

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION (R), DECEMBER 2023**CHEMICAL ENGINEERING****(2020 SCHEME)****Course Code: 20CHT451****Course Name: Project Engineering****Max. Marks: 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Differentiate semi commercial plant and commercial plant.
2. Describe the significance of TEFR
3. List out the types of flow diagrams that are common in use.
4. What are the different phases of project life cycle?
5. What is the importance of statutory sanctions in planning of a project?
6. List out the stages of formation of company.
7. List any three financial institutions in India.
8. Define specification sheets.
9. Briefly explain about breakeven analysis.
10. What are the duties of a piping engineer?

PART B***(Answer one full question from each module, each question carries 14marks)*****MODULE I**

11. a) What are the factors affecting the selection of plant location. (7)
Explain with suitable example.
- b) Illustrate the role of Project engineer in a Chemical Industry. (7)

OR

12. a) Explain the preliminary data required for construction of projects? (7)
- b) Describe the importance of Bench scale experiments? Explain the role of R & D for the development of a company. (7)

MODULE II

13. a) Explain the role of a project engineer in the erection of a process plant? (6)
- b) Name any four insulating materials used in chemical Industry. (8)
Explain the method to evaluate an insulating material.

OR

14. a) Describe briefly about the pre-commissioning steps used in erection of process plants? (10)
b) Differentiate PERT and CPM. (4)

MODULE III

15. Define contract. Explain different types of contract. (14)

OR

16. a) What is the difference between a tender and quotation? How bid comparison is done? (7)
b) What is technology transfer? Explain different types of technology transfer. (7)

MODULE IV

17. a) What are the different methods of project financing? (7)
b) Write a short note on key financial indicators. (7)

OR

18. a) Differentiate between standard and special equipment selection criteria. (8)
b) List out the requirements to be included in the specification sheet for the installation of a double pipe heat exchanger. (6)

MODULE V

19. a) What is minimum cost analysis? Discuss different factors required for doing this analysis. (7)
b) What is the scope of piping engineering? List out the pipe sizing techniques. (7)

OR

20. a) How we can ensure the safety in plant designs? Explain in detail. (7)
b) List out the major codes and standards providing engineering bodies in piping. (7)
