

- Q.26 Discuss the manufacturing of DA with flowsheet.
- Q.27 Discuss about dehydration and desulphurization process of petroleum.
- Q.28 Describe the setting process and filtration in sugar industry.
- Q.29 Difference between octane number and cetane number with its significance.
- Q.30 Discuss about process of ammonium nitrate with flowsheet.
- Q.31 Explore the significance of micro nutrients in fertilizers, providing examples of essential micronutrients and their effects on crop yield and quality.
- Q.32 Discuss about distillation with its types.
- Q.33 Write about the major cement industries in India, composition of portland cement.
- Q.34 Difference between flash point and fire point?
- Q.35 Explain purification process used in sugar industry.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

- Q.36 Explain the manufacturing process of urea, detailing each step involved from the synthesis of ammonia to the final product, highlighting any environmental considerations.
- Q.37 Define sugar. Discuss in details sugar industry with flow sheet, application and uses.
- Q.38 Write short note on any three:-
- 1) SSP
 - 2) Mother liquor
 - 3) Density
 - 4) Viscosity

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4th Sem. Branch: P&P Sub : Process Industries

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

- Q.1 Which process is commonly used for the manufacturing of ammonia?
- a) Haber-Bosch process
 - b) Ostwald process
 - c) Solvay process
 - d) Bosch-Meiser process
- Q.2 The specific gravity of petroleum products is a measure of their:
- a) Density compared to water
 - b) Viscosity
 - c) Refractive index
 - d) Flash point
- Q.3 Which of the following is a major engineering problem encountered in the cement industry?
- a) Excessive use of water
 - b) High energy consumption
 - c) Overproduction of clinker
 - d) Insufficient curing time

- Q.4 What is the purpose of the bleaching process in sugar technology?
- To improve color
 - To increase sugar concentration
 - To remove impurities
 - To enhance crystallization
- Q.5 The smoke point of a petroleum product is the temperature at which:
- It begins to vaporize
 - It ignites and sustains combustion
 - It becomes cloudy
 - It starts to smoke
- Q.6 What is the primary purpose of refining and distillation in petroleum technology?
- To separate crude oil into various fractions
 - To increase the viscosity of crude oil
 - To enhance the color of crude oil
 - To reduce the flash point of crude oil
- Q.7 What is the primary process involved in the purification of sugar?
- Filtration
 - Crystallization
 - Bleaching
 - Setting
- Q.8 What is the primary raw material used in the manufacturing of urea?
- Nitrogen gas
 - Ammonia
 - Carbon dioxide
 - Methanol

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- Q.9 _____ process is used as a pretreatment of crude oil to remove sulphur?
- Dehydration
 - Desalting
 - Desulphurization
 - Dewaxing
- Q.10 Which process involves the heating of raw materials to high temperature in a kiln?
- Grinding
 - Blending
 - Clinkering
 - Cooling

Section-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define dewaxing.
- Q.12 Write the types of cement industry.
- Q.13 What is the chemical formula of super phosphate (SSP)?
- Q.14 Define drying.
- Q.15 Write the formula of viscosity.
- Q.16 Write one application of cement.
- Q.17 Name any one type of fertilizer industry.
- Q.18 What is the primary purpose of crude oil pretreatment?
- Q.19 Name any one type of engg problem associated with cement industry.
- Q.20 Define aniline point.

Section-C

Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 Explain crystallization with diagram.
- Q.22 Define fertilizer, write about NPK.
- Q.23 Classify the crude oil.
- Q.24 Explain the production of cement with flowsheet, advantages and engg problems.
- Q.25 Write about the origin of petroleum with diagram.

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