PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch - **BIOTECHNOLOGY**

APPLIED MICROBIOLOGY

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 Discovery of Rabies vaccine by
(i) Edward Jenner (ii) Louis Pasteur
(iii) Joseph lister (iv) Robert koch

2 Which of the following gene deduced the evolutionary relationship between the taxonomic groups?
(i) 16S rRNA (ii) 5S rRNA
(iii) 23S rRNA (iv) 18S rRNA

3 Which of the following is used only in life-threatening situations when no other drug is adequate?
(i) Penicillin (ii) Amphicillin
(iii) Streptomycin (iv) Chloromphenicol

4 The main nitrogen reservoir in the biosphere is the
(i) Ocean (ii) Atmosphere
(iii) Rocks (iv) organism

5 Which of the following bacteria is the most commonly isolated pathogen from the infection known as pharyngitis?
(i) *Streptococcus pneumoniae* (ii) *Staphylococcus aureus*
(iii) *Streptococcus pyogenes* (iv) *Mycoplasma pneumoniae*

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a Classify the bacteria based on morphology.
OR
b Mention the factors affecting the growth of microorganisms.

7 a Expain the concept of Microbiome.
OR
b Descrine the conventional methods of bacterial taxonomy.

8 a Write the characteristics of Antimicrobial agents.
OR
b Differentiate the types of antiviral agents.

Cont...

9 a Classify the agriculturally important viruses.

OR

b Discuss the microbial transformation of minerals.

10 a Explain the infections caused by *Aspergillus.*

OR

b Write the current scenario about the covid.

SECTION -C (30 Marks)

Answer **ALL** questions

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

11 a Highlight the milestones in the field of microbiology.

OR

b Give a detailed account on bacterial growth curve.

12 a Outline the characteristic features of archeabacteria.

OR

b Explain in detail about meta-genomics.

13 a Write an essay about the antifungal agents.

OR

b List out the antimicrobial agents inhibiting the protein synthesis.

14 a Explain the nitrogen cycle with a neat schematic representation.

OR

b Give the applications of microbes in diagnosis.

15 a Elaborate the causes and pathogencity of *salmonella typhi* .

OR

b Categorize the parasitic diseases in detail.

Z-Z-Z

END