Reg. No.	:		
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Question Paper Code: 59516

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

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. Calculate the resistivity of the given material whose resistance is 2Ω ; length and area of cross section are 15cm and 25cm2 respectively by Resistivity survey method of petroleum exploration

	(a) 3.33 Ωm	(b) 33.3 Ωm	(c) 0.3333Ωm	(d) 333.3 Ωm
2.	Example of Middle Distil	late 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) Polymerisat	ion	(d) Alkylation				
7. The important raw	7. The important raw material used for the production of Poly Vinyl Chloride is					
(a) Methane		(b) Ethane				
(c) Ethylene ox	ide	(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 Cr	acking	(b) Catalytic Crack	ing			
(c) Reforming		(d) Alkylation				
10. The is used for preventing the error rather than it is corrected.						
(a) Feedback co	ontrol	(b) Feedforward c	ontrol			
(c) Ratio contro	ol	(d) Selective contro	ol			
PART - B (5 x 2 = 10 Marks)						
11. List the methods of Recovery in petroleum						
12. Define catalytic ref	orming.					
13. Give the products of	btained from methane.					
14. What is octane num	iber?					
15. What is meant by L	EL and UEL?					

PART - C (5 x 16 = 80 Marks)

16. (a) A pressure vessel used for separating well fluids produced from oil and gas wells into gaseous and liquid components. Identify the process and explain in detail along with its types. (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)	Describe the chemicals obtained from ethylene with its applications.	(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)	Discuss the procedure involved in controlling the quality of the products distillation column.	in a (16)
20. (a)	Describe the area classification as per National Electric Code (NEC).	(16)
	Or	
(b)	Explain the general safety precautions to be followed in petroleum industry.	(16)