INTRODUCTORY MICROBIOLOGY & SYSTEMATICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 All of the following scientists got Nobel Prize for their contribution to the field of Microbiology, except.

(i) Antony van Leeuwenhoek	(ii) Louis Pasteur
(iii) Paul Ehrlich	(iv) Robert Koch

- 2 In gram staining Iodine is used as a-----

(i) fixative	(ii) mordant
(iii) solublizer	(iv) stain

- 3 According to Bergeys manual of systematic bacteriology prokaryotes that lack a cell wall belong to the group -----

(i) Gracillicutes	(ii) Firmicutes
(iii) Tenericutes	(iv) Mendosicutes

- 4 Which of the following contains Chlorophyll, Phycoerythrin and phycocyanin?

(i) Chlorophyta	(ii) phaeophyta
(iii) Rhodophyta	(iv) Basillariophyta

- 5 The protein coat of viruses that enclose the genetic material is called-----

(i) peplomer	(ii) Viroid
(iii) Capsid	(iv) all of these

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a Analyse Germ theory of disease with your critical view.
OR
b Assume a suitable methods adopted for Industrial Sterilization.

- 7 a Determine various methods of pure culture isolation.
OR
b Illustrate in brief about microbial evolution and phylogeny.

- 8 a Explain in brief about importance of Molecular systematics.
OR
b Classify Phototrophic bacteria with neat example.

- 9 a Discuss in detail about general characters of Zygomycetes.
OR
b Sketch out basic structure of Algal cell.

- 10 a Show the neat sketch on cultivation of viruses in egg embryo.
OR
b Classify insect Viruses with good example.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

- 11 a Evaluate Contributions of Louis Pasteur in the field of Microbiology.
OR
b Classify Chemical sterilization methods with suitable example.
- 12 a Differentiate the significance of special staining methods.
OR
b Criticize the importance of rRNA sequencing with proper explanation.
- 13 a Determine the general characters of Archaea.
OR
b Predict the economic importance of Planctomycetes.
- 14 a Construct your views on growth and reproduction of filamentous fungi.
OR
b Categorize the role of algae in sustainable environment.
- 15 a Interpret the nomenclature of viruses with suitable explanation.
OR
b Recommend a best suitable protocol for purification of Viruses.

Z-Z-Z

END