Reg. No. : | | | | | | | | | | |

Question Paper Code: 59516

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Elective

Electronics and Instrumentation Engineering

15UEI916 - INSTRUMENTATION AND CONTROL FOR PETROCHEMICAL INDUSTRIES

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The _____ unit washes out salt from Crude oil.

   (a) Fractionation (b) Distillation (c) Desalter (d) Evaporator

2. Example of Middle Distillate is

   (a) Kerosene (b) Gasoline
   (c) LPG (d) Fuel oil

3. Petrol is also known as

   (a) Gasoline (b) LPG (c) Petroleum (d) Crude oil

4. The Thermally enhanced oil recovery is _____ injection.

   (a) Microbial (b) Steam (c) Gas (d) Chemical

5. Which of the following is almost pure Carbon?

   (a) Asphalt (b) Residual fuel (c) Coke (d) Distillate fuel

6. The process used to convert paraffins into isoparaffins is

   (a) Cracking (b) Isomerisation
   (c) Polymerisation (d) Alkylatio

7. The important raw material used for the production of Poly Vinyl Chloride is

   (a) Methane (b) Ethane
   (c) Ethylene oxide (d) VCM

8. High Density Polyethylene (HDPE) is produced under _____ pressure.

(a) High (b) Low (c) Very high (d) Constant

9. Coking is a method of

(a) Thermal Cracking (b) Catalytic Cracking
(c) Reforming (d) Alkylation

10. The _____ is used for preventing the error rather than it is corrected.

(a) Feedback control (b) Feedforward control
(c) Ratio control (d) Selective control

PART - B (5 x 2 = 10 Marks)

11. List the methods of Recovery in petroleum
12. Define catalytic reforming.
13. State the properties of VCM,
14. What is octane number?
15. What is meant by LEL and UEL?

PART - C (5 x 16 = 80 Marks)

16. (a) Discuss the various techniques used to discover the petroleum resources. (16)

Or

(b) Explain the various recovery techniques in the petroleum plant. (16)

17. (a) Describe thermal cracking process with a neat sketch. (16)

Or

(b) Explain the steps involved in polymerization. (16)

18. (a) Explain the best production route available for the production of benzene (16)

Or

(b) Describe the process involved in the manufacturing process of methanol. (16)

19. (a) Illustrate the Basic controls involved in Binary distillation column. (16)

Or

(b) Describe the common methods of density measurement inpetroleum evaporator station with the aid of neat sketch. (16)

20. (a) Describe the area classification as per National Electric Code (NEC). (16)

Or

(b) Demonstrate the methods followed in mechanical isolation in petrochemical industries. (16)

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