STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2016-17)

SUBJECT CODE: 16VF/VM/AT46

B.Voc. DEGREE EXAMINATION, APRIL 2018
FOOD PROCESSING AND QUALITY CONTROL
FOURTH SEMESTER

COURSE : MAJOR CORE
PAPER : ANALYTICAL TECHNIQUES IN FOOD QUALITY ASSURANCE
TIME : 5 HOURS MAX.MARKS: 100
(Theory: 50marks +Practical: 50 marks)

SECTION – A

ANSWER ALL QUESTIONS (20 X 1 = 20)

I. Choose the correct answer:

1. Carr Price method is used for the estimation of
   a) Vitamin A b) Vitamin C c) Iron d) Calcium

2. The stationary phase for Paper Chromatography is
   a) Paper b) Water c) Butanol d) Ninhydrin

3. Identify the analytical technique used to estimate alkali metals.
   a) Flame Photometry b) HPLC c) Viscometry d) Column Chromatography

4. Role of a monochromator: _____
   a) Amplifies signals received b) Permits specific wavelength
   c) Aids in the detection of compounds d) reduces noise

5. Abbe's Meter measures
   a) Viscosity b) density c) buoyancy d) Refractive index

II. Fill in the blanks:

6. The wavelength at which Cholesterol is estimated is _____.
7. Rf is _____.
8. ANSA is used in the estimation of _____.
9. The detector used in GC is _____ .
10. The filter to be used for green solution is _____.

III. State whether true or false:

11. A high value of dissolved oxygen indicates purity.
12. GC can be used for volatile substances.
13. Brick colored flame is got for sodium.
14. The wavelength of 300 nm is in the UV region.
15. The least adsorbed component is eluted first in column chromatography.

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IV. Answer in a line or two:

16. Define BOD.
17. State the Beer Lambert law.
18. Name the reagent to be used for detection on amino acids.
19. Differentiate FID and electron capture detector.
20. Define pH and its significance.

SECTION B

Answer any SIX questions: (6 x 3 = 18 Marks)

21. Give the principle of Flourimetry.
22. Explain the importance of water analysis in Food Safety.
23. Draw the block diagram for UV - Vis spectrophotometer.
24. How is moisture content in wheat flour estimated?
25. How do you detect the presence of calcium in foods?
26. Write brief notes on a) COD b) TDS
27. Give the advantages of TLC over Paper Chromatography.
28. Give any three applications of HPLC.
29. Explain the technique of viscometry in studying oils.
30. Give the principle of DSC.

SECTION C

Answer any TWO questions: (2 x 6 = 12 Marks)

31. Enumerate the parts of Flame photometer with illustrations.
32. How do you estimate hardness of water?
33. Describe the procedure to estimate Iron colorimetrically.
34. How is TLC used to separate carotenoids?

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