

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: IMSC  
BRANCH: FOOD TECHNOLOGY**

**SEMESTER : VI  
SESSION : SP/19**

**SUBJECT: IMF6007 FOOD ADDITIVES AND INGREDIENTS  
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.
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- Q.1(a) What are antioxidants? [2]  
Q.1(b) What do you mean by flavour and flavour enhancers? [4]  
Q.1(c) Describe the safety evaluation of food additives. [6]
- Q.2(a) What do you mean by stabilizer and thickeners? [2]  
Q.2(b) What do you mean by emulsion and emulsifier? [4]  
Q.2(c) With respect of food additives give the concepts of acid bases and buffer. [6]
- Q.3(a) Differentiate in between natural and artificial colour [2]  
Q.3(b) Write short notes on alkyl isothiocyanate and vanillin. [4]  
Q.3(c) What are the factors affecting stability of flavor? [6]
- Q.4(a) Write down the characteristic of intense sweetener. [2]  
Q.4(b) What is sweetener? classify the sweetener? [4]  
Q.4(c) Write down the chemical name and draw the structure of the following sweeteners: [6]  
Saccharine, Nitroaniline and Aspartame.
- Q.5(a) What is protein deficiency? [2]  
Q.5(b) Write down the processing of fats and oils. [4]  
Q.5(c) Describe saturated and unsaturated fatty acid. [6]
- Q.6(a) Why colours are used in food additives? [2]  
Q.6(b) Classify the presence of food colours in food additives. [4]  
Q.6(c) Write notes on food colour additives. [6]
- Q.7(a) What do you mean by dietary fibres? [2]  
Q.7(b) Describe the dietary fibre content in various food. [4]  
Q.7(c) Write down the analysis of dietary fibre by enzyme chemical method. [6]

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