



B.E DEGREE EXAMINATIONS: APRIL 2015

(Regulation 2009)

Eighth Semester

ELECTRONICS AND INSTRUMENTATION ENGINEERING

EIE132:Instrumentation in Petro Chemical Industries

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

- A scale used to determine anti-knock properties of gasoline is _____.
 - Paraffins
 - Asphalt
 - Octane Number
 - Emulsion
- When a solvent of low volatility is added to depress the volatility of one of the components, the separation is known as _____.
 - Absorption
 - Azeotropic distillation
 - Extractive Distillation
 - Compression
- The process in which hydrocarbons are decomposed at elevated temperatures to form material of lower molecular weight are called _____.
 - Vacuum distillation
 - Thermal conversion process
 - Thermal cracking
 - Visbreaking
- Cracking of ethane is carried out by thermal cracking process to produce _____.
 - Butane
 - Propylene
 - Ammonia
 - ethylene
- Low pressure methanol synthesis operates in the pressure range of _____.
 - 5-10MPa
 - 30-35MPa
 - 50-70MPa
 - 80-100MPa
- Methanol can be converted to light olefins by _____.
 - Reaction process
 - Mobil process
 - Catalyst process
 - Heat exchanger process

22. a) (i) Elaborate fluidized bed catalytic cracking method with a neat sketch. (7)
(ii) Briefly discuss the Thermal conversion process in petroleum industry. (7)

(OR)

- b) (i) Discuss in detail the types of Hydro cracking with relevant diagrams. (7)
(ii) Enumerate the production of Acetylene from crude oil. (7)

23. a) (i) Name the various acetylene derivatives and brief about them. (7)
(ii) What is Butadiene? How butadiene is extracted from petroleum? (7)

(OR)

- b) (i) List the various Propylene Derivatives and brief about them. (7)
(ii) Write down the physical and chemical properties of propylene. (7)

24. a) (i) Name the various level measuring instruments in a petroleum industry and brief about them. (7)
(ii) Discuss in detail the parameters to be measured in refinery and petrochemical industry. (7)

(OR)

- b) (i) Write a detailed note on the maintenance of measuring instruments in a petrochemical industry. (7)
(ii) Discuss Intrinsic and Electrical safety in petroleum industry. (7)

25. a) Elaborate in detail the process control system for catalytic crackers unit with the help of P and I diagram

(OR)

- b) Enumerate the basic principle behind the stripping and enriching sections of distillation column. List the various products obtained using distillation.
