

M.Sc.(Chem.) Semester - 4 (CBCS) Examination**May/June-2021 (NEW COURSE)****Analysis of Selected Materials (Core)****Time: 1:30 Hours****Marks: 42****Instructions:**

1. Figures to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
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Que-1(A) What are food additives? Give its classification based on their functional use. (04)

Que-1(B) **Answer any two questions out of three.** (10)

1. Write a note on spectroscopic method for estimation of benzoic acid in food products.
2. Give structure, qualitative test and method of extraction of Saccharin from food products
3. Discuss DPPH radical scavenging activity

Que-2(A) Discuss the Rose-Gottlieb method for analysis of Fat. (04)

Que-2(B) **Answer any two questions out of three.** (10)

1. Discuss the method for detection of Cotton seed oil as adulterant.
2. Give an account of Gerber method for estimation of fat.
3. Give brief introduction of Starch and discuss method for detection of starch and cellulose in milk and milk products.

Que-3(A) **Answer the following questions** (04)

1. What is glycoside and aglycone?
2. What are provitamins? give any one example with structure

Que-3(B) **Answer any two questions out of three.** (10)

1. Give introduction, general properties and classification of carotenoids with example.
2. Give introduction, general properties and classification of Flavonoids
3. How will you confirm the presence of following content in extract? Saponin, Tannin, Alkaloids, Flavonoids, Soluble starch

Que-4(A) Give an account of National standards for drinking water. (04)

Que-4(B) **Answer any two questions out of three.** (10)

1. Discuss estimation of Na and K in soil sample by flame photometry.
2. Discuss method for determination of BOD (Biological Oxygen Demand) in detail.
3. How will you determine following in water sample?
(i) Total acidity & alkalinity, (iii) Chloride

Que-5(A) **Answer the following questions** (04)

1. Discuss various components of crude oil.
2. What is ASTM? Briefly explain its importance in the field.

Que-5(B) **Answer any two questions out of three.** (10)

1. Explain Flash and Fire point with Determination Cleavland open cup instrument.
2. Give an account of Aniline point of petroleum products in detail.
3. Write a note on density measurement
(i) Hydrometer (ii) Pycnometer
