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53 (FPT 703) FALL
2018

FOOD ADDITIVES AND LEGISLATION

Paper : FPT 703

Full Marks : 100

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

Answer any five questions out of six.

1. (a) Describe the classification of food additives in details depending upon their functions. 8
- (b) Explain how antioxidants work to inhibit oxidative rancidity in unsaturated oils, using a simple reaction scheme. 4
- (c) Describe briefly the function of acetic acid and acetate salts, as acidulants/ acidity regulators and as antimicrobial food additives. 8

Contd.

2. (a) Give the PFA legal specifications of **any two** of the following :

(i) Skimmed milk

(ii) Double-toned milk

(iii) Ice cream. 2.5×2=5

(b) Describe the *four* major synthetic antioxidants and their functions. 15

3. (a) Explain how emulsifiers function in stabilizing an emulsion — water-in-oil or oil-in-water. Use a simple schematic diagram. 4

(b) Write short notes on **any four** of the following stabilizers : 4×4=16

(i) Guar gum

(ii) Carrageenan

(iii) Pectin

(iv) Gelatin

(v) Alginates/Alginic acid.

4. (a) Briefly elaborate on the following three groups of volatile food flavor compounds : 3×4=12

(i) Lactones

(ii) Sulfur compounds

(iii) Aldehydes.

(b) Give brief descriptions on *any two* major groups of non-volatile flavor compounds responsible for trigeminal sensation among consumers. 2×4=8

5. (a) Briefly elaborate on the following natural food colorants : 3×4=12

(i) Myoglobin

(ii) Anthocyanin

(iii) Annatto.

(b) According to PFA, what is an "adulterated food"? Give six different ways, a food may be termed as "adulterated". 2+6=8

6. (a) According to the FSSAI 2006, what are food preservatives? What are Class-I and Class-II preservatives? Give examples. 2+4=6

(b) According to the Essential Commodities Act, 1955 describe the show cause notice before confiscation and the procedures of confiscation of essential commodities. 3+6=9

(c) What are the *three* major functions of Central Food Laboratories? What qualifications should a Food Inspector have? 3+2=5