CLASS: IMSc   SEMESTER : IV
BRANCH: FOOD TECH   SESSION : SP/19

SUBJECT: IMF4005 FOOD ANALYSIS

TIME: 3.00 Hrs.   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)	Give example of aromatic amino acid.	[2]
Q.1(b)	What are essential amino acids? Give examples?	[4]
Q.1(c)	What is sickle cell anemia? Show the nin hydrin test for protein.	[6]
Q.2(a)	What is Food Safety?	[2]
Q.2(b)	Write the anthrone test for carbohydrates.	[4]
Q.2(c)	Write the Bial's test for pentoses. Write reactions for Benedict test for carbohydrates.	[6]
Q.3(a)	How shape of the food effcts on color?	[2]
Q.3(b)	Explain L, a, b scale in color scale with figure.	[4]
Q.3(c)	Relate mechanical properties of food with the common popular terms.	[6]
Q.4(a)	What chemicals are used to determine N terminal amino acid?	[2]
Q.4(b)	What are the steps for sequencing large protein?	[4]
Q.4(c)	What is Hue, saturation and brightness of color?	[6]
Q.5(a)	What is the basic requirement of NMR spectroscopy?	[2]
Q.5(b)	How amylase content affects on the Texture of cooked rice?	[4]
Q.5(c)	What is the principle of UV-Vis spectroscopy? Schematic diagram of sngle beam UV Visible spectrophotometer.	[6]
Q.6(a)	Compare IR with Raman spectroscopy.	[2]
Q.6(b)	What is the principle of atomic absorption spectroscopy?	[4]
Q.6(c)	Explain the basic principle of Thin Layer Chromatography (TLC).	[6]
Q.7(a)	Explain the term amorphous phase, crystalline phase in polymer.	[2]
Q.7(b)	What are the informations obtained from TGA?	[4]
Q.7(c)	How SE, BSE is generated in SEM analysis? Give schematic diagram of SEM.	[6]

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