



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA TPC JEE MAIN TEST 84

Chemistry

1. Polarisation is not a cause of colour/colour intensity in which of the following set of species

A. AgCl , AgBr , AgI

B. PbCl_2 , PbBr_2 , PbI_2

C. ZnS , CdS , HgS

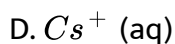
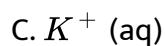
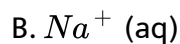
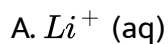
D. Cl_2 , Br_2 , I_2

Answer: D



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2. Among the following, which has the maximum size ?



Answer: A



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3. A molecule XY_2 contains two a, two ir bond and one lone pair of electron in the valence shell of X. The arrangement of lone pair as well as bond pair is :

A. Square pyramidal

B. Linear

C. Trigonal planar

D. Unpredictable

Answer: C



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4. The process of heating pyrites in air to remove sulphur is called:

A. roasting

B. calcination

C. fluxing

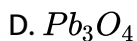
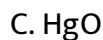
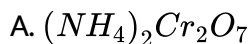
D. smelting

Answer: A



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5. What is the red coloured solid compound that is insoluble in water which becomes soluble if some KI is added to water and also heating the solid in a test tube results in liberation of some violet coloured fumes and droplets of a metal appear on the cooler parts of the test tube ?



Answer: B



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6. In $Fe(CO)_5$, the Fe-C bond possesses:-

A. ionic character

B. σ - character

C. π - character

D. both σ and π character

Answer: D

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7. During hydrolysis of hydrolith (CaH_2) a compound 'A' and hydrogen gas is obtained. When chlorine gas is bubbled in solution of 'A' it produces 'B' which has permanent bleaching action. Find oxidation state of chlorine in 'B' -

A. +1

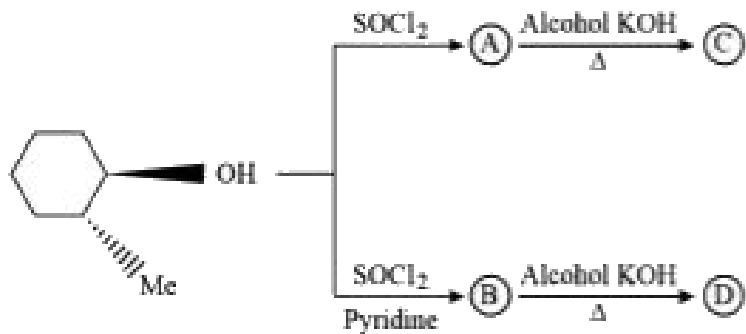
B. +3

C. +5

D. +7

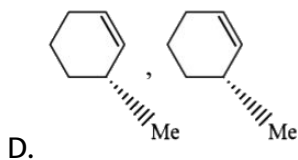
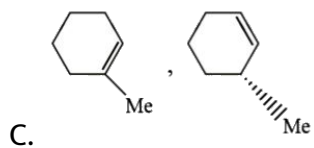
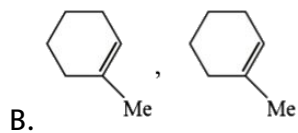
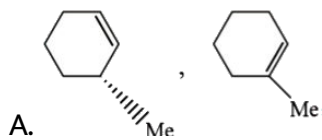
Answer: A

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8.

Major product (c) and (d) will be respectively:



Answer: A

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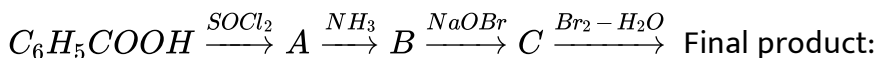
9. Which of the following set of molecules give same osazone when reacted with excess of phenylhydrazine :-

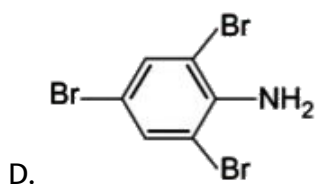
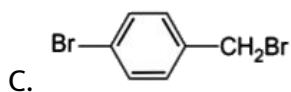
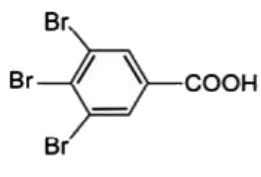
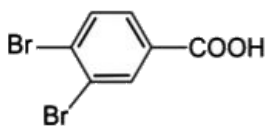
- A. Glucose and fructose
- B. Fructose and galactose
- C. Glucose and galactose
- D. Galactose and mannose

Answer: A

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10. The final product obtained from the following chain reaction is:





Answer: D

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11. Hydrolysis of maltose ($C_{12}H_{22}O_{11}$) by maltase gives

A. glucose

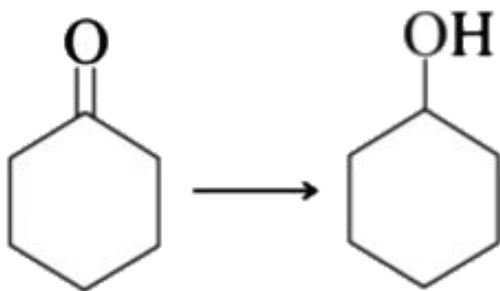
B. fructose

C. both (1) and (2)

D. none of these

Answer: A

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12.

Above conversion can be carried out by :

A. Zn-Hg/HCl

B. $LiAlH_4$

C. H^{\oplus} / Δ

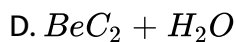
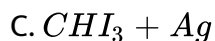
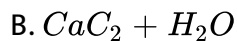
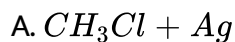
D. HIO_4

Answer: B



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13. In which of the following reactions, acetylene gas will not be liberated ?



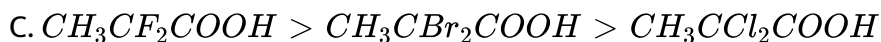
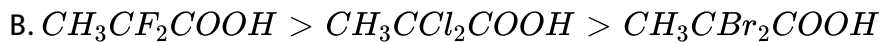
Answer: A



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14. What is the proper order of acidic strength for the following acids ?

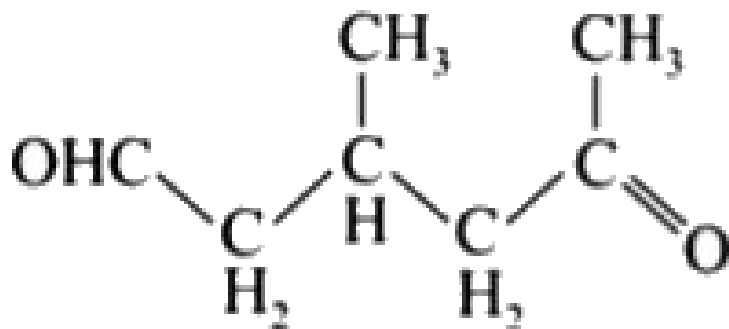
A.



Answer: B

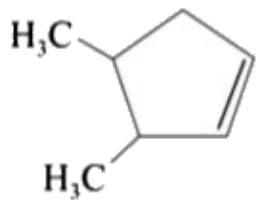
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15. A single compound of the structure:

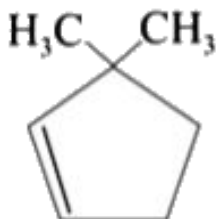


is obtainable from ozonolysis of which of the following cyclic compounds

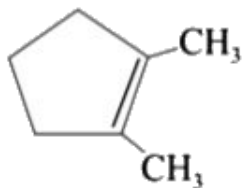
?



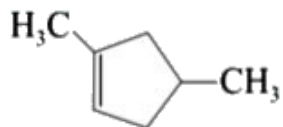
A.



B.



C.



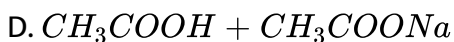
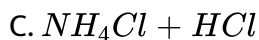
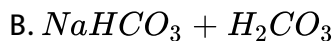
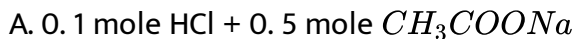
D.

Answer: D



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16. Which of the following solutions does not act as buffer :-



Answer: C



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17. Which of the following statements are true ?

i. Ferrimagnetic material, Fe_3O_4 becomes paramagnetic at 850 K.

ii. Paramagnetic behaviour of a material is due to the presence of the unpaired electrons in it.

iii. The maximum coordination number in ionic solids is 8.

A. I and II only

B. II and III only

C. I and III only

D. I, II and III

Answer: D

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18. Which of the following pair of orbitals possess two nodal planes each ?

A. p_x , $d_{x^2-y^2}$

B. $d_{x^2-y^2}$, d_{x^2}

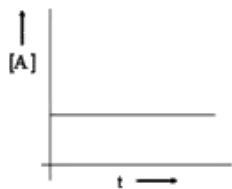
C. d_{xz} , $d_{x^2-y^2}$

D. p_y , d_{xy}

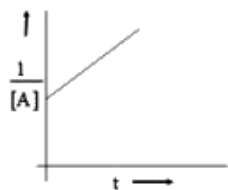
Answer: C

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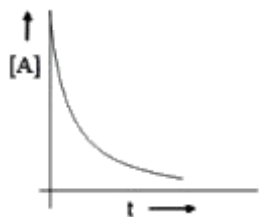
19. Among the following, which is the correct curve depicting a zero order reaction for A-products ?



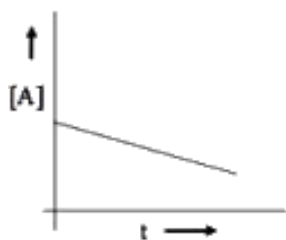
A.



B.



C.



D.

Answer: D



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20. Which of the following is an intensive property ?

- A. Volume
- B. Enthalpy
- C. Surface tension
- D. Free energy

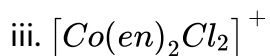
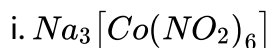
Answer: C

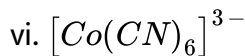
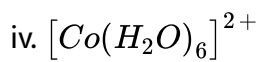


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21. In the following compounds, the count of complexes having cobalt in

+3 oxidation state is:





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22. In Magnesium bismuthide, oxidation number of bismuth is (Bi)_____.

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23. Identify the elements given below, the total number of actinoids is _____.

Ce, Eu, Th, No, Pa, Pu, Tm

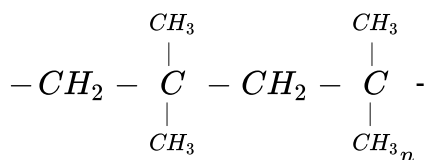
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24. An organic compound 'x' (C_4H_9Cl) on Wurtz reaction gives a hydrocarbon which on monochlorination gives only one chloroderivative.

The number of methyl groups in 'X' is:

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25. How many carbon atoms are present in a monomeric unit of the following polymer ?



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26. How many of the following can displace copper from its salt solution ?

Zn, Fe, Pb, Ni, Ag, Au

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27. The number of elements from the following which exhibit(s) variable oxidation numbers is ____.

Be, B, C, Na, F, Cl, Al, H, Li, O

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28. A 1000 g toothpaste sample has 200 mg fluoride ion concentration.

What is the concentration of F^- in ppm ?

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29. 6.40 g of unknown gas at STP occupies volume of $4.48dm^3$. Its molar mass is.....g mol^{-1}

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30. Equal weights of ethane and hydrogen are mixed in an empty container at $25^\circ C$. If the total pressure is 16 atm, then the pressure exerted by hydrogen gas is _____ atm

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