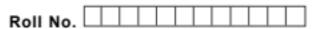
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M.Tech.(Food Technology) (2018 Batch) (Sem.-1) ADVANCES IN FOOD ANALYSIS Subject Code : MTFT-512-18 M.Code : 75599

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES : 1.Attempt any FIVE questions out of EIGHT questions. 2.Each question carries TWELVE marks.

1.	 a) Write the principle of spectroscopy. Explain working of UV-visible spectrophotom and its application in food Industry. 	ter 4
	b) What is FTIR spectroscopy? How the FTIR spectra results are interpreted?	4
	c) How the emission spectroscopy is helpful in food analysis?	4
2.	 a) What are different types of emission and absorption spectroscopy. Explain working flame photometery. 	g of 8
	b) What is Fluorescence spectroscopy? How the spectrofluoromieter works?	4
3.	a) How TLC works? Explain with example the application of TLC in food analysis.	6
	b) Draw a schematic diagram of a gas chromatograph and explain function of each part	t. 6
4.	a) What different types of detectors are used in chromatographic analysis. Exp working of Thermal conductivity (TCD), Flame ionization (FID) detectors.	olain 2+6
	b) How chromatography is used in the analysis of vitamins in food samples? Explain v example.	vith 4
5.	Write the principle of SEM. Write its importance in food analysis. Discuss the application of SEM in food product development and quality control with suitable examples. 3+	ition 4+5
6.	 Draw a DSC chromatogram. How DSC analysis results are interpreted? How the result outputs of DSC and glass transition temperature analysis are used in food quality control and product development? Discuss. 2+2+8 	
7.	What is particle size analyzer? Write its basic principle. What are various types of particle analyzer? Explain the working and application of PSA in food industry. 2+	ticle 2+8
8.	Explain the theory of electrophoresis. Differentiate between SDS-PAGE electrophoreses. How the molecular weight of food samples proteins is calculated by S PAGE analysis. 3+	and DS- 2+7

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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