

SMARTKIDZ TUTORIALS - GOA
FIRST FORMATIVE TEST AUGUST 2022
STD X SUB: SCIENCE

MARKS 20

A. Under each statement, **FOUR** alternatives a, b, c and d are given. Select the most appropriate alternative and write the capital letters against the numerical: **10 mks**

1. The following reaction is an example of a
$$4\text{NH}_3(\text{g}) + 5\text{O}_2(\text{g}) \rightarrow 4\text{NO}(\text{g}) + 6\text{H}_2\text{O}(\text{g})$$
 - (i) displacement reaction
 - (ii) combination reaction
 - (iii) redox reaction
 - (iv) neutralization reaction
 - (a) (i) and (iv)
 - (b) (ii) and (iii)
 - (c) (i) and (iii)
 - (d) (iii) and (iv)
2. Electrical impulse travels in a neuron from
 - (a) Dendrite \rightarrow axon \rightarrow axonal end \rightarrow cell body
 - (b) Cell body \rightarrow dendrite \rightarrow axon \rightarrow axonal end
 - (c) Dendrite \rightarrow cell body \rightarrow axon \rightarrow axonal end
 - (d) Axonal end \rightarrow axon \rightarrow cell body \rightarrow dendrite
3. Electrical resistivity of a given metallic wire depends upon
 - (a) its length
 - (b) its thickness
 - (c) its shape
 - (d) nature of the material
4. Which of the following is a non-renewable source of energy?
 - (a) Wood
 - (b) Sun
 - (c) Fossil fuels
 - (d) Wind

5. The major problem in harnessing nuclear energy is how to
 - (a) split nuclei?
 - (b) sustain the reaction?
 - (c) dispose off spent fuel safely?
 - (d) convert nuclear energy into electrical energy?
6. An electric kettle consumes 1 kW of electric power when operated at 220 V. A fuse wire of what rating must be used for it?
 - (a) 1 A
 - (b) 2 A
 - (c) 4 A
 - (d) 5 A
7. Which of the following is not associated with growth of plant?
 - (a) Auxin
 - (b) Gibberellins
 - (c) Cytokinins
 - (d) Absciscic acid
8. Which among the following statement(s) is(are) true? Exposure of silver chloride to sunlight for a long duration turns grey due to
 - (i) the formation of silver by decomposition of silver chloride
 - (ii) sublimation of silver chloride
 - (iii) decomposition of chlorine gas from silver chloride
 - (iv) oxidation of silver chloride
 - (a) (i) only
 - (b) (i) and (iii)
 - (c) (ii) and (iii)
 - (d) (iv) only
9. Select the mis-matched pair
 - (a) Adrenaline: Pituitary gland
 - (b) Testosterone: Testes
 - (c) Estrogen: Ovary
 - (d) Thyroxin: Thyroid gland
10. Which of the following is not an involuntary action?
 - (a) Vomiting
 - (b) Salivation
 - (c) Heart beat
 - (d) Chewing

B. Answer the following:

11. Define a neuron. **1mk**

12. Draw a circuit diagram of an electric circuit containing a cell, a key, an ammeter, a resistor of $2\ \Omega$ in series with a combination of two resistors ($4\ \Omega$ each) in parallel and a voltmeter across the parallel combination. State the Ohm's law. **3mks**

13. Write a balanced chemical equation for each of the following reactions **2mks**

i) Hydrogen sulphide gas reacts with oxygen gas to form solid sulphur and liquid water.

ii) $\text{TiCl}_4(\text{l}) + \text{Mg}(\text{s}) \rightarrow \text{Ti}(\text{s}) + \text{MgCl}_2(\text{s})$

14. Mention any two limitations in using solar energy. What is biomass? **2mks**

15. Define 1 Volt. **1mk**

16. What is rancidity? **1mk**