

**SAMPLE PAPER- 1**

**Verbal & Non Verbal Reasoning**

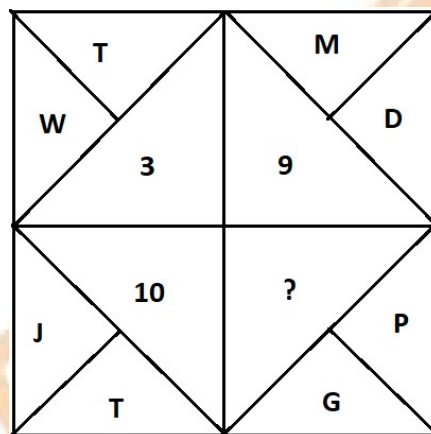
**Q1.** **A** and **B** are brothers .  
**C** and **D** are sisters . A's son is D's brother.  
 How is **B** related to **C** ?

- (a) Father (b) Uncle  
 (c) Brother (d) Grandfather

**Q2.** In some detective coding language , **CALCUTTA** is coded as **GEPGYXXE**  
 then which of the following would be coded as **FSQFCE**

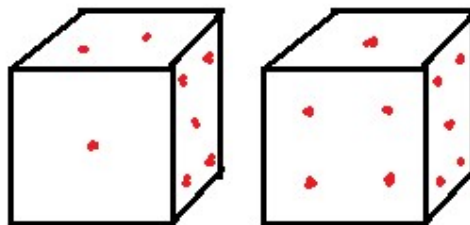
- (a) BOMYAB (b) BOMBYA  
 (c) BOMBAY (d) BOBAMY

**Q3.** Find the missing number in the given figure :



- (a) 5  
 (b) 9  
 (c) 11  
 (d) 13

**Q4.** Two positions of a dice are shown here .  
 How many dots are there on the face opposite to the face with four dots ?

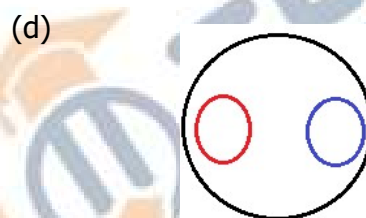
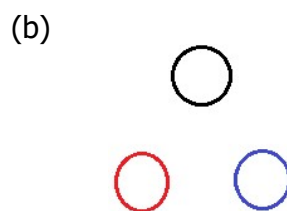
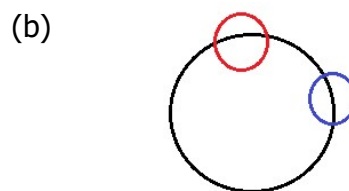
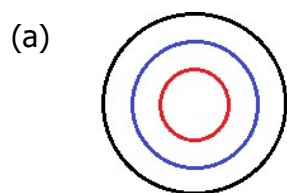


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(a) 2  
(c) 5

(b) 3  
(d) 6

**Q5.** Which of the following Venn diagrams best represents the relationship amongst "Petals , Bouquet , Flower" ?



**Case Based Study**

**Direction :** Read the attached passage & answer the question Q6



Fig.(1) Egg dipping into HCl



Fig.(2) Bubbles comes out



Fig.(3) Bubbles makes dense effervescences

## SAMPLE PAPER- 1

to Q7

Henry did an experiment with *muriatic acid* & *whole Egg*.

Fig.(1) He dipped the whole-Egg in a beaker filled with muriatic acid.

Fig(2) Bubbles come out slowly initially and later it formed dense effervescences.

Fig(3) Effervescences can be seen at the mouth of the Beaker.

Answer the following Questions

**Q6. Chemical formula of Muriatic Acid**

- (a)  $H_2SO_4$   
(c)  $H_3PO_3$

- (b)  $C_2H_5COOH$   
(D)  $HCl$

**Q7. What is the Reason of dense effervescences**

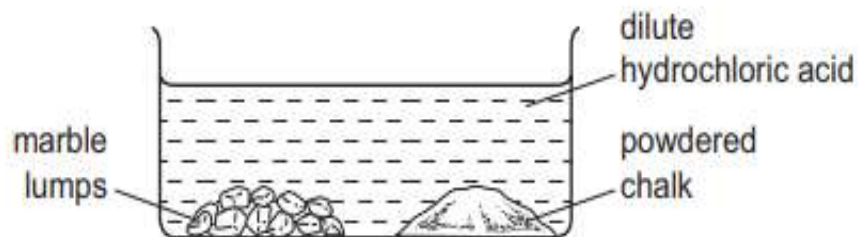
- (a) Ammonia is produced as a gas which bubbles out  
(b) Carbon di oxide gas is produced which bubbles out  
(c) Hydrogen gas is produced which bubbles out  
(d) Bubbles is due to oxygen attached with the Eggs Shell

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**Multiple Choice Question [MCQ]**

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**Q8.** Marble and chalk are two forms of calcium carbonate.



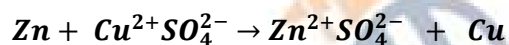
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The diagram shows equal masses of lumps of marble and powdered chalk placed in dilute hydrochloric acid.

Why marble takes more time than chalk to dissolve in acid.

- (a) Marble is more reactive than chalk.
- (b) Marble is more soluble than chalk.
- (c) The marble has smaller surface area as compared to chalk.
- (d) The marble is more basic.

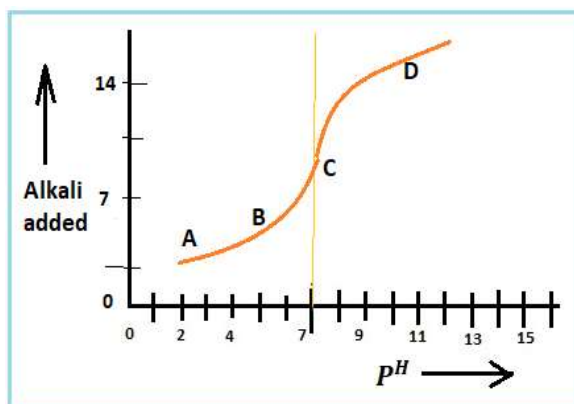
**Q9.** Zinc bar is dipped into Copper Sulphate Solution .



Write the Reducing & Oxidising Agent for the above reaction:

- (a) Zn is Oxidising , Cu is Reducing Agent
- (b) Zn is Oxidising ,  $\text{SO}_4^{2-}$  is Reducing Agent
- (c)  $\text{CuSO}_4$  is Oxidising , Zn is Reducing Agent
- (d) Cu is Oxidising ,  $\text{SO}_4^{2-}$  is Reducing Agent

**Q10.** The graph given below depicts a neutralization reaction



**SAMPLE PAPER- 1**

**Acid+ Alkali → Salt + Water**

The pH of a solution changes as we add excess of alkali to an acid

Which letter denotes the area of the graph where both alkali& salt are present ?

- (a) A (b) B  
(c) C (d) D

**Q11.** **P, Q, R** and **S** are four metals.

**P** reacts rapidly with dilute acid, but it slowly forms bubbles of gas in cold water.

**S** reacts slowly with dilute acid, but it displaces **Q** from an aqueous solution of its salt.

**R** reacts rapidly with cold water.

What is the order of reactivity of the metals ?

	least reactive → most reactive			
<b>A</b>	Q	S	P	R
<b>B</b>	R	P	S	Q
<b>C</b>	R	S	P	Q
<b>D</b>	S	Q	P	R

**Q12.** Diluting acid with water is an exothermic reaction . How will you protect yourself from accidents while diluting a concentrated acid?

- (a) By adding acid to water with constant stirring.  
(b) By adding water to acid with constant stirring.  
(c) By adding water to acid followed by base.  
(d) By adding base to acid with constant stirring.

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**Q13.** The  $P^H$  of the solution is given as :

- (a)  $P^H = \log[H^+] \text{ (aq.)}$
- (b)  $P^H = -\log[H^+] \text{ (aq.)}$
- (c)  $P^H = [H^+] \text{ (aq.)}$
- (d) None of these

**Assertion & Reason**

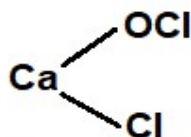
The given below Statement in Assertion(A) is followed by a statement of Reason(R) .

Make the correct choice of that :

- (a) Assertion(A) and Reason(R) are both True and Reason is the Correct Explanation
- (b) Assertion(A) and Reason(R) are both True but the Reason(R) is not the correct explanation.
- (c) Assertion(A) is Correct but Reason(R) is not Correct.
- (d) Assertion(A) is not Correct but Reason(R) is Correct.

**Q14.**

**Assertion :** It is a



mixed salt

**Reason:** It contain two

**Bleaching Powder**

anions

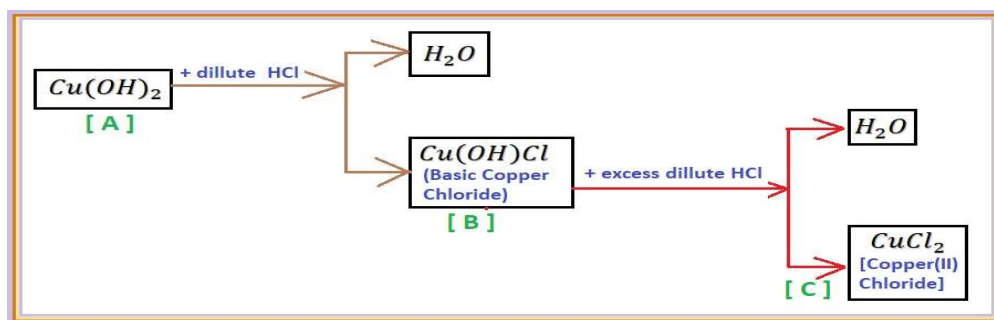
**Q15. Assertion :**  $3Fe + 4H_2O \text{ (steam)} \rightarrow Fe_3O_4 + 4H_2$

the reaction is a balanced chemical equation.

**Reason :** The chemical equation follows the Law of conservation of mass.

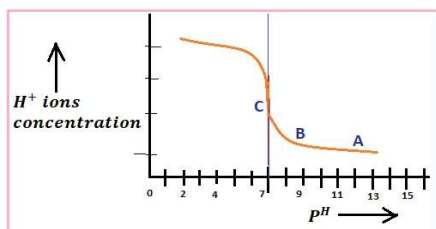
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Achiever's Section

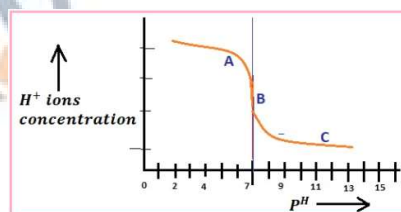


**Q16.** From the above fig., determine the correct graph for  $\text{H}^+$  ions Concentration &  $\text{pH}$

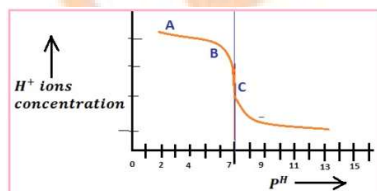
(A)



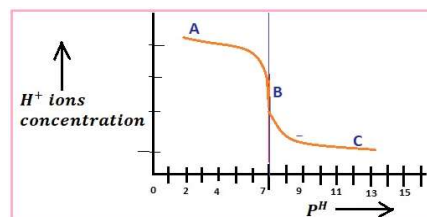
(B)



(C)



(D)



**Q17.** Which reaction is Decomposition Reaction :

- (a)  $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2 \uparrow$
- (b)  $\text{KClO}_3 \xrightarrow{\text{MnO}_2} \text{KCl} + \text{O}_2 \uparrow$
- (c)  $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{HCl}$
- (d)  $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$

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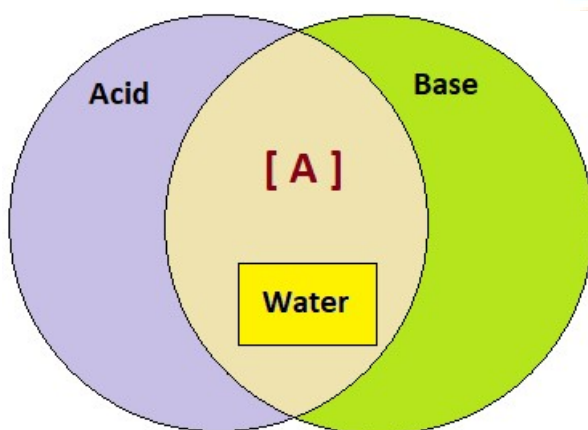
**Q18.** Which metal ion gives a white precipitate with aqueous sodium hydroxide and with aqueous ammonia?

(a)  $Cu^{+2}$

(b)  $Fe^{+2}$

(c)  $Fe^{+3}$

(d)  $Zn^{+2}$



**Direction :** Look at the Venn diagram & answer Q19 & Q20

**Q19.** Select the specific reaction shown in above reaction :

(a) Neutralization reaction

(b) Decomposition

(c) Combination

(d) Half-filled Reaction

**Q20.** What would be the Product [A] in the above Venn diagram.

(a) Alkali

(b) Salt

(c) Base

(d) Acid



**SAMPLE PAPER- 1****KEY : MOCK TEST-01****Verbal & Non Verbal Reasoning**

**Q1: Answer :** (b) Uncle

**Q2: Answer :** (b) BOMBYA

**Q3: Answer :** (b) 9

**Q4: Answer :** (a) 2

**Q5: Answer :** (a)

**Case Based Study**

**Q6.** Answer: (D) HCl

**Q7.** Answer : (b) Carbon di oxide gas is produced which bubbles out

**Multiple Choice Question [MCQ]**

**Q8.** (c) The marble has the smaller surface area.

**Q9.** (c) Cu is Oxidising , Zn is Reducing Agent

**Q10.** (d) D

**Q11. Answer (A)**

**Q12. Answer** (a) By adding acid to water with constant stirring.

**Q13. Answer** (b)  $P^H = -\log[H^+]$  (aq.)

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**Assertion & Reason**

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The given below Statement in Assertion(A) is followed by a statement of Reason(R) .Make the correct choice of that :

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- 

**Q14. Answer :**(a) Assertion(A) and Reason(R) are both True and Reason is the correct explanation of assertion

**Q15. Answer :**(a) Assertion(A) and Reason(R) are both True and Reason is the Correct explanation of assertion

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**Achiever's Section**

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**Q16: Answer (A)**

**Q17: Answer** (b)  $KClO_3 + MnO_2 \rightarrow KCl + MnO_2 + O_2 \uparrow$

**Q18: Answer** (d)  $Zn^{+2}$

**Q19:Answer:** (a) Neutralization reaction

**Q20:Answer:**(b) Salt