

MGMs JUNIOR COLLEGE

Some Basic Principles of Organic Chemistry + Hydrocarbons

60 min

XII CHEMISTRY ASSIGNMENT-1

Marks : 30

1) IUPAC name of tertiary butyl alcohol is . [CPMT 1994, 2006]

- A) Butan-1-ol B) Butan-2-ol
C) 2-methyl propan-1-ol D) 2-methyl propan-2-ol

2) Cl– C– Cl angle in 1, 1, 2, 2 – tetrachloroethene and tetrachloromethane respectively are about [IIT JEE 1988]

- A) 120 ° and 109.5° B) 90° and 109.5°
C) 109.5° and 90° D) 109.5° and 120°

3) The IUPAC name of succinic acid is [IIT JEE 1994]

- A) 1, 4-butanedioic B) Dimethyl-2-acid acid
C) 1, 2-dimethyldioic D) None of these acid

4) The IUPAC name of neopentane is [AIEEE 2009]

- A) 2– methylbutane B) 2, 2– dimethylpropane
C) 2– methylpropane D) 2, 2– dimethylbutane

5) The IUPAC name of $\text{CH}_2=\text{CH}-\text{CH}_2\text{Cl}$ is [MP PMT 1995]

- A) Allyl chloride B) 1– chloro– 3– propene
C) Vinyl chloride D) 3– chloro– 1– propene

6) The IUPAC name of crotonaldehyde is [MP PMT 1999]

- A) Prop-2-ene-1-al B) Propenal
C) But-2-ene-1-al D) Butenal

7) Which of the following alkanes contain primary, secondary, tertiary and quaternary carbon atoms together [MP PET 2001]

- A) $(\text{CH}_3)_3\text{CH}$ B) $(\text{C}_2\text{H}_5)_3\text{CH}$
C) $(\text{CH}_3)_4\text{C}$
D) $(\text{CH}_3)_3\text{CCH}_2\text{CH}(\text{CH}_3)_2$

8) The IUPAC name of picric acid is [KCET 2002]

- A) 2,4,6– trinitrophenol B) 2,4,6– trinitrobenzoic acid
C) 4– nitrophenol D) None

9) The compound having only primary hydrogen atoms is [AIIMS 2004]

- A) Butene B) 2,3– Dimethylbutene
C) Cyclohexane D) Propyne

10) IUPAC name of $\text{CH}_3\text{CH}_2\text{C}(\text{Br})=\text{CH}-\text{Cl}$ is [CPMT 2004; RPMT 2006]

- A) 2-bromo-1-chloro butene B) 1-chloro-2-bromo butene
C) 3-chloro-2-bromo butene D) None of the above

11) The IUPAC name of Gammexane is [MP PET 2004]

- A) Benzene hexachloride

B) Hexachlorobenzene

- C) 1, 2, 3, 4, 5, 6, hexachlorobenzene
D) 1, 2, 3, 4, 5, 6, hexachlorocyclohexane

12) The IUPAC name of [CPMT 1983, 93; MNR 1984; RPMT 1999; DCE 2002; Pb. CET 2004; MP PMT 2005]

- A) 1, 1-dimethyl-1, 3-butanediol and propanetricarbonyl amine
B) 4-methyl-2, 4-pentanediol and 1, 2, 3 propanetrinitrile
C) 2-methyl- 2, 4-pentanediol and propane 1, 2, 3-tricarbonitrile
D) 1,3,3-trimethyl 1,3-propanediol and 1, 2, 3 tricyano propane

13) The IUPAC name for $\text{CH}_3\text{CO}-\text{CH}_3$ is [MP PET 1991; J & K 2005; MP PMT 2010]

- A) Dimethyl ketone B) Acetone
C) Propanal D) Propanone

14) The IUPAC name of $\text{C}_6\text{H}_5.\text{COCl}$ is [IITJEE2006]

- A) Benzoyl chloride B) Benzene chloro ketone
C) Benzene carbonyl chloride D) Chloro phenyl ketone

15) The reagent used for the conversion $\text{CH}_3\text{CH}_2\text{COOH} \rightarrow \text{CH}_3\text{CH}_2\text{CH}_3$ is

- A) LiAlH_4
B) sodalime
C) red P and concentrated HI
D) amalgamated zinc and concentrated HCl

16) Indicate the expected structure of the organic product when ethyl magnesium bromide is treated with heavy water (D_2O) .

- A) $\text{C}_2\text{H}_5-\text{C}_2\text{H}_5$ B) $\text{C}_2\text{H}_5\text{OD}$
C) sodium benzoate D) $\text{C}_2\text{H}_5\text{D}$

17) n– propyl bromide on treatment with ethanolic potassium hydroxide produces

- A) propanol– 1 B) propene
C) propanol– 2 D) ethyl propyl ether

18) Pure methane can be produced by

- A) Wurtz reaction B) Kolbes electrolytic method
C) sodalime decarboxylation D) reduction with H_2

19) In a mixture of n– hexadecane and alpha– methyl naphthalene, the percentage of the later is 10. The value of cetane number is .

- A) 110 B) 90 C) 10 D) Zero

20) Which one of the following compounds does not dissolve in conc. H_2SO_4 even on warming?

- A) Ethylene B) Benzene C) Hexane D) Aniline

21) When propyne is treated with aqueous H_2SO_4 in presence of H_2SO_4 the major product is

- A) propanal
- B) n-propyl hydrogen sulphate
- C) acetone
- D) propanol

22) A gas decolourises alkaline KMnO_4 solution but does not give precipitate with AgNO_3 . It is

- A) CH_4
- B) C_2H_4
- C) C_2H_2
- D) C_2H_6

23) Anti-Markovnikov's addition of HBr is not observed in

- A) propene
- B) 1-butene
- C) but-2-ene
- D) pent-2-ene

24) The highest boiling point is expected for

- A) iso-octane
- B) n-octane
- C) 2, 2, 3, 3-tetramethyl butane
- D) n-butane

25) Ozonolysis of 2,3-dimethyl-1-butene followed by reduction with zinc and water gives

- A) methanoic acid and 3-methyl-2-butanone
- B) methanal and 2-methyl-2-butanone
- C) methanal and 3-methyl-2-butanone
- D) methanoic acid and 2-methyl-2-butanone

26) Which of the following is the predominant product in the reaction of HOBr with propene

- A) 2-bromo-1-propanol
- B) 3-bromo-1-propanol
- C) 2-bromo-2-propanol
- D) 1-bromo-2-propanol

27) Two gases P and Q decolourise aqueous bromine but only one of them gives a white precipitate with aqueous ammonical silver nitrate solution. P and Q are likely to be

- A) ethane and ethyne
- B) but-1-yne and but-2-yne
- C) ethane and but-2-yne
- D) ethyne and propyne

28) 2.8g of pure alkene containing only one double bond per molecule, reacts completely with 8 g of bromine (in an inert solvent). What is the molecular formula of the alkene

- A) C_2H_4
- B) C_4H_8
- C) C_3H_4
- D) C_6H_2

29) 1-butyne on oxidation with hot alkaline KMnO_4 would yield

- A) $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$
- B) $\text{CH}_3\text{CH}_2\text{COOH}$
- C) $\text{CH}_3\text{CH}_2\text{COOH} + \text{CO}_2 + \text{H}_2\text{O}$
- D) $\text{CH}_3\text{CH}_2\text{COOH} + \text{HCOOH}$

30) Which is one of the following most reactive ring nitration.

- A) Benzene
- B) Mesitylene
- C) Toluene
- D) m-xylene