KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food .Engg) 2011 Admission
V[th] Semester Final Examination-December /January2013

Cat. No: Fdpr.3103   Marks: 80
Title: Oil chemistry and Technology (2+1)   Time: 3hours

I Fill in the blanks   (10 x 1=10)

1. The major components of fat and oils are_____

2. The relationship between Iodine value and unsaturation of oil is_____

3. Oil seeds are pressed directly in_____to obtain a good quality oil

4. Most common mono unsaturated fatty acid is_____

5. The analysis of lipids are done effectively by_____

6. The development of any disagreeable odour and flavour in oils and fats is termed as _____

7. The iodine value of soya bean oil is _____

8. Most widely used solvent in solvent extraction is_____

9. In the most efficient expellers oil left in the cake is around _____ percentage

10. The free fatty acid present in coconut oil is_____

II Write short note on any TEN questions   (10 x 3=30)

1. Para anisidine value and its importance

2. Functional properties of fats and oils

3. Degumming, Refining and bleaching of oils

4. Different methods for extraction of volatile oil and oleoresins from spices

5. Leaching equipments

6. Butter substitutes

7. Enzymatic spoilage of oils

8. Solid oil

9. Rancidity of oil

10. Explain EFA with examples

11. Write briefly about margarines

12. Define iodine number and give its importance

III Answer any SIX questions $(6 \times 5=30)$

1. Solid fat index and oil stability index
2. Explain screw pressing
3. Describe the importance of heating and roasting when expelling oils
4. Explain auto oxidation of fats and oils.
5. Explain lipid metabolism
6. Nutritional aspects of oils and fats
7. Give examples of short chain, medium chain fatty acids, MUFA and PUFA with structure
8. Explain super critical fluid extraction

IV Answer any ONE question $(1 \times 10=1 0)$

1. A) Explain the physical and chemiocal extraction of vegetables oils

   B) Discuss the importance of following processes during refining of vegetable oils

   a.) Decolourization

   b.) Degumming

   c.) Nutralization

   d.) Dewaxing

   e.) Deodorization

2. Explain in detail the hydrogenation of oils, its merits and demerits

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