

Question Bank

Petrol Chemistry

- 1) Looking at the boiling point vs % volume graph for your fractional distillation, what can you conclude about the your sample components in the distillate?
- 2) Why we should cover the fractional column by a cotton sheets or aluminum insulator? as shown in this fig.
- 3) During the distillation ,as you heat the sample the temperature is raise ,but when the first drop of the distillate appear then the temperature begin to fall, why?
- 4) For separation of(aviation gasoline) in high pure percent 90%
Which type of distillation should we use ?why?
- 5) Give a definition for crude oil, and how can you illustrate the term of cuts in petroleum chemistry ?
- 6) What can you conclude about this graph of boiling point vs % volume of two petroleum samples?
- 7) What is the structure of each sample ?
- 8) Which sample is good economical

9) Aviation fuel contain:

- a) light naphtha
- b) Kerosen
- c) Medium Naphtha
- d) Diesel

10) The lower members of naphthalene are , ,

11) The hydrocarbone present in crude petroleum are classified into , ,

12) Petrol composition specify its and properties also the of its products.

13) All hydrocarbon classes are present in the crude mixture, except and

14) The simplest mononuclear aromatic compound are , , and

15) BTX are important petrochemical reffering to , , and

16) Binuclear aromatic hydrocarbon are found in

17) Separate a sample of n-butane and 2-pentane from each other .

18) True or False:

The high percentage of n-paraffins in crude oil increase its importance.

19) Explain the important of determining the % aromatics & non-aromatics.

20- The **BTX** and **BTEX** terms.

21- You use petroleum ether to separate non aromatic and diethyl ether to separate the aromatic. Why?

22) Why you use petroleum ether at the beginning and diethyl ether at the end?

23) Whats the importance and benefits of cetane no.

24) Write the scale of cetane no for the following traucks:

a) Modern highway diesel engines. B) Premium diesel

c) Regular no. 2 diesel

25) Whats the importance of octane no of gasoline ?

26) How can we measurement the octane no of gasoline ?

27) What are the benefits of knowing pour point of petroleum derivatives?

28) How can we measurement the pour points?

29) Whats the importance and the benfits of knowing flash point of petroleum derivatives ?

30) How can we measurement the flash point?

Polymer Chemistry

- 31) Write the chemical equations of preparation of the following:
- a) linear and crosslinked UF resins. b) phenolphormaldehyde resin.
- 32) What are the industrial applications of UF resins?
- 33) Set the differentials between thermoplastic and thermosetting.
- 34) Explain the role of the fillers in polymer application.
- 35) Which materials can be used as fillers?
- 36) Explain the mechanism of polymerization of preparation of UF resins.
- 37) Write some applications and uses of PFs polymers.
- 38) Explain the properties of novolac and bakelite.
- 39) Write differentials between novolac and bakelite.
- 40) PF is also called as
- 41) Describe briefly the properties of phenolic resins.
- 42) Write the advantages of bulk polymerization.
- 43) Write the disadvantages of bulk polymerization.
- 44) Why the M.Wt of polymers is high?
- 45) How can we determine the M.wt.?
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- 46) Write the structure of the nylon that you prepare ?

47) Write the types of nylons.

48) Write one equation for preparing of nylon 66 and 610.

49) Why the nylons are good fibers?

50) Write the types of original of polymers.