

## “UTSAAH” Test Series

### 10<sup>th</sup> TOPIC – Chemical Equations & Reactions

#### Science 10<sup>th</sup> Answer Keys Paper on 10.09.2022

- A substance which oxidises itself and reduces other is known as -  
(a) oxidising agent **(b) reducing agent**  
(c) both of these (d) none of these
- When hydrogen sulphide gas is passed through a blue solution of copper sulphate, a black precipitate of copper sulphide is obtained and the sulphuric acid so formed remains in the solution. The reaction is an example of-  
(a) a combination reaction  
(b) a displacement reaction  
(c) a decomposition reaction  
**(d) a double decomposition reaction**
- Which of the following is a physical change?  
(a) Formation of curd from milk  
(b) Ripening of fruits  
**(c) Getting salt from sea water**  
(d) Burning of wood
- What happens when copper rod is dipped in iron sulphate solution?  
(a) Copper displaces iron  
(b) Blue colour of copper sulphate solution is obtained  
**(c) No reaction takes place**  
(d) Reaction is exothermic
- White silver chloride in sunlight turns to-  
**(a) grey** (b) yellow  
(c) remain white (d) red
- balanced chemical equation is in accordance with-  
(a) Avogadro's law  
(b) law of multiple proportion  
**(c) law of conservation of mass**  
(d) law of gaseous volumes
- Black and white photography uses-  
(a) decomposition of silver chloride  
**(b) decomposition of silver bromide**  
(c) both  
(d) none of these
- When copper powder is heated it gets coated with-  
**(a) black copper oxide** (b) yellow copper oxide  
(c) red copper oxide (d) None of these
- Combination of phosphorus and oxygen is an example of -  
**(a) oxidation** (b) reduction

(c) rancidity (d) None of these

10. A reddish brown coloured metal used in electric wires, when powdered and heated strongly in an open China dish, its colour turns black. When hydrogen gas is passed over this black substance, it regains its original colour. Based on this information, the metal and black coloured substances are

(a) copper and copper nitrate

(b) silver and silver oxide

**(c) copper and copper oxide**

(d) aluminium and aluminium oxide

11. A complete chemical equation represents the reactants, products and their physical states symbolically.

(a) True (b) False

12. The reaction of nitrogen and hydrogen gives ammonia. This is an example of a decomposition reaction.

(a) True (b) False

13. Oxidation is the loss of electrons from a substance.

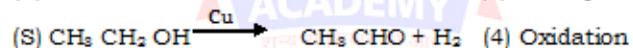
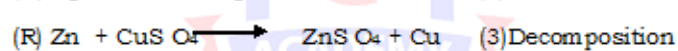
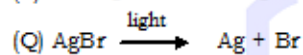
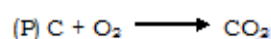
(a) True (b) False

14. Action of heat on ferrous sulphate is an example of decomposition reaction.

(a) True (b) False

15. Match the Column I & Column II

**Column I**



**Column II**

(1) Displacement

(2) Combination

(3) Decomposition

(4) Oxidation

(a) P-3, Q-2, R-4, S-1

**(b) P-2, Q-3, R-1, S-4**

(c) P-2, Q-1, R-3, S-4

(d) P-1, Q-3, R-2, S-4

**DIRECTION Q. No. 16 to 18 :** Each of these questions contains an Assertion followed by Reason. Read them carefully and answer the question on the basis of following options. You have to select the one that best describes the two statements.

(a) If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

(c) If Assertion is correct but Reason is incorrect.

(d) If Assertion is incorrect but Reason is correct

**16. Assertion (A) :** Sodium metal is stored under Kerosene.

**Reason (R) :** Metallic sodium melts when exposed to air.

Answer C

**17. Assertion (A) :** To dilute sulphuric acid, acid is added to water and not water to acid.

**Reason (R) :** Specific heat of water is quite large

Answer A

**18. Assertion(A) :** Brown fumes are produced when lead nitrate is heated.

**Reason (R) :** Nitrogen dioxide gas is produced as a by product due to the decomposition of lead nitrate.

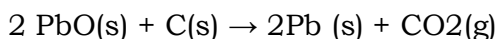
Answer A

19.  $CuO + H_2 \longrightarrow H_2O + Cu$ , reaction is an example of -

**(a) redox reaction** (b) synthesis reaction

(c) neutralisation (d) analysis reaction

20. Which of the statements about the reaction below are incorrect?



- (a) Lead is getting reduced.
- (b) Carbon dioxide is getting oxidised.
- (c) Carbon is getting oxidised.
- (d) Lead oxide is getting reduced.

- (i) (a) and (b)
- (ii) (a) and (c)
- (iii) (a), (b) and (c)
- (iv) All

21. Sodium and chlorine are reacted and as a result, sodium chloride is formed which is also called table salt. What option gives the reactants and products of the reaction?

- (a) reactants-sodium; products- chlorine
- (b) reactants-sodium and table salt; products- chlorine
- (c) reactants-table salt; products- sodium and chlorine

**(d) reactants-sodium and chlorine; products- sodium chloride**

22. A student adds lead and silver to two different test tubes containing an equal amount of copper sulphate solution. The student observes that the color of the solution in the test tube with lead changes. What explains the change in the colour of the solution?

- (a) A displacement reaction takes place as lead replaces copper from the solution.
- (b) A combination reaction takes place as lead combines with sulphate in the solution.
- (c) decomposition reaction takes place as copper dissociates from sulphate in the solution.
- (d) A double displacement reaction takes place as copper dissociates from sulphate

and lead combines with sulphate in the solution.

23. A student learns that food companies fill bags of chips with nitrogen gas. What is the purpose packing it with nitrogen?

**(a) it prevents rancidity of chips**

- (b) it keeps the mosquitoes away from chips
- (c) it keeps the chips dry if the pack falls in water
- (d) prevents chips from spilling out when the pack is opened

24. A student notices that the bread kept out has a green coloured coating over it after a few days. What explains the reason for the student's observation?

**(a) the oils in the bread oxidises and causes rancidity**

- (b) bread comes in contact with atmospheric moisture and corrodes
- (c) the oils in the bread reduces and cause the change in the colour of the bread
- (d) comes in contact with the atmospheric nitrogen and a layer deposit over it

25. A student notices that her silver jewellery turned dull and had a gray-black film over it after wearing for a few months. What results in the change in colour of the silver metal?

- (a) dust deposits over the jewellery which changes its colour
- (b) the jewellery comes in contact with air, moisture, and acids and corrodes**
- (c) the polish over the jewellery was removed after wearing for a few months
- (d) silver breaks due to wear and tear and turns its colour changes due to rusting



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