

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – BIOTECHNOLOGY

FUNDAMENTALS OF MICROBIOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

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

- Who is known as the father of Microbiology?
(i) Edwin John Butler (ii) Ferdinand Cohn
(iii) Robert Koch (iv) Anton van Leeuwenhoek
- Find out the approximate size of the bacterial cell.
(i) 1mm in diameter (ii) 0.5 to 1.0 micrometer in diameter
(iii) 2mm in diameter (iv) 2 micrometer in diameter
- Which of the following is used in electron microscope?
(i) electron beams and magnetic fields (ii) light waves
(iii) magnetic fields (iv) electron beams
- Which of the following method can be used to determine the number of bacteria quantitatively?
(i) Spread-plate (ii) Streak-plate
(iii) Pour-plate and spread plate (iv) Pour plate
- Mention that the Protozoa eat other organisms are known as.
(i) parasitic (ii) mutualistic
(iii) holozoic (iv) saprophytic

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- a. Compare Dark and light field microscope.
(OR)
b. Outline the History and Scope of microbiology.
- a. Describe the shape and arrangement of bacterial cells.
(OR)
b. Sketch the prokaryotic Cell structure.
- a. Produce the types of plating technique.
(OR)
b. Explain the factors that affect microbial growth.
- a. Outline the microbial taxonomy.
(OR)
b. Explain synthetic chemotherapeutic agents.

Cont...

10. a. Describe prebiotics. (OR)
b. Classify probiotics and its application.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a. Categorize the types of microscopy. (OR)
b. Highlight on the sterilization techniques adopted in microbiology.
12. a. Summarize the fungal morphology. (OR)
b. Examine the microbial anatomy in detail.
13. a. Differentiate the nutritional types of microorganism. (OR)
b. Assume the growth and control of microbial nutrition.
14. a. Analyze the bacterial multidrug resistance. (Or)
b. Outline the classification of virus and bacteria.
15. a. Distinguish fermented foods and dairy Products. (OR)
b. Summarize the industrial application of microbes.

Z-Z-Z END