



विद्या सर्वार्थ साधिका

ANANDALAYA

PERIODIC TEST – 1

Class : X

Subject: Science

Date: 20/07/2019

M.M : 40

Time : 2 Hours

General Instructions:

1. Question paper consists of two sections A and B.
2. Section B consists of Multiple Choice Questions.
3. You have to attempt both the sections separately.

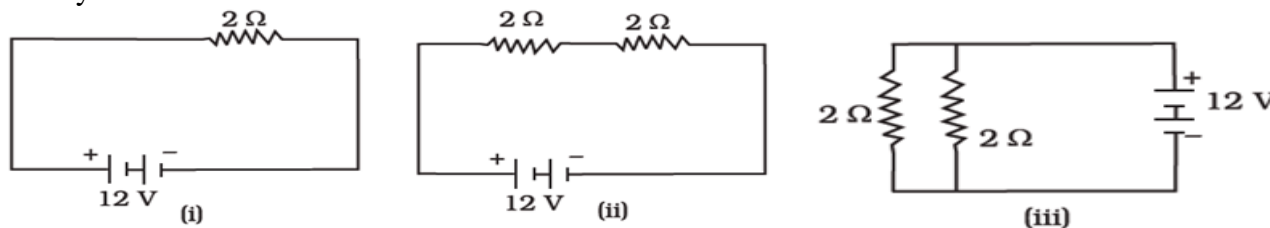
SECTION A

1. A wire of resistance 20Ω is bent to form a closed square. What is the resistance across a diagonal of the square? (1)
2. Write a balanced chemical equation for the chemical decomposition of copper carbonate.. (1)
3. Name the following: (1)
 - (a) The blood vessel that brings oxygenated blood to the human heart.
 - (b) The chamber of the heart that receives deoxygenated blood.
4. (a) Define 1 volt. Express it in terms of SI unit of work and charge. (3)
 - (b) In a given voltmeter, a student sees that needle indicates 17 divisions in voltmeter while performing an experiment to verify Ohm's law. If voltmeter has 10 divisions between 0 and 0.5V, then what is the value corresponding to 17 divisions?
5. (a) An electric bulb rated 60W at 220V. Calculate its resistance and the capacity of the fuse that should be used for the bulb. (3)
 - (b) Though same current flows through the electric line wires and the filament of bulb, yet only the filament glows. Why?
6. (a) How will you show that iron is more reactive than copper? (3)
 - (b) Give two differences between displacement and double displacement reaction.
7. (a) Identify the reducing agent in the following reactions. (3)
 - (i) $4\text{NH}_3 + 5\text{O}_2 \rightarrow 4\text{NO} + 6\text{H}_2\text{O}$
 - (ii) $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$
 - (b) When copper metal corrodes, a green deposit is formed on its surface. What is the chemical name and chemical formula of this green deposit?
8. What will happen if (3)
 - (a) Trachea is noncartilaginous in our respiratory system.
 - (b) Gall bladder is surgically removed in patients.
 - (c) Aorta is blocked due to the deposition of cholesterol.

9. Write scientific reasons for the given statements: (3)
- The absorption of digested food mainly occurs in small intestine.
 - It is necessary to separate oxygenated blood and deoxygenated blood in mammals and birds.
 - The rate of breathing is much faster in aquatic organisms than terrestrial organisms.
10. (a) State Ohm's law. Write necessary condition for its validity. (5)
- How is this law verified experimentally?
 - What will be the nature of graph between potential difference and current for a conductor?
 - Name the physical quantity that can be obtained from this graph.
11. Translate the following statements into chemical equations and balance them :- (5)
- Sodium chloride reacts with silver nitrate to give sodium nitrate and a precipitate of silver chloride.
 - Hydrogen gas combines with nitrogen to form ammonia.
 - Zinc carbonate decomposes to give zinc oxide and carbon dioxide.
 - Ammonia gas reacts with water to give ammonium hydroxide.
 - Copper (II) oxide on heating with hydrogen gas gives copper and water.
12. (a) Draw the human digestive system starting from the food pipe to small intestine and label all the parts. (5)
- Explain the process of digestion in the stomach.

SECTION B

13. In the following circuits, heat produced in the resistor or combination of resistors connected to a 12V battery will be: (1)



- same in all the case.
 - maximum in case (i)
 - maximum in case (ii)
 - maximum in case (iii)
14. The products obtained by the heating of ferrous sulphate are (1)
- SO_2, FeO
 - $\text{SO}_3, \text{SO}_2, \text{Fe}_2\text{O}_3$
 - $\text{SO}_3, \text{SO}_2, \text{FeO}$
 - $\text{SO}_3, \text{Fe}_2\text{O}_3$
15. In an experiment on photosynthesis, students selected and covered a portion of four different leaves of a de-starched potted plant with red, green, blue and black strip separately. When the starch test was done on these leaves after 4 hours, the result showed no starch in (1)
- the portion covered with red, green and blue strips.
 - the portion covered with green strip.
 - the portion covered with black and blue strips.
 - any of the covered portions.
16. The mounting medium used in slide preparation of temporary mount of leaf peel is (1)
- Iodine
 - Water
 - KOH
 - Alcohol