

Dear student following is Tough level [●●●○○] test paper. Any 15 correct attempts in 25 minutes would be a satisfactory performance. Many questions have narrow difference among choices be careful.

**SINGLE OPTION CORRECT :**

- Q.1** During qualitative test of nitrate radical, a brown ring is formed. The ring formed is due to the formation of :  
 (A)  $\text{FeSO}_4\text{NO}$  (B)  $(\text{FeSO}_4)_2\text{NO}$   
 (C)  $\text{FeSO}_4(\text{NO})_2$  (D)  $[\text{Fe}(\text{H}_2\text{O})_5\text{NO}] \text{SO}_4$
- Q.2** Evolution of deep red vapours, when an inorganic salt is mixed with powdered  $\text{K}_2\text{Cr}_2\text{O}_7$  and heated with conc.  $\text{H}_2\text{SO}_4$ , indicates the presence of :  
 (A)  $\text{Cl}^-$  (B)  $\text{F}^-$   
 (C)  $\text{BO}_3^{3-}$  (D)  $\text{PO}_4^{3-}$
- Q.3** Which of the following salts is/are not decomposed by dilute or conc.  $\text{H}_2\text{SO}_4$  ?  
 (A)  $\text{Na}_2\text{SO}_3$  (B)  $\text{NaCl}$   
 (C)  $\text{Na}_2\text{SO}_4$  (D)  $(\text{CH}_3\text{COO})_2\text{Ca}$
- Q.4** Which of the following salts will turn water coloured when fumes evolved on treatment with conc.  $\text{H}_2\text{SO}_4$  are passed in water ?  
 (A) Nitrate (B) Bromide  
 (C) Both (D) None
- Q.5** Starch iodide paper is used to test the presence of :  
 (A) Iodine (B) Iodide ion  
 (C) Oxidising agent (D) Reducing agent
- Q.6** In which of the following tests,  $\text{Cl}^-$  ion is tested by observing the colour of a precipitate which does not contain  $\text{Cl}^-$  ions at all ?  
 (A) Chromyl chloride test  
 (B) Lassaigne's test  
 (C) Silver mirror test  
 (D) Fehling solution test
- Q.7** For the test of halides, the sodium carbonate extract is acidified by :  
 (A) dil.  $\text{H}_2\text{SO}_4$  (B) dil.  $\text{HNO}_3$   
 (C) dil.  $\text{HCl}$  (D) Any of these
- Q.8** An inorganic mixture, when treated with dil.  $\text{H}_2\text{SO}_4$  produced a gas which turned lead acetate paper black and potassium dichromate paper green. The mixture contains :  
 (A)  $\text{S}^{2-}$  ions (B)  $\text{SO}_3^{2-}$  ions  
 (C)  $\text{NO}_2^-$  ions (D)  $\text{CH}_3\text{COO}^-$  ions
- Q.9** When an iodide salt is treated with conc.  $\text{H}_2\text{SO}_4$ , the product formed is :  
 (A)  $\text{I}_2$  (B)  $\text{HI}$   
 (C)  $\text{IO}_3^-$  (D)  $\text{IO}^-$
- Q.10** An aqueous solution containing acetate ions, gives blood red colour with neutral  $\text{FeCl}_3$ . On boiling, a ppt. is formed. The ppt. is :  
 (A) Ferric acetate  
 (B) Basic ferric acetate  
 (C) Ferric oxide  
 (D) Ferrous acetate
- Q.11** An inorganic mixture is heated with conc.  $\text{H}_2\text{SO}_4$ . The evolved gas burns with blue flame. This is due to the presence of :  
 (A)  $\text{C}_2\text{O}_4^{2-}$  (B)  $\text{Ba}^{2+}$   
 (C)  $\text{Cu}^{2+}$  (D)  $\text{BO}_3^{3-}$
- Q.12** Sodium carbonate extract of an inorganic salt is acidified with  $\text{CH}_3\text{COOH}$  and then added to  $\text{CaCl}_2$  solution. The ppt. obtained decolourised acidified  $\text{KMnO}_4$ . Probable inorganic salt is :  
 (A) A carbonate (B) An oxalate  
 (C) A sulphate (D) A sulphite
- Q.13** An inorganic salt, when treated with conc.  $\text{H}_2\text{SO}_4$ , produced oily drops. The probable salt is :  
 (A) An oxalate (B) A fluoride  
 (C) A nitrite (D) An iodide



- Q.14** An inorganic mixture was treated with excess of dil.  $\text{H}_2\text{SO}_4$ . Effervescences were produced. The solution was heated till effervescences ceased. After this a small pinch of  $\text{MnO}_2$  were added. Fresh effervescences were produced. Select the correct statement/s :
- (A) Mixture contains  $\text{CO}_3^{2-}$  ions  
 (B) Mixture contains  $\text{C}_2\text{O}_4^{2-}$  ions  
 (C) Mixture contains  $\text{SO}_3^{2-}$  ions  
 (D) Mixture contains both  $\text{CO}_3^{2-}$  and  $\text{C}_2\text{O}_4^{2-}$  ions
- Q.15** An inorganic mixture contains  $\text{Ag}^+$  and  $\text{SO}_4^{2-}$  radicals. The suitable reagent to detect  $\text{SO}_4^{2-}$  ion is :
- (A)  $\text{BaCl}_2$  (B)  $\text{Ba}(\text{NO}_3)_2$   
 (C)  $\text{BaSO}_4$  (D)  $\text{BaS}$
- Q.16** Starch + KI paper is turned blue by-
- (A)  $\text{SO}_3^-$  (B)  $\text{SO}_4^{2-}$   
 (C)  $\text{NO}_2^-$  (D)  $\text{NO}_3^-$
- Q.17** A deep brown gas is formed by mixing two colourless gases which are :
- (A)  $\text{NO}_2$  and  $\text{O}_2$  (B)  $\text{N}_2$  and  $\text{NO}$   
 (C)  $\text{NH}_3$  and  $\text{HCl}$  (D)  $\text{NO}$  and  $\text{O}_2$
- Q.18** A salt when heated evolves a coloured gas which bleaches moist litmus paper. The gas is
- (A)  $\text{Cl}_2$  (B)  $\text{Br}_2$   
 (C)  $\text{NO}_2$  (D)  $\text{I}_2$
- Q.19** Iodide can be obtained from  $\text{NaI}$  solution by the action of-
- (A)  $\text{Cl}_2$  (B)  $\text{NO}_2$   
 (C) Soluble  $\text{Cl}^-$  (D) Soluble  $\text{Br}^-$
- Q.20** Solution of a compound X reacts with  $\text{AgNO}_3$  solution to form a white precipitate of Y which dissolves in  $\text{NH}_4\text{OH}$  to give a complex Z. When Z is treated with dil.  $\text{HNO}_3$ , Y reappears. The compound X is-
- (A)  $\text{NaCl}$  (B)  $\text{CH}_3\text{Cl}$   
 (C)  $\text{NaBr}$  (D)  $\text{NaI}$
- Q.21** During chromyl chloride test, the orange red vapours are of-
- (A)  $\text{CrOCl}_2$  (B)  $\text{ClO}_2$   
 (C)  $\text{CrO}_2\text{Cl}_2$  (D)  $\text{Cr}_2\text{OCl}_2$
- Q.22** A white inorganic salt, on heating in a dry test tube turns yellow and on cooling becomes white. The probable salt is :
- (A)  $\text{ZnO}$  (B)  $\text{SnO}_2$   
 (C)  $\text{PbO}_2$  (D)  $\text{Sb}_2\text{O}_3$
- Q.23** A salt having  $\text{BO}_3^{-3}$  on burning with alcohol and conc.  $\text{H}_2\text{SO}_4$  gives ..... edge flame :
- (A) Green (B) Yellow  
 (C) Red (D) White
- Q.24** Aqueous solution of an acetate salt when treated with ferric chloride solution a blood red solution is formed, due to formation of :
- (A)  $\text{Fe}(\text{CNS})_3$  (B)  $(\text{CH}_3\text{COO})_3\text{Fe}$   
 (C)  $(\text{CH}_3\text{COO})_2\text{Fe}$  (D)  $\text{Fe}(\text{OH})_3$
- MORE THAN ONE OPTION CORRECT :**
- Q.25** Which of the following turn/s acidified  $\text{K}_2\text{Cr}_2\text{O}_7$  paper green ?
- (A)  $\text{SO}_2$  (B)  $\text{H}_2\text{S}$   
 (C)  $\text{Br}_2$  (D)  $\text{CO}_2$
- Q.26** Chromyl chloride fails in presence of :
- (A)  $\text{Ag}$  (B)  $\text{Sn}$   
 (C) Iodide (D) None of these.
- Q.27** In layer test of  $\text{I}^-$  ions, the oxidising agent(s) can be :
- (A) Chlorine water (B) Conc.  $\text{HNO}_3$   
 (C) Sodium hypochlorite (D) Chloramine-T
- Q.28** Heating of oxalic acid with conc.  $\text{H}_2\text{SO}_4$  gives
- (A)  $\text{CO}$  (B)  $\text{CO}_2$   
 (C)  $\text{SO}_2$  (D)  $\text{SO}_3$
- Q.29** Lime water is turned milky by-
- (A)  $\text{CO}_2$  (B)  $\text{SO}_2$   
 (C)  $\text{NO}_2$  (D)  $\text{SO}_3$
- Q.30** Which of the following react/s with  $\text{AgCl}$  ?
- (A)  $\text{Na}_2\text{CO}_3$  (B)  $\text{NaNO}_3$   
 (C)  $\text{NH}_4\text{OH}$  (D)  $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$



### CHEMISTRY IIT JEE (CLASS TEST - 10) (INORGANIC) ANSWER KEY

Name : ..... Roll No. : .....

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	21	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	29	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B

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Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	D	A	C	B	C	A	B	A	A	B	A	B	B	D	B
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	A	A	A	C	A	A	B	A,B	A,B,C	A,B,C	A,B	A,B	A,B