

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2023
(Sixth Semester)

Branch – FOOD PROCESSING TECHNOLOGY

FOOD BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- Find the term biotechnology, coined by?
(i) Hargobind khurana (ii) Saran Narang
(iii) Karoly Ereky (iv) William Hays
- Which is extensively used in the genetic engineering of plants?
(i) Xanthomonas Citri (ii) Agrobacterium Tumefaciens
(iii) Bacillus Coagulans (iv) Clostridium Septicum
- Name of the DNA fragment containing the cloned gene inserted into the vector
(i) Recombinant Gene (ii) Recombinant DNA
(iii) Vector (iv) Recombinant Plasmid
- Which enzymes that join nucleic acid molecule
(i) Ligases (ii) Polymerases
(iii) Nuclease (iv) Topoisomerase
- Which carbon source has great application in SCP production?
(i) Cellulose (ii) Starch
(iii) Methanol (iv) Methane
- Which biocatalyst catalyzes the chemical reaction without changing its concentration?
(i) Sugars (ii) Enzymes
(iii) Proteins (iv) Lipids
- Identify the term food ingredients whose DNA is altered to obtain desirable results?
(i) DNA foods (ii) GM foods
(iii) Fast foods (iv) Fermented Foods
- Which bacterial species are used for milk fragmentation to form cheese?
(i) Saccharomyces Spp (ii) Aspergillus Spp
(iii) Lactobacillus Spp (iv) Pencillium Spp

Cont...

9. Which part can be utilized as a source of biodiesel?
(i) Animal Skin (ii) Animal Teeth
(iii) Animal Bone (iv) Animal Fat
10. Which of the following are the applications of nanotechnology in the food-processing sector?
(i) Enhanced Nutrient Delivery (ii) Antimicrobial packaging
(iii) Green Packaging (iv) All the above

SECTION - B (35 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks

(5 x 7 = 35)

- 11 a Explain the importance and applications of biotechnology.
OR
b State the applications of genetic engineering.
- 12 a Bring out the concepts of recombinant DNA technology.
OR
b Explain the role of bacteriophages in gene cloning.
- 13 a Describe about the microorganism as single cell protein.
OR
b Explain the production of amylase and protease enzymes in food industry.
- 14 a Develop a flowchart for the preparation of fermented sausage.
OR
b Explain the role of microorganisms in palm wine production.
- 15 a Classify bio fuel and bio diesel.
OR
b Explain the industrial uses and advantages of bioplastics.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks

(3 x 10 = 30)

- 16 Enumerate the structure, functions, and properties of DNA.
- 17 Discuss the gene cloning steps involved in recombinant DNA technology.
- 18 Discover different enzyme production in the food industry.
- 19 Identify and explain the production of genetically modified rice.
- 20 Discuss the concept and applications of nanotechnology in food industry.

Z-Z-Z

END