

**University of Mumbai**  
**Online Examination 2020**

Program: BE Chemical Engineering

Curriculum Scheme: Revised 2012

Examination: Forth Year Semester VII

Course Code: CHE704

**Course Name: Department Elective II - Petroleum Refining Technology**

Time: 1 hour

Max. Marks: 50

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Note to the students:- All Questions are compulsory and carry equal marks .

1. According to the inorganic theory in which form does the petroleum is found under the earth's crust?
  - (A) Metal fluorites
  - (B) Metal pyrites
  - (C) Metal carbides
  - (D) Metal oxides
  
2. According to the organic theory, from which kind of compound does the petroleum is formed?
  - (A) Plant debris
  - (B) Animal and vegetable debris
  - (C) From the decomposers
  - (D) From sunlight
  
3. What type of compounds does the paraffin base oil contains?
  - (A) Paraffin, olefin and aromatic compound
  - (B) Paraffin, nitrogen and sulphur
  - (C) Paraffin, Naphthenes and aromatic compound
  - (D) Paraffin, sulphur and aromatic compound

4. \_\_\_\_\_ is the maximum height of flame in mm in which given oil will burn without producing any smoke. It is an indication of clean burning quality of kerosene.
- (A) Pour point
  - (B) Smoke point
  - (C) Aromaticity
  - (D) Flash point
5. \_\_\_\_\_ test indicates qualitatively the amount of aromatic; present in kerosene.
- (A) Copper Corrosion test
  - (B) Carbon Residue test
  - (C) Pensky – marten’s Test
  - (D) Aniline test
6. Total sulfur can be estimated by bomb method. Maximum permissible amount of sulfur is \_\_\_\_\_; in all kerosene
- (A) 0.13%
  - (B) 1%
  - (C) 0%
  - (D) 8%
7. Illuminating characteristics of kerosene is expressed by its
- (A) Smoke point
  - (B) Aniline point
  - (C) Luminosity number
  - (D) Aromatic content
8. Straight run petrol as compared to methyl/ethyl alcohol has
- (A) Lower calorific value
  - (B) Lower octane number
  - (C) Higher specific gravity
  - (D) Higher ignition temperature
9. Flash point of atmospheric distillation residue is determined by \_\_\_\_\_ apparatus.

- (A) Pensky-Martens (closed cup type)
- (B) Abel
- (C) Cleveland (open cup type)
- (D) Ramsbottom

10. During electrical desalting of crude oil, the electrical conductivity of a mixture of crude oil and water (which ranges between 3 to 8% water) \_\_\_\_\_ with increase in the amount of water.

- (A) Decreases
- (B) Increases
- (C) Remains unchanged
- (D) Decrease Linearly

11. What physical property allows Distillation to separate different molecules?

- (A) Melting point
- (B) Boiling point
- (C) Diffusion rate
- (D) Condensation rate

12. The process of separating the different length hydrocarbons from crude oil is known as...

- (A) Distillation
- (B) Cracking
- (C) Fractional Distillation
- (D) Filtering

13. Formulations of good kerosene touch a maximum limit of \_\_\_\_\_ aromatics.

- (A) 20%
- (B) 30%
- (C) 10%
- (D) 5%

14. Viscosity index improvement, deasphalting and dewaxing are some of the major applications of \_\_\_\_\_.

- (A) Percolation technique

- (B) Clay treatment
- (C) Sulfuric acid treatment
- (D) Solvent treatment

15. Commercial Percolation Technique is one of the simplest techniques for improvement in quality of \_\_\_\_\_ .

- (A) Kerosene
- (B) Gasoline
- (C) Lube oils
- (D) Wax

16. All heavy fractions of crude oils contain at least some amount of waxy material; this has been referred as \_\_\_\_\_ wax.

- (A) Aromatic
- (B) Paraffin
- (C) Inorganic
- (D) Asphalt

17. Which of the following processes is used for the production of petroleum coke?

- (A) Stabilization
- (B) Visbreaking
- (C) Cracking
- (D) Reforming

18. Name the endothermic reaction out of the following

- (A) Catalytic cracking
- (B) Hydrocracking
- (C) Dehydrogenation of Naphthenes to produce aromatic
- (D) Catalytic polymerization

19. Which of the following is the most widely used cracking process in oil refineries?

- (A) Dubbs process
- (B) T.C.C. moving bed process
- (C) Fluidized bed catalytic cracking process
- (D) Houdry's fixed bed process

20. Reforming converts

- (A) Olefins into Paraffins
- (B) Naphthenes into aromatics
- (C) Naphthenes into olefins
- (D) Naphthenes into paraffin

21. Name the endothermic reaction out of the following:

- (A) Catalytic cracking
- (B) Hydrocracking
- (C) Dehydrogenation of Naphthenes to produce aromatic
- (D) Catalytic polymerization

22. A concentration of ..... Ferric chloride is found to reduce the air blowing period by half

- (A) 0.3%
- (B) 0.5%
- (C) 1%
- (D) >1%

23. Crude with ..... Sulphur gives more asphaltic materials.

- (A) no
- (B) high
- (C) less
- (D) equal

24. .... is quite destructive to Asphaltenes

- (A) Acetic acid
- (B) chlorides
- (C) Sulphuric acid
- (D) Nitric acid

25. The interaction of ..... with asphaltenes may serve as a possible way of deasphalting in future.

- (A) Peroxides
  - (B) Acids
  - (C) Sulphuric acid
  - (D) Metal chlorides
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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	B
Q3.	C
Q4.	B
Q5.	D
Q6.	D
Q7.	C
Q8.	B
Q9.	C
Q10.	B
Q11.	B
Q12.	C
Q13.	A
Q14.	D
Q15.	C
Q16.	B
Q17.	C
Q18.	C
Q19.	C
Q20.	B
Q21.	C
Q22.	A
Q23.	B
Q24.	C
Q25.	D

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