

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Discuss the methods of manufacture of diammonium phosphate in detail with the help of neat process flow sheet.
- Q.24 What is use of polymerization in petroleum industry? Describe the hot sulphuric acid polymerization process in detail.
- Q.25 What is composition of cement? Describe the different raw materials used in the manufacture of cement in detail.

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**3rd Sem. / Chemical
(Pulp & Paper)**

Subject : Process Industries

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Which of the following unit operation is used for separation of crude oil into different constituents?
a) evaporation b) sublimation
c) distillation d) crystallization
- Q.2 What is the main source of phosphatic fertilizers?
a) coal b) rock phosphate
c) natural gas d) lime
- Q.3 Residue formed in the petroleum refining is?
a) diesel oil b) ammonia
c) gas oil d) asphalt
- Q.4 Which evaporator is used to concentrate the clarified juice obtained in extraction of sugarcane to produce white crystalline sugar?
a) open pan evaporator
b) multiple effect evaporator

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- c) vacuum evaporator
 - d) agitating film evaporator
- Q.5 Which of the following is not a nitrogenous fertilizer?
- a) urea
 - b) ammonium sulphate
 - c) calcium carbonate
 - d) potassium nitrate
- Q.6 Which of the following provides the calcareous component required for the manufacture of cement?
- a) lime
 - b) marble
 - c) granite
 - d) limestone

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Define the bleaching.
- Q.8 Write the chemical formula of urea.
- Q.9 What is pour point?
- Q.10 What is full form of ADU in context of distillation?
- Q.11 Write the name of two major petroleum refineries in India.
- Q.12 What are clinkers?

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SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Discuss the crystallization process of sugar industry in brief.
- Q.14 Explain need and importance of NPK value in brief.
- Q.15 Discuss the different types of fertilizer in brief.
- Q.16 What are the properties and uses of single super phosphate?
- Q.17 What is flash point? Discuss its significance.
- Q.18 Discuss the major engineering problems in the manufacture of cement.
- Q.19 What is difference between octane number and cetane number?
- Q.20 Describe thermal reforming in brief.
- Q.21 Define and discuss viscosity index in brief.
- Q.22 Explain the vacuum distillation unit of petroleum refinery in brief.

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