

- 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) Visocity

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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

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.