

Total number of printed pages-3

53 (FPT 801) PDPI

2019

**PLANT DESIGN AND PROJECT
ENGINEERING**

Paper : FPT 801

Full Marks : 100

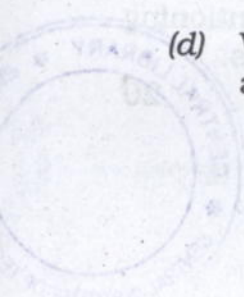
Time : Three hours

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

Answer any five questions.

1. (a) What is a Plant Design? Explain in brief. 3
- (b) Why does food processing sector differ from other processing industries? 5
- (c) Describe the general design considerations in making food plant design. 5
- (d) What are the principal plant utilities in a food plant? 3

Contd.



(e) What is a plant size and why is it important? 4

2. Describe the various aspects of food plant design process with proper flowchart. 20

3. (a) What are the purposes of a pre-feasibility study? Explain different factors or elements to be considered in a pre-feasibility study. 3+7=10

(b) Give a detail of the situations when the need of a plant location arise. 6

(c) What may be the consequences of a poor plant locations? 4

4. (a) Discuss the various factors involved in two phases of plant location study. 15

(b) What are the basic types of flow patterns in a plant layout design? 5

5. Discuss the types of plant layout mentioning their advantages and disadvantages.



6. (a) Write in detail about the guidelines to be considered for planning a plant building constructions on the site. 10

(b) What should be the characteristics of floors in a good processing plant? 5

(c) Discuss the advantages and disadvantages of single-storey building over multi-storey building. 5

7. Write short notes on : 4x5=20

(a) Fixed capital

(b) Working capital

(c) Break-even Analysis

(d) Depreciation.

