

CHEMISTRY

BOOKS - MAXIMUM PUBLICATION

MODEL PAPER1

Example

1. The element with $1s^2$ $2s^2$ $2p^6$ $3s^2$ $3p^6$ is placed in the group ____ of the periodic table.

A. I
B. 6
C. 8
D. 18
Answer: D
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2. The reaction taking place at the anode of a
zinc copper galvanic cell

A.
$$Zn
ightarrow Zn^{2+} + 2e^-$$

B.
$$Zn^{2\,+}\,+2e^{\,-}\, o Zn$$

C.
$$Cu
ightarrow Cu^{2\,+} + 2e^{\,-}$$

D.
$$Cu^{2+} + 2e^-
ightarrow Cu$$

Answer: B



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3. The metal that liberate hydrogen gas when react with steam is

A. Magnesium
B. Zinc
C. Iron
D. Sodium
Answer: C
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4. The substance used to remove moisture
from ammonia is

A. Vanadium pento	xide
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B. Sulphuric acid

C. Calcium oxide

D. Silicon dioxide

Answer: C



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5. The functional group present in the Compound CH_3-O-CH_3 is_____

- A. Hydroxy
- B. Alkoxy
- C. Methyl
- D. Carboxylic

Answer: B



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6. Calculate the number of molecules In 90g of water.

(Hint -Atomic mass H=1, 0=16)



7. The molecular mass of CO_2 , is 44. Find out the number of molecules in 220g



 CO_2 .

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8. Certain elements are arranged in the order as they appear in the electrochemical series.

Answer the question that follows based on

this Na>Mg>Al>Zn>Cu>Ag

Which of these element is likely to be found in free state in nature?



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9. Certain elements are arranged in the order as they appear in the electrochemical series.

Answer the question that follows based on

this Na>Mg>Al>Zn>Cu>Ag

Which of these metal will produce the stablest compound?

10. Certain elements are arranged in the order as they appear in the electrochemical series.

Answer the question that follows based on

this Na>Mg>Al>Zn>Cu>Ag

Which of these 'metal is produced by reducing its ore with CO?



11. The subshell electron configuration of certain elements are given below. (Symbols are not real)

$$A = [Ar]4s^23d^1$$

$$B=[Ne]3s^1$$

$$C=[Ar]4s^1$$

$$D = [Ne]3s^23p^5$$

Write any characteristic of the element A.



12. The subshell electron configuration of certain elements are given below. (Symbols are not real)

$$A = [Ar]4s^23d^1$$

$$B=[Ne]3s^1$$

$$C=[Ar]4s^1$$

$$D = [Ne]3s^23p^5$$

Which among these belong to the same group?



13. The subshell electron configuration of certain elements are given below. (Symbols are not real)

$$A=[Ar]4s^23d^1$$

 $B = [Ne]3s^1$

$$C=[Ar]4s^1$$

$$D=[Ne]3s^23p^5$$

Which among these belong to the same period?



14. Certain samples are given below.

 $200gH_2$

200gHe

200gCa

Find out the number of moles in each sample.



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15. Certain samples are given below.

 $200gH_2$

200gHe

200gCa

Arrange them in the increasing order of number of molecules.

(Hint Atomic mass of H = 1, He = 4, Ca = 40)



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16. Which substances are used as the anode, cathode and electrolyte when copper is refined by electrolysis.



17. It is said that electrolytic refining of copper is economic. Why?



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18. There are compounds with same molecular formula but different structural formula.

Write two compounds with different structural formula and the molecular formula $C_3H_8O_{\cdot}$



19. There are compounds with same molecular formula but different structural formula.

By what name these compounds are known?



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20. The chemical reactions taking place inside blast furnance during the manufacture. of liron is given b6low. Analyse it and answer the questions given below.

$$CaCO_3(s)
ightarrow CaO(s) + CO_2(g)$$

 $CaO(s) + SiO_2(s)
ightarrow CaSiO_3(s)$

 $C(s) + O_2(g) o CO_2(g)$ +Heat

CO(g) + C(s)+Heat ightarrow 2CO(g)

 $Fe_2O_3(s) + 3CO(g)
ightarrow 2Fe(s) + 3CO_2(g)$

Write the chemical formula of the ore of iron.



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21. The chemical reactions taking place inside blast furnance during the manufacture. of !iron is given b6low. Analyse it and answer the questions given below.

$$CaCO_3(s)
ightarrow CaO(s) + CO_2(g)$$

$$CaO(s) + SiO_2(s)
ightarrow CaSiO_3(s)$$

$$C(s) + O_2(g) o CO_2(g)$$
+Heat

$$CO(g) + C(s)$$
+Heat $ightarrow 2CO(g)$

$$Fe_2O_3(s)+3CO(g)
ightarrow 2Fe(s)+3CO_2(g)$$

Which compound is the actual reducing agent in the reaction?



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22. The chemical reactions taking place inside blast furnance during the manufacture. of iron is given below. Analyse it and answer the questions given below.

$$CaCO_3(s)
ightarrow CaO(s) + CO_2(g)$$

$$CaO(s) + SiO_2(s)
ightarrow CaSiO_3(s)$$

$$C(s) + O_2(g) o CO_2(g)$$
+Heat

$$CO(g) + C(s)$$
+Heat $ightarrow 2CO(g)$

 $Fe_2O_3(s) + 3CO(g) \rightarrow 2Fe(s) + 3CO_2(g)$



23. Sulphuric acid is known as 'the king of chemicals'.

What is the basis for this?



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24. How concentrated sulphuric acid is diluted in the laboratory?



25. The wooden cupboards in which concentrated sulphuric acid is often seen charred. Why?



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26. How do galvanic cells and electrolytic cells differ each other?



27. Write any two practical uses of electrolysis.

