

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

PG DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

TRANS DISCIPLINARY COURSE
(Common to PG Programmes)

MICROBIAL WORLD

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Gram positive bacteria are usually more susceptible to
(i) Streptomycin (ii) Tetracycline
(iii) Penicillin (iv) Ampicillin
- 2 Substrate used by microbes to produce SCP includes
(i) Methane gas (ii) Industrial wastes
(iii) Agricultural wastes (iv) All the above
- 3 Which of the following gastroenteritis viruses can spread by air?
(i) Sapovirus (ii) Rotavirus
(iii) Norovirus (iv) Astrovirus
- 4 The term gnotobiotic refers to
(i) Germ contaminated animals (ii) Germ free animals
(iii) Animal with normal flora (iv) Bacteria living in oral cavity
- 5 Which of the following is not a product of cellulose degradation?
(i) Glucose (ii) CO₂
(iii) Water (iv) nitrogen gas

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Discuss the cell wall composition of Gram positive bacteria.
OR
b Explain the virus symmetry.
- 7 a Comment on Spirulina as SCP.
OR
b Draw the flow chart explaining the process wine production.
- 8 a How to enumerate microbes from air?
OR
b List out water borne pathogens. Add a note on its control measures.
- 9 a What is commensalism? Explain normal flora of skin.
OR
b Give a brief on Candidosis and its control measures.
- 10 a Comment on effect of microbial consortia for cellulose degradation.
OR
b Explain the economic importance of fungi.

Cont...

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks (5 x 6 = 30)

- 11 a Write an essay on general characters of fungi.
OR
b Illustrate the working principle and function of bright field microscope.
- 12 a Give an account on microbial spoilage of fruits and vegetables.
OR
b Describe the industrial production and purification of vitamin B₁₂.
- 13 a Explain municipal solid waste treatment.
OR
b Discuss Rhizobium as N₂ fixing bio-fertilizer.
- 14 a Give a brief account on host-microbes interaction.
OR
b List out respiratory infections, causative agents and their control measures.
- 15 a Write an essay on economic importance of algae.
OR
b Discuss bioremediation. Add a note on its advantages over pollution control.

Z-Z-Z

END