Chemistry Practical Class 10 Arranging Zn, Fe, Cu and Al metals in the decreasing order of reactivity Viva Questions with Answers

Q1. Name any two metals that are more reactive than iron.
Answer: Aluminium and zinc are more reactive than iron.

Q2. What happens when copper is added to ferrous sulphate solution?
Answer: No reaction will occur as copper is less reactive than iron.

Q3. What is the colour of copper sulphate solution?
Answer: Copper sulphate solution is blue coloured.

Q4. What is the colour of the aluminium sulphate solution?
Answer: Aluminium sulphate solution is colourless.

Q5. What is the colour of the ferrous sulphate solution?
Answer: Ferrous sulphate solution is green coloured.

Q6. Why did the cuprous sulphate solution colour change when zinc metal was dipped?
Answer: Cuprous sulphate solution colour changed when zinc metal was dipped into it because zinc is more reactive than copper. Zinc displaces copper from copper sulphate and forms zinc sulphate.
$CuSO_4 + Zn \rightarrow ZnSO_4 + Cu$

Q7. What will you observe when copper is added to the ferrous sulphate solution?
Answer: No reaction will occur when copper is added to the ferrous sulphate solution.
$Cu + FeSO_4 \rightarrow$ No Reaction

Q8. Which are the most and the least reactive metal in the above experiment?
Answer: Aluminium is the most reactive, while copper is the least reactive metal in the above experiment.

Q9. Why can we safely preserve ferrous sulphate in a copper vessel, whereas we can not preserve the same in a zinc vessel?
Answer: We can preserve ferrous sulphate in a copper vessel because copper is less reactive than iron. Thus no reaction will take place. But, we can not store ferrous sulphate in a zinc vessel because

zinc is more reactive than iron. Thus, it will displace iron from ferrous sulphate and form zinc sulphate solution.
$FeSO_4 + Cu \rightarrow$ No Reaction

Q10. What does the reactivity series of metals indicate?
Answer: The reactivity series of metals indicates the reactivity of metals in decreasing order.

Q11. Can we store zinc sulphate in an aluminium container? Give a reason for your answer.
Answer: No, we can not store zinc sulphate in an aluminium container because aluminium is more reactive than zinc. Thus, it will displace zinc from zinc sulphate solution and form aluminium sulphate.
$3\ ZnSO_4 + 2\ Al \rightarrow Al_2(SO_4)_3 + 3\ Zn$

Q12. Can we store copper sulphate in an iron container? Give a reason for your answer.
Answer: No, we can not store copper sulphate in an iron container because iron is more reactive than copper. Thus, it will displace copper from copper sulphate solution and form ferrous sulphate.
$CuSO_4 + Fe \rightarrow FeSO_4 + Cu$

Q13. Why is the reactivity of different metals different?
Answer: The reactivity of different metals is different because of the difference in the tendency to lose electrons.