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**PG CBCS`**  
**M.SC. Semester-II Examination, 2021**  
**FOOD SCIENCE & NUTRITION**  
 PAPER: FSN 202  
 (FOOD MICROBIOLOGY AND FOOD PRESERVATION)

**Full Marks: 40****Time: 2 Hours****Answer any FOUR questions:****10X4=40**

1. What is porin and periplasmic space? Write down the structure of NAM and NAG. How do the flagella move? Mention the function of hopanoid.  
2+3+3+2
2. Briefly describe the bacterial growth curve. Prove that mean generation time is reciprocal to the mean growth rate constant.  
6+4
3. What is mycelium? Define coenocytic and septate hyphae. Describe the sexual life cycle of *Rhizopus* sp.  
2+2+6
4. How does the irradiation help to preserve the food? Describe the adverse effect of food irradiation on food quality. Name any two irradiation resistant bacteria.  
3+5+2
5. What are the advantages of food drying? Write down the factors affecting the food drying rate. Briefly describe Klin dryer.  
3+3+4
6. Define Z value. Differentiate between moist heat and dry heat sterilization. Write a note on natural food preservative. What are the advantages of pasteurization over sterilization?  
2+2+3+3
7. Write short notes on high pressure hydrostatic technology and extrinsic factors of microbial growth in food.  
5+5
8. Write the causes of meat spoilage. How will you select the good quality meat? Explain the meat preservation.  
3+2+5

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