

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

Branch – MICROBIOLOGY

CHEMISTRY FOR MICROBIOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

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

1. What is the primary goal of green chemistry?
a) To develop new chemical reactions b) To minimize the environmental impact of chemical processes c) To increase the production of hazardous chemicals d) To reduce the cost of chemical production
2. Which vitamin is crucial for proper blood clotting and bone health?
a) Vitamin A b) Vitamin C c) Vitamin D d) Vitamin K
3. Mention the primary purpose of using fertilizers in agriculture?
a) To kill pests and weeds b) To increase soil fertility and enhance plant growth c) To provide shade for crops d) To control soil erosion
4. Identify the primary function of plasticizers in polymers?
a) Increase rigidity b) Enhance color stability c) Increase flexibility d) Improve electrical conductivity
5. State the purpose of the dyeing process in leather production?
a) To add a protective layer b) To give the leather color and finish c) To soften the leather d) To remove impurities

SECTION - B (15 Marks)

Answer ALL Questions

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

6. (a) Bring out any three difference between normality and molarity.
(OR)
(b) Outline the principle of crystallization for purification of solids.
7. (a) Summarize the biological functions and deficiency disease of vitamin-A.
(OR)
(b) Compare the properties between the analgesics and antiseptics.
8. (a) Discuss a suitable method for the manufacture of ammonium nitrate.
(OR)
(b) With an example of natural plant insecticides, how will you eradicate the insects from plants?
9. (a) Differentiate between thermoplastics and thermosetting plastics.
(OR)
(b) Contrast the role of any one enzyme in detergent industry.
10. (a) List out the different types of leather forms used in leather industry.
(OR)
(b) Compare the properties between natural and synthetic adhesives.

Cont...

SECTION -C (30 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 x 6 = 30)

11. (a) Enumerate theory of fractional distillation employed in purification of liquids.
- (OR)**
- (b) Apply green chemical methods to synthesis any two molecules.
12. (a) How will you classify vitamins based on solubility? Give an example for each.
- (OR)**
- (b) Compare and contrast the conformational analysis of ethane.
13. (a) Organize the role of various nutrients for plant growth.
- (OR)**
- (b) How will you classify insecticides based on mode of action? Give an example for each.
14. (a) How will you manufacture detergents?
- (OR)**
- (b) Contrast the manufacturing of essential oils. Illustrate the composition of essential oil also.
15. (a) Organize the various processes involved in the manufacture of leather.
- (OR)**
- (b) Categorize the applications of protein and starch based adhesives.

Z-Z-Z

END