Total No. of printed pages = 3

FPT-603/FP & its M&S/6th Sem/2013/M

FOOD PLANT AND ITS MAINTENANCE AND SANITATION

Full Marks – 100

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

Answer any *five* from seven.

1. (a) What do you mean by plant design ? What are the different situations that give rise to plant design problems ? 2+5=7

   (b) What is the importance of location in business ? 4

   (c) List the four steps in anaerobic digestion and explain each. 6

   (d) What are the basic types of flow patterns employed in designing the layout. 3

[Turn over

2. (a) Explain the following terms : 2×5=10

(i) BOD

(ii) floc

(iii) Sludge

(iv) L-flow

(v) variable costs.

(b) Define plant layout. Write the important objectives of a good plant layout. 2+5=7

(c) What is anoxic decomposition ? 3

3. (a) What is activated sludge ? Draw the flow sheet of an activated sludge system. 2+6=8

(b) What are the important factors involved in the two stages of plant location study ? 6

(c) Explain product layout. 6

4. (a) What is FAR ? Draw the flow chart for plant design. 2+8=10

(b) Explain in brief the working principle of trickle filter. 6

(c) List two advantages each for aerobic and anaerobic digestion. 4

5. (a) Bring out the differences in design of food processing and non-food processing plants. 8

(b) What are the different types of reactors ? Explain any one of them giving suitable diagram. 2+6=8

(c) What is food sanitation ? 4

6. (a) Explain with the help of a flow chart the systematic layout planning procedure. 8

(b) Differentiate between process and group layout. 5

(c) What is fluidization ? Draw and label the schematic diagram of fluidized bed reactor. 7

7. Write short notes on any *four* : 4×5=20

(a) Fixed position layout

(b) HACCP

(c) Types of activated sludge

(d) Effluent treatment of food industries

(e) CIP

(f) Break even analysis.