



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA JEE MOCK TEST 72

Chemistry

1. Arrange in increasing order of solubility of AgBr in the given solutions :

(i) 0.1 M NH_3 (ii) 0.1M $AgNO_3$

(iii) 0.2M NaBr (iv) pure water

A. $(iii) < (ii) < (iv) < (i)$

B. $(iii) < (ii) < (i) < (iv)$

C. $(iii) < (ii) < (i) < (iv)$

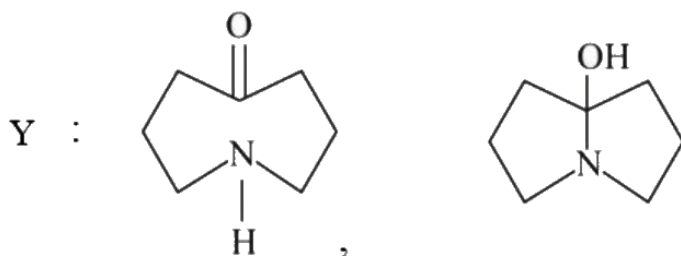
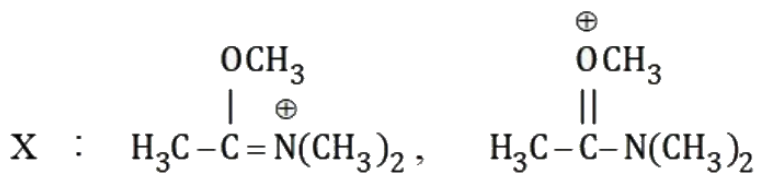
D. $(ii) < (iii) < (iv) < (i)$

Answer: A



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2. Consider the following pairs of compounds



of these pairs

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3. At STP, a container has 1 mole of Ar, 2 mole of CO_2 , 3 moles of O_2 and 4 moles of N_2 . Without changing

the total pressure if one mole of O_2 is removed, the partial pressure of O_2

A. is changed by about 26 %

B. in halved

C. in unchanged

D. changes by 30 %

Answer: A



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4. Among alkali metal salts, the lithium salts are the poorest conductors of electricity in aqueous solution

because of

- A. easy diffusion of Li^+ ions
- B. lower ability of Li^+ ions to polarize water molecules
- C. lowest charge to radius ratio
- D. higher degree of hydration of Li^+ ions

Answer: D



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5. If $C_{a_3}(PO_4)_2$ and H_3PO_3 contain same number of 'P' atom then the ratio of oxygen atoms in these compounds respectively is

A. $8/3$

B. $2/3$

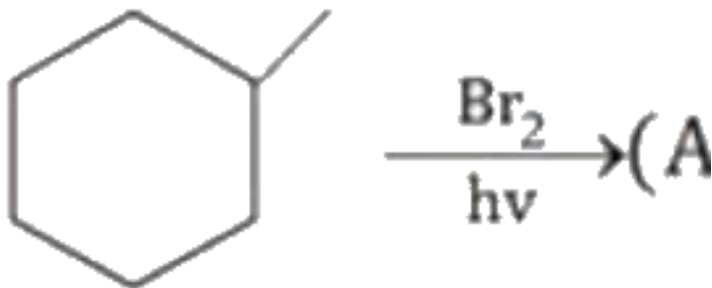
C. 3

D. $4/3$

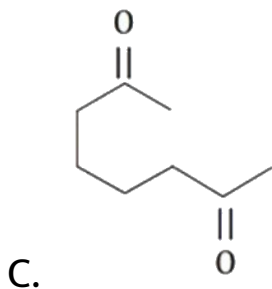
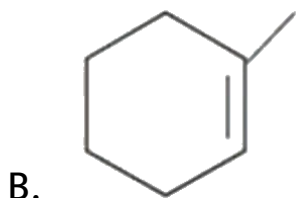
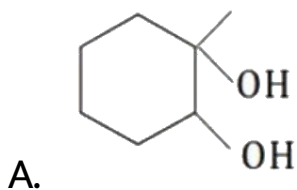
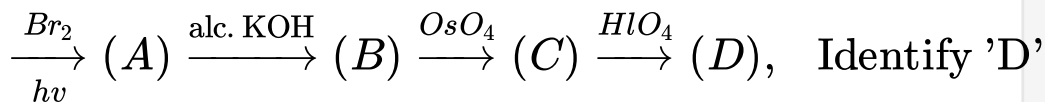
Answer: D



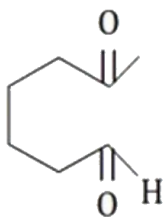
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6.



D.



Answer: D

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7. An element X ($At, wt = 80g/mol$) having fcc structure, calculate the number of unit cells in $8g$ of X

A. $0.4 \times N_A$

B. $0.1 \times N_A$

C. $4 \times N_A$

D. None of these

Answer: D



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8. A salt is formed when a weak acid of dissociation constant 10^{-4} and weak base of dissociation constant 10^{-5} are mixed. The pH and degree of hydrolysis of salt solution are

A. 5.1 %

B. 7.14 %

C. 6.5, 0.3 %

D. 0.3, 6.5 %

Answer: C



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9. A hydride of nitrogen which is acidic in nature is :

A. NH_3

B. N_3H

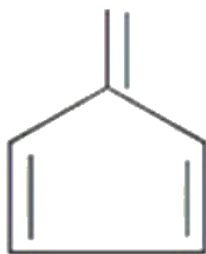
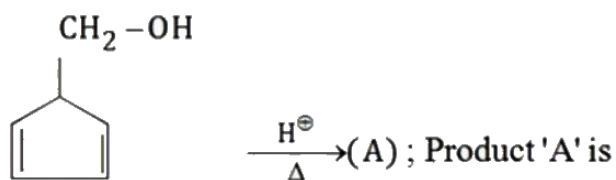
C. N_2H_2

D. N_2H_4

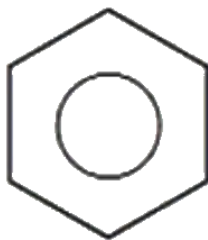
Answer: B

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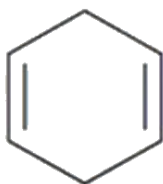
10. Complete the following reaction



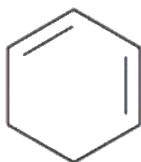
A.



B.



C.



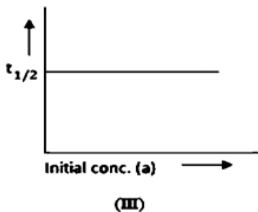
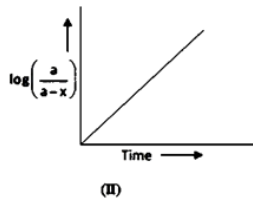
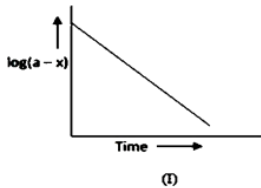
D.

Answer: B



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11. Which of the following is/are correct for the first order reaction ? (a is initial concentration of reactant, x is concentration of the reactant reacted and t is time)



- A. I and II only
- B. II and III only
- C. I, II and III only

D. I and III only

Answer: C

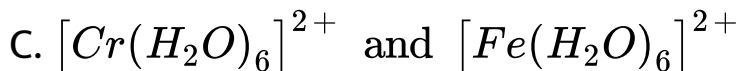
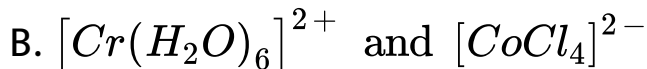
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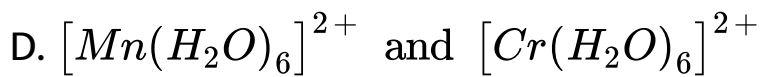
12. The pair having the same magnetic moment is

[at.

No.

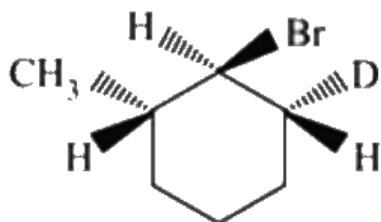
$Cr = 24, Mn = 25, Fe = 26$ and $Co = 27$]





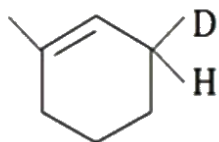
Answer: C

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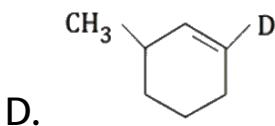
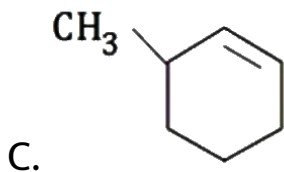
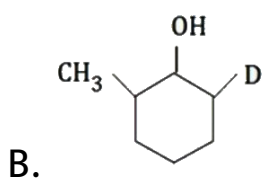


13.

Major product of this reaction is



A.



Answer: C

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14. The chlorine end of the chlorine monoxide radical carries a charge of $+0.167e$. The bond length is 154.6

pm. Calculate the dipole moment of the radical in Debye units.

A. 2.35 D

B. 1.24 D

C. 1.59 D

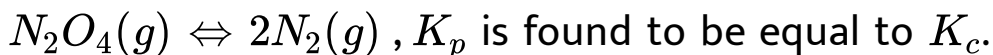
D. 2.05 D

Answer: B



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15. For the following gases equilibrium,



This is attained when:

A. $0^{\circ}C$

B. 273 K

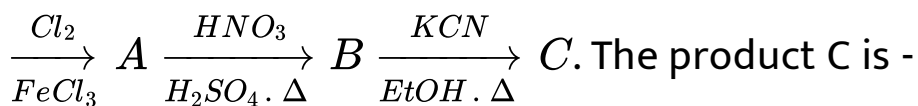
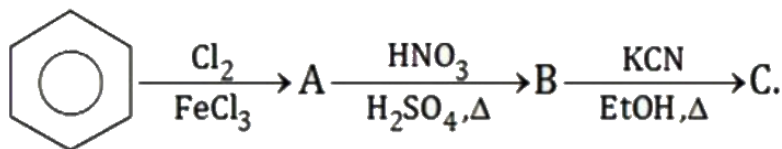
C. 1 K

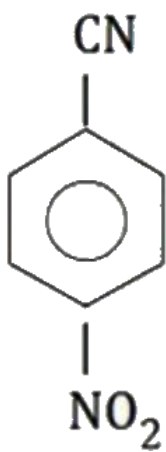
D. 12.19 K

Answer: D

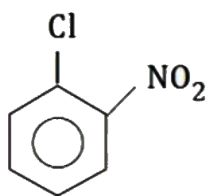
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16.

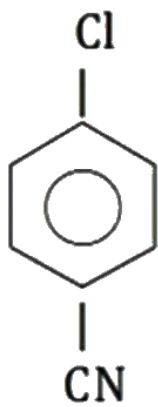




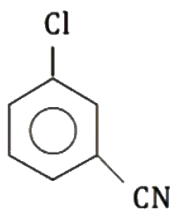
A.



B.



C.



D.

Answer: A



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17. Match the following.

(1)	Energy of ground state of He^+	(p)	6.04 eV
(2)	Potential energy of 1 orbit of H atom	(q)	-27.2 eV
(3)	Kinetic energy of II excited state of He^+	(r)	54.4 eV
(4)	Ionisation potential of He^+	(s)	-54.4 eV

A. (1) - (p), (2) - q, (3) - r, (4) - s

B. (1) - s, (2) - r, (3) - q, (4) - p

C. (1) - s, (2) - q, (3) - p, (4) - r

D. (1) - q, (2) - r, (3) - p, (4) - s

Answer: C

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18. Neopentyl bromide, undergoes dehydrohalogenation to give alkenes even though it has no $\beta - H$. This is due to

A. E_2 mechanism

B. Rearrangement of carbocations by E_1 mechanism

C. E_1cB mechanism

D. E_4 mechanism

Answer: B

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19. Three faraday of electricity is passed through molten solutions of $AgNO_3$, $NiSO_4$ and $CrCl_3$ kept in three vessels using inert electrodes. The ratio in mol in which the metals Ag, Ni and Cr will be deposited is-

A. 1 : 2 : 3

B. 3 : 2 : 1

C. 6 : 3 : 2

D. 2 : 3 : 6

Answer: C



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20. Which among the following statements are true for glycine?

1. It exists in crsytalline form
2. It is optically active

3. It is soluble in water

4. It can form Zwitter ions

A. 1, 2 and 3

B. 1, 2 and 4

C. 1, 3 and 4

D. 2, 3 and 4

Answer: C



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21. A cyclic silicate having structural formula

$[Si_6O_{18}]^{n-}$. What is value of n ?



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22. How many of these elements have lower electron affinity than fluorine?

Cl, S, O, N, P, Br, I, C



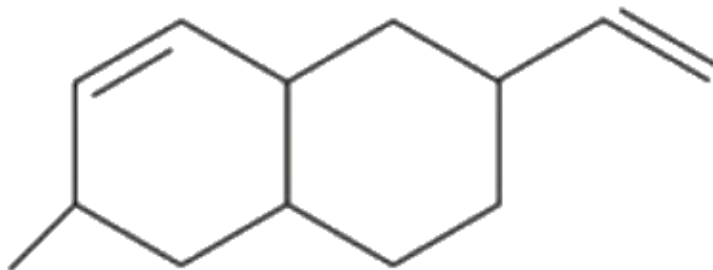
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23. 26.8 gm $Na_2SO_4 \cdot nH_2O$ contains 12.6 of water here the value of 'n' is ?



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24. In the given compound here



If X and Y are the number of secondary and tertiary C - atoms respectively. Find the value of sum of $X + Y$ here.

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25. Serotonin is a famous tranquilizer if it contains ' X ' number of l_p of electrons and ' Y ' number of π - bonds. The sum of $X + Y$ is equal to





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