18FPB39

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – **FOOD PROCESSING TECHNOLOGY**

FOOD BIOTECHNOLOGY

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 function of RNA in Genetic Engineering
(i) Structural support to the cell
(ii) Strong genetic information
(iii) Translating genetic code into proteins
(iv) Replicating DNA

2 State the purpose of using DNA ligase in gene cloning process
(i) Cut DNA at specific site (ii) Amplify DNA
(iii) Join DNA fragments together (iv) Integrate Foreign DNA into host cell

3 Find the primary source of Single Cell Protein used in food production
(i) Microorganisms (ii) Animals
(iii) Plants (iv) Fungi

4 Identify the primary purpose of developing Golden Rice
(i) To improve colour (ii) To improve taste
(iii) To increase shelf life (iv) To enhance Vitamin A content

5 Find the category of bioethanol
(i) Gaseous biomass (ii) Liquid biofuel
(iii) Biogas (iv) Solid biomass

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

6 a Describe the scope of biotechnology.
OR
b Sketch the structure of DNA.

7 a Outline the use of restriction endonuclease enzyme.
OR
b Explain the role of plasmids in gene cloning.

8 a State the advantages of microbial protein.
OR
b Summarize the production of lactase enzyme.

Cont...

9 a Bring out the steps in production of Genetically Modified rice.

OR

b Describe the production process in palm wine.

10 a Explain about bio-diesel.

OR

b How do biofilms are formed and state its purpose?

SECTION -C (30 Marks)

Answer **ALL** questions

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

11 a Discuss the importance and applications of biotechnology.

OR

b Elucidate the functions and properties of DNA and RNA.

12 a Enumerate the steps in Gene Cloning and give its applications.

OR

b Highlight the use of bacteriophage in gene cloning.

13 a Discuss about spirulina.

OR

b Analyze the application of various enzymes in food industries.

14 a Discuss the steps in production of designer milk and fermented sausages.

OR

b Examine the steps in production of HFCS with a neat flow chart.

15 a Discuss in detail about bio-plastics.

OR

b Summarize about nanotechnology.

Z-Z-Z END