

# JEE Main Online Exam 2019

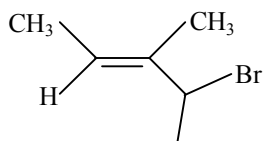
## [Memory Based Paper]

### Questions & Answer

10<sup>th</sup> January 2019 | Shift - II

#### CHEMISTRY

Q.1



(1) 2-Bromo-3-methyl Pent-3-ene

(2) 3-methyl-4-Bromo Pent-2-ene

(3) 4 Bromo-3-methyl pent-2-ene

(4) 4-Bromo-3-methyl But-2-ene

Ans. [3]

Q.2 Two complex compound have same chemical formula one shows optical isomerism and other do not show optical isomerism. Which kind of isomer these are

(1) Ionisation

(2) Linkage

(3) Geometrical

(4) None of these

Ans. [3]

Q.3 Which of the following pair contain 2 P-H bond.

(1)  $\text{H}_3\text{PO}_2$ ,  $\text{H}_3\text{PO}_3$

(2)  $\text{H}_3\text{PO}_2$ ,  $\text{H}_4\text{P}_2\text{O}_5$

(3)  $\text{H}_3\text{PO}_3$ ,  $\text{H}_4\text{P}_2\text{O}_6$

(4)  $\text{H}_3\text{PO}_2$ ,  $\text{H}_4\text{P}_4\text{O}_6$

Ans. [2]

Q.4 Number of 2 atom 2-electron and 3 atom 2-electron bonds in  $\text{B}_2\text{H}_6$  are -

(1) 2, 4

(2) 3, 1

(3) 4, 2

(4) 1, 3

Ans. [3]

Q.5 A metal form high spin and low spin complex. If difference between number of unpaired electron is two then metal ion is -

(1)  $\text{Co}^{2+}$

(2)  $\text{Mn}^{2+}$

(3)  $\text{Fe}^{2+}$

(4)  $\text{Ni}^{2+}$

Ans. [1]

Q.6 For 1 molal compound elevation in boiling point is 2K and for 2 molal depression in freezing point is 2 K what is the relation between  $K_b$  and  $K_f$ .

(1)  $K_b = K_f$

(2)  $K_b = 1.5 K_f$

(3)  $K_b = 2K_f$

(4)  $K_b = 0.5 K_f$

Ans. [3]

**Q.7** A solid having HCP arrangement with formula  $A_2B_3$ . Which atom form lattice and which atom occupied void-

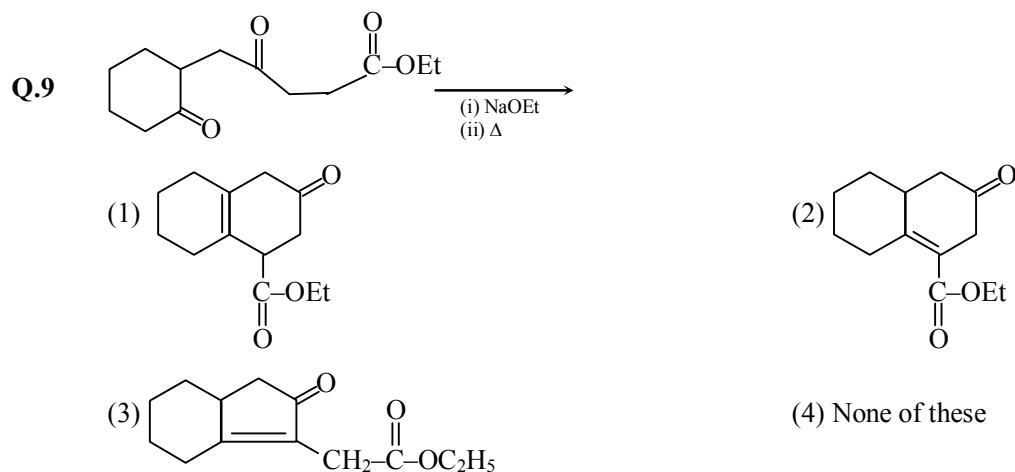
- (1) B atom occupy lattice and A atom occupy  $\frac{2}{3}$  octahedral voids
- (2) B atoms occupy lattice and A atoms occupy  $\frac{1}{3}$  octahedral voids
- (3) A atom occupy lattice and B atoms occupy  $\frac{2}{3}$  tetrahedral voids
- (4) A atoms occupy lattice and B atoms occupy  $\frac{1}{3}$  octahedral voids

**Ans.** [1]

**Q.8** When Na is treated with liquid  $NH_3$  blue colour solution is formed. What is the reason for colour formation

- (1) Due to  $[Na(NH_3)_x]^+$
- (2) Due to Ammoniated (solvated)  $e^-$  or  $[e(NH_3)_y]^-$
- (3) Due to hydrated  $e^-$
- (4) Due to formation of  $NaNH_2$

**Ans.** [2]

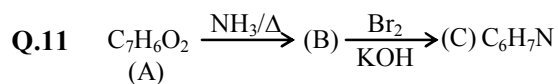


**Ans.** [2]

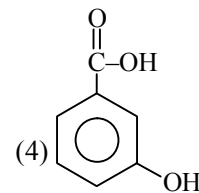
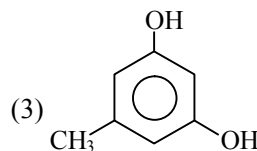
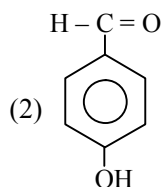
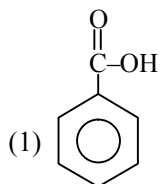
**Q.10** Amount of sugar required to form 2L of 0.1 M solution

- (1) 136.8 g
- (2) 34.2 g
- (3) 17.1 g
- (4) 68.4 g

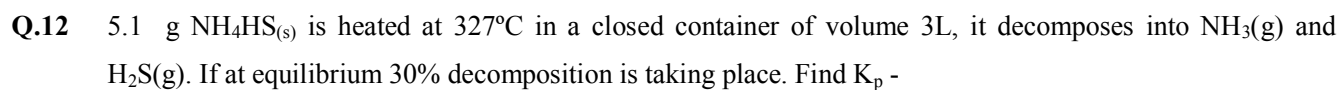
**Ans.** [4]



Compound 'A' is



Ans. [1]



(1)  $0.248 \times 10^{-2}$

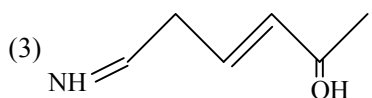
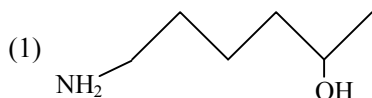
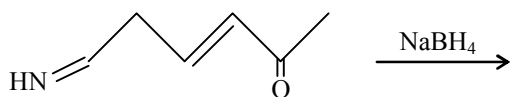
(2) 0.243

(3) 0.9706

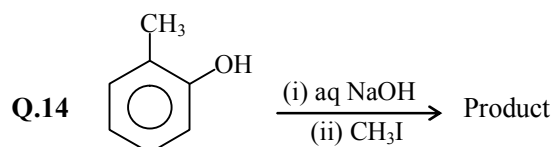
(4) 0.496

Ans. [2]

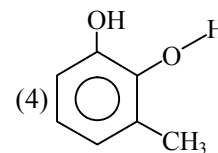
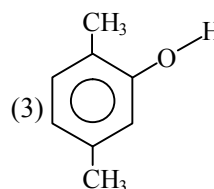
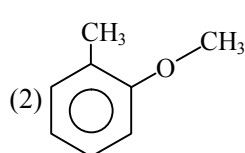
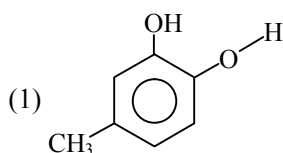
Q.13



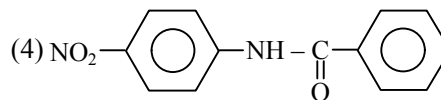
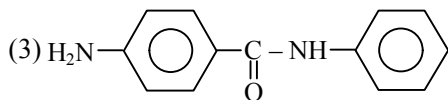
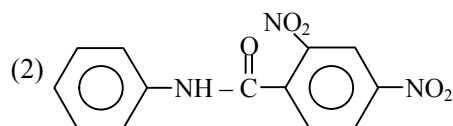
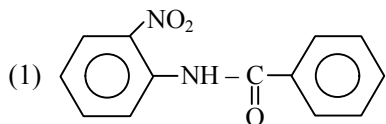
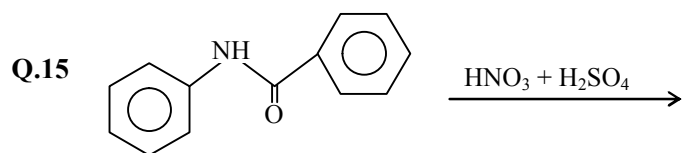
Ans. [4]



The product is -



Ans. [2]



Ans. [4]

Q.16 When potassium permanganate reacts with oxalate ion, total number of electron(s) gained or lost in the reaction -

(1) 2

(2) 8

(3) 10

(4) 6

Ans. [3]

Q.17 Which can not be used for test of protein

(1) Xanthoprotic

(2) Ninhydrin

(3) Biuret Test

(4) Boford Test

Ans. [4]

Q.18 In which of the following entropy change is negative -

(1)  $N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$

(2) Dissociation of HI

(3) Sublimation of Ice

(4) Dissociation of  $PCl_5$

Ans. [1]

Q.19 Which type of sol are haemoglobin and gold sol

(1) Both are positive

(2) Both are negative

(3) Haemoglobin is positive and gold is negative

(4) Haemoglobin is negative and gold is positive

Ans. [3]

Q.20 For an element having  $Z = 71$ , in which orbital the last electron will enter

(1) 6s

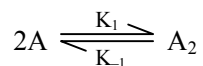
(2) 5d

(3) 9f

(4) 6d

Ans. [2]

**Q.21** For the following equation



Then find  $-\frac{d[A]}{dt}$

(1)  $2K_1[A]^2 - 2K_{-1}[A_2]$

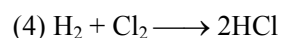
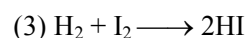
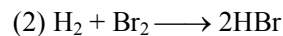
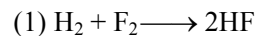
(2)  $2K_1[A]^2 - K_{-1}[A_2]$

(3)  $K_1[A]^2 - 2K_{-1}$

(4)  $K_1[A]^2 - K_{-1}[A_2]$

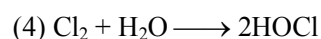
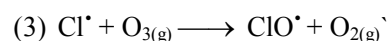
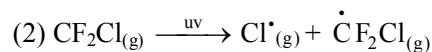
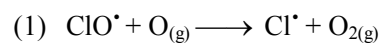
**Ans.** [1]

**Q.22** Which of the following reaction needs catalyst -

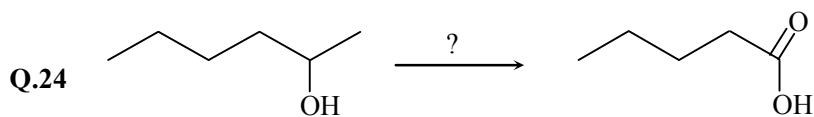


**Ans.** [3]

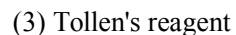
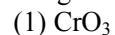
**Q.23** Which of the reaction is not involve in ozone layer depletion



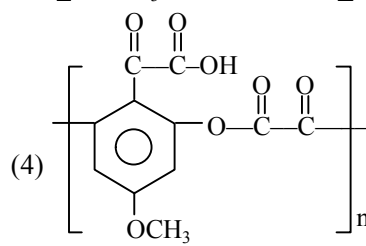
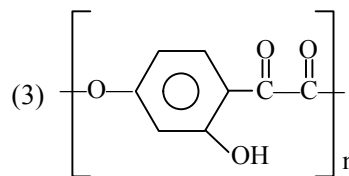
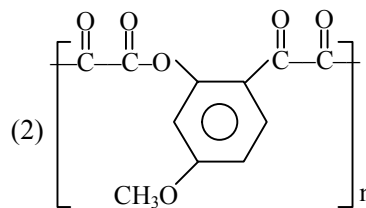
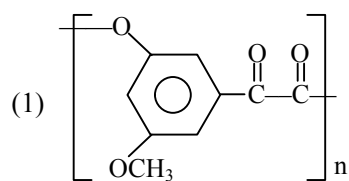
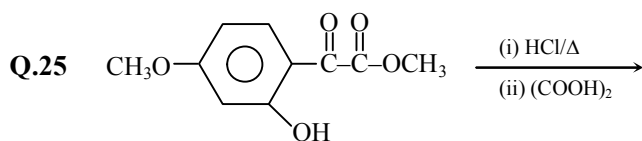
**Ans.** [4]



Reagent for conversion is



**Ans.** [4]



**Ans.** [1]