

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – OCTOBER/NOVEMBER-2018.

PETROLEUM AND ENERGY ENGINEERING

(Maximum Marks : 100)

Time : 3 Hrs

PART-A
(Maximum marks: 10)

Marks

I. Answer all questions in one or two sentences. Each question carries 2 marks.

1. Define cracking process.
2. Define sweetening of petroleum products
3. State calorific intensity of coal.
4. Define proximate analysis of coal.
5. State the principle of ocean thermal energy conversion. (5X2=10)

PART - B
(Maximum Marks : 30)

II Answer any five of the following questions. Each question carries 6 marks.

1. Explain crude oil refining process using fractional distillation with a diagram.
2. Describe Doctor's sweetening process with a flow diagram.
3. Summarize Baum Jig washing for cleaning of coal.
4. Explain the manufacture of Biogas with a sketch.
5. Describe the construction and working of electric furnace with a neat sketch.
6. Explain the working of travelling grate stoker.
7. Summarize the working of silicon cell with a diagram. [5x6 =30]

PART - C
(Maximum marks : 60)

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT I

- III (a) Explain catalytic polymerization process with a flow diagram. (8)
- (b) Explain magneto hydrodynamic power generation with the help of diagram. (7)

OR

- IV (a) Summarize the exploration methods of crude petroleum. (8)
- (b) Draw the diagram of nuclear reactor and name its parts. (7)

UNIT- II

- V (a) Explain the construction and working of Junker's gas calorimeter with a neat sketch. (8)
- (b) Explain the manufacture of producer gas with a neat sketch. (7)

OR

- VI (a) Describe the manufacture of coke using beehive oven with a diagram. (9)
- (b) Compare the properties of coal used for metallurgical purposes and for gas producers. (6)

UNIT- III

- VII (a) Explain the construction and working of blast furnace with a neat sketch. (9)
- (b) Explain the working of over feed stocker with a sketch. (6)

OR

- VIII (a) Describe ultimate analysis of coal. (8)
- (b) Explain pulverized coal burning methods. (7)

UNIT – IV

- IX (a) Explain the working of photovoltaic water pumping system with a diagram. (8)
- (b) Explain the working of solar still used for solar distillation with a neat sketch. (7)

OR

- X (a) Explain the working of cylindrical parabolic concentrating collectors with a sketch. (8)
- (b) Explain the working of wind mills with a sketch. (7)
