

CBCS SCHEME

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18PC641

Sixth Semester B.E. Degree Examination, July/August 2022 Petroleum Transportation Engineering

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is the most common method of transporting petroleum? Explain. (10 Marks)
b. What is the most environmentally safe way to transport oil? Explain. (10 Marks)

OR

- 2 a. How does oil transportation affect the environment? Explain. (10 Marks)
b. Explain briefly on marine oil terminal. (10 Marks)

Module-2

- 3 a. Explain briefly on origin of petroleum. (10 Marks)
b. Write a note on composition of Crude petroleum. (10 Marks)

OR

- 4 a. Write a note on hazards associated with Cryogenics and safety precautions. (10 Marks)
b. Explain low, intermediate and high temperature thermal insulation. (10 Marks)

Module-3

- 5 a. Write a note on gas hydrates. (10 Marks)
b. Write challenges for artificial lifting of gas hydrate reservoirs. (10 Marks)

OR

- 6 a. What is film inversion? When is it encountered in two phase flow? (10 Marks)
b. Explain wax deposition and prediction in petroleum pipelines. (10 Marks)

Module-4

- 7 a. What are the various pre construction activities in pipeline construction? Explain. (10 Marks)
b. Write a note on electric welding processes and their types. (10 Marks)

OR

- 8 a. Explain effect of atmospheric air on welding. (10 Marks)
b. What is Cathodic protection on piping? Explain. (10 Marks)

Module-5

- 9 a. Explain liquefied natural gas. (08 Marks)
b. Write a note on : (i) 2-stroke engine (ii) 4-stroke engine (12 Marks)

OR

- 10 a. Explain briefly the advantage of two shaft system of gas turbine compare to simple gas turbine system. (10 Marks)
b. What are the different types of flow meters? Explain. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.