

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BVoc DEGREE EXAMINATION MAY 2024  
(Third Semester)

Branch – FOOD PROCESSING TECHNOLOGY

FOOD MICROBIOLOGY & FERMENTATION TECHNOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The water activity is closely related to \_\_\_\_\_.  
(i) Temperature (ii) Pressure  
(iii) Moisture (iv) Relative humidity
- 2 Esters like flavors in butter are resulted from the action of  
(i) *P. mephitica* (ii) *Aeromonas hydrophila*  
(iii) *P. fragi* (iv) *Pseudomonas synxantha*
- 3 \_\_\_\_\_ Infection causes death within 48 hours  
(i) *Shigella dysenteriae* (ii) *Shigella flexneri*  
(iii) *Shigella boydii* (iv) *Shigella sonnei*
- 4 In pour-plate method, the medium should be maintained at what temperature?  
(i) 37°C (ii) 45 °C (iii) 25 °C (iv) 0 °C
- 5 In which of the following process proceeds with having a rich fermentation broth and high oxygen concentration?  
(i) Surface fermentation (ii) Submerged fermentation  
(iii) Solid state fermentation (iv) Liquid state fermentation

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Classify bacteria on the basis of their morphology.  
OR  
b Enumerate on the most common genera of mold present in food.
- 7 a Narrate on the microorganisms that causes food spoilage.  
OR  
b Cite the common methods of food preservation adopted to prevent food spoilage.
- 8 a Differentiate food poisoning and food infection with examples.  
OR  
b Report on anyone of the non bacterial agents that cause food borne disease.
- 9 a Explain solid state fermentation and its significance.  
OR  
b Write a note on the principles of fermentation.
- 10 a Enlist the advantages of using bioreactor for fermentation.  
OR  
b Enumerate on PCR for detection of microorganisms.

Cont...

**SECTION -C (30 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Discuss in detail on the growth characteristics of bacteria.  
OR  
b Elaborate on the intrinsic factors influencing the growth of microorganisms.
- 12 a Elucidate on types of spoilage.  
OR  
b Examine on the causes, source of contamination and types of spoilage in meat and meat products.
- 13 a Tabulate on the microbial food borne diseases and their causative pathogens.  
OR  
b Highlight on the factors responsible for food borne diseases.
- 14 a Elaborate on the fermented foods and their importance.  
OR  
b Show the methods followed for thermal inactivation of microbes.
- 15 a Sketch the design of a fermenter and explain.  
OR  
b Discuss in detail on downstream processing stages.

Z-Z-Z

END