18FPB39

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(Sixth Semester)

Branch – **FOOD PROCESSING TECHNOLOGY**

FOOD BIOTECHNOLGY

Time: Three Hours Maximum: 50 Marks

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

1 Choose the primary function of RNA
(i) Energy source (ii) Store genetic information
(iii) Protein synthesis (iv) structural support to cells

2 Identify the function of restriction endonucleases in gene cloning
(i) Ligate DNA (ii) Cut DNA
(iii) Restrict RNA (iv) Replicate RNA

3 Match the application of SCP in food processing
(i) Meat substitutes (ii) Leavening agent
(iii) Preservative (iv) Sweeteners

4 State the purpose of genetically modified rice
(i) to improve yield (ii) to increase shelf life
(iii) to reduce pest attack (iv) to increase carotene content

5 Name the process commonly used to produce hydrogen from biomass
(i) Gasification (ii) Fermentation
(iii) Combustion (iv) Distillation

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

6 a State the importance of biotechnology in food processing.
OR
b Organize the properties of DNA.

7 a Describe the process of ligation in gene cloning.
OR
b Outline the role of T4 plasmids in biotechnology.

8 a Bring out the nutritional value of Single Cell Protein.
OR
b Narrate the application of amylase enzyme in food industry.

9 a State the objective of designer milk production .
OR
b Describe the key traits of Flavr Savr tomato.

10 a Differentiate bio-plastics from conventional plastics.
OR
b Explain the uses of bio-films in food processing sector.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

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

11 a Enumerate on structure of RNA.

OR

b Identify the applications of genetic engineering.

12 a Summarize the steps involved in gene cloning.

OR

b Justify the role of restriction endonuclease and bacteriophage in gene cloning.

13 a Outline the production process of protease.

OR

b Highlight the applications of enzyme in food industry.

14 a Infer on the production of Genetically modified rice and its importance.

OR

b Elucidate on the methodology for developing transgenic fish.

15 a Point out on the process of producing Bio-ethanol from agricultural waste.

OR

b Discuss on the applications of nanotechnology in food industry.

Z-Z-Z END