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(Revision 2015)

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – OCTOBER/NOVEMBER -2019.

PETROLEUM AND ENERGY ENGINEERING

(Maximum Marks : 100)

[Time : 3 hours]

PART-A
(Maximum marks: 10)

Marks

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

1. List any two types of sweetening process.
2. Define reforming of gasoline.
3. Define carbonization.
4. List the elements of flue gases.
5. List the sources of non conventional energy.

(5x2=10)

PART - B
(Maximum Marks : 30)

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

1. Identify the parts of a fractionating column.
2. Explain the process of thermal cracking with flow diagram.
3. Identify the properties and uses of peat.
4. Illustrate the production of coke using beehive oven.
5. Differentiate inside and outside mixing type burners with sketches.
6. Understand the working of over feed, stocker with a sketch.
7. Illustrate flat collectors of solar cell.

[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 the moving bed catalytic cracking process with a flow diagram. (8)

(c) Explain the sweetening process for kerosene. (7)

OR

- IV (a) Explain the constructional details of nuclear reactor for power generation with neat sketch. (8)
- (b) Illustrate the function of redwood viscometer. (7)

UNIT- II

- V (a) Illustrate the manufacture of producer gas. (8)
- (b) Differentiate between low temperature carbonization and high temperature carbonization. (7)

OR

- VI (a) Demonstrate the production of gobar gas with a sketch. (8)
- (b) Construct Junker's gas calorimeter. (7)

UNIT- III

- VII (a) Estimate the proximate analysis of coal. (8)
- (b) Illustrate the working of open hearth furnace. (7)

OR

- VIII (a) Explain the working principle of orsat apparatus with a sketch. (8)
- (b) Illustrate the working principle of regenerators. (7)

UNIT - IV

- IX (a) Illustrate the working of solar water heater. (8)
- (b) Explain the working of wind mill. (7)

OR

- X (a) Explain the function of solar drying. (8)
- (b) Illustrate the working of ocean thermal energy conversion. (7)
