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Question Paper Code: 39061

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Elective

Instrumentation and Control Engineering

01UIC913 - INSTRUMENTATION FOR PETROCHEMICAL INDUSTRIES

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is meant by petroleum exploration?
2. Label the constituents of petroleum products.
3. Define isomerization.
4. Define the term fishing and mention where it can be used.
5. List the chemical products of petroleum.
6. Outline the methane derivative from petroleum products.
7. What is thermo well?
8. State the effects of temperature in the reactors.
9. State the degree of freedom.
10. Write the applications of process control.

PART - B (5 x 16 = 80 Marks)

11. (a) With a neat sketch, explain the operations involved in petroleum extraction. (16)

Or

(b) List the recovery technique and explain them in detail. (16)

12. (a) Sketch the piping diagram of cracking process and describe them in detail. (16)

Or

(b) Explain the production of acetylene and propylene from petroleum. (16)

13. (a) Illustrate the methane and acetylene derivatives from petroleum products. (16)

Or

(b) Explain the process involved in methanol production from synthetic gases with its merits and demerits. (16)

14. (a) Discuss in detail about the intrinsic safety of the instruments used in petroleum industries. (16)

Or

(b) Illustrate the procedure for selection and maintenance of measuring instruments in petroleum industry. (16)

15. (a) With a neat process diagram, discuss the pressure control of chemical reactors. (16)

Or

(b) Exemplify the polyvinyl chloride production in petroleum industry. (16)
