CLASS: IMSC   SEMESTER : V
BRANCH: FOOD TECH.   SESSION : MO/18

SUBJECT: IMF5007 FERMENTED FOOD PRODUCT

TIME: 3 HOURS   FULL MARKS: 60

INSTRUCTIONS:
1. **The question paper contains 7 questions each of 12 marks and total 84 marks.**
2. **Candidates may attempt any 5 questions maximum of 60 marks.**
3. **The missing data, if any, may be assumed suitably.**
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. **Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.**

Q.1(a)   "Fermentation Processes can be classified into five different categories". Mention the categories.   [2]
Q.1(b)   Mention three industrially important enzymes with its applications.   [4]
Q.1(c)   How food fermentation is related to preservation and flavor development? What is pure culture?   [6]

Q.2(a)   Differentiate between Chemostat and Turbidostat.   [2]
Q.2(b)   Derive the mathematical expression of Batch and continuous culture.   [4]
Q.2(c)   "The availability of oxygen in the medium may be influenced by several ways like Fast metabolism,   [6]
         Rheology and antifoam agents" Explain. What do you mean by antifoaming agent?

Q.3(a)   What do you mean by dilution rate?   [2]
Q.3(b)   Explain the preservation techniques used for industrially important microbes.   [4]
Q.3(c)   Explain the upstream, downstream and production process.   [6]

Q.4(a)   How strength of alcohol is expressed?   [2]
Q.4(b)   Mention about the criteria considered in designing fermentor for proper sterilization.   [4]
Q.4(c)   With schematic diagram, explain different parts of fermentor.   [6]

Q.5(a)   How acetic acid content in vinegar is measured?   [2]
Q.5(b)   Write down the reaction scheme of vinegar production.   [4]
Q.5(c)   Differentiate between Orleans method and Trickling generator method for vinegar production.   [6]

Q.6(a)   What is cheese? Classify the cheese.   [2]
Q.6(b)   With flow diagram describe the process of cheese making.   [4]
Q.6(c)   How bubbles are created inside the cheese? What is cidar?   [6]

Q.7(a)   Identify the possible hazards in during their processing steps of Indian sweetmeat.   [2]
Q.7(b)   What is papad? Write down the moisture content and associated microbial risk in packaged papad.   [4]
Q.7(c)   Write down the flow diagram and microbes associated with idli and dosa fermentation.   [6]

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