10th International Olympiad *of* Science 2018

Presented by:
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CLASS 10th SYLLABUS & SAMPLE QUESTIONS

Chemical Reactions; Acids, Bases and Salts; Metals and Non-Metals; Carbon and Its Compounds; Periodic Classification of Elements; Life Processes; Reproduction; Control and Coordination; Heredity and Evolution; Light and Human Eye; Electricity and Magnetic Effects of Electric Current; Sources of Energy; Natural Resources; Our Environment; Mental Aaptitude and Reasoning.

The Actual Question Paper Contains 50 Questions. The Duration of the Test Paper is 60 Minutes.

1. **Which mode of reproduction has been shown in the following figure?**
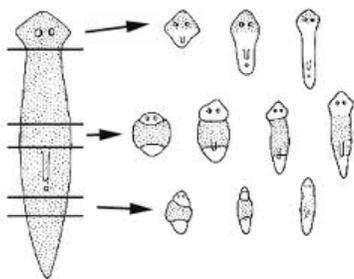
    (A) Asexual mode of reproduction
    (B) Sexual mode of reproduction
    (C) Parthenogenesis
    (D) All of these
    (E) None of these

2. **If 100 J of energy is available at the producer level, calculate the amount of energy available to hawk in the following food chain.**
    Green plants $\rightarrow$ Grasshopper $\rightarrow$ Frog $\rightarrow$ Snake $\rightarrow$ Hawk
    (A) 0.1 J   (B) 0.01 J
    (C) 10 J   (D) 10000 J
    (E) None of these

3. **Examine the graph and calculate the resistance of the coil at the point Q.**
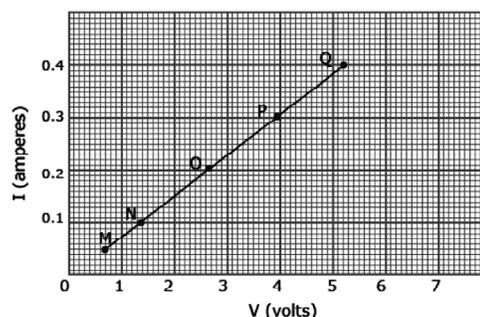
    (A) 12 Ohms
    (B) 5.2 Ohms
    (C) 13 Ohms
    (D) 0.4 Ohms
    (E) None of these

4. **pH values of four solutions A, B, C and D are 7, 8, 9, 10 respectively. Put them in a sequence according to their nature.**
    (A) Acidic, acidic, neutral, basic
    (B) Acidic, neutral, basic, basic
    (C) Acidic, acidic, acidic, neutral
    (D) Neutral, basic, basic, basic
    (E) None of these

5. Name the hydrocarbon given below.

$$H-\overset{\overset{\displaystyle H}{|}}{\underset{\underset{\displaystyle H}{|}}{C}}-C\equiv C-H$$
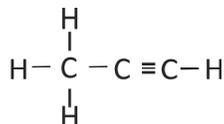
(A) Propanal (B) Propene
(C) Propyne (D) Propanoic acid
(E) None of these

6. On which one of the following factors the strength of an electromagnet depends?
(A) The number of turns in the coil
(B) The current flowing in the coil
(C) The length of air gap between its poles
(D) All of these
(E) None of these

7. There is a device in the motor which is used to reverse the direction of current in the coil of a motor. What is the name of this device?
(A) Commutator (B) Magnetic field
(C) Armature (D) All of these
(E) None of these

8. What are the end products of the anaerobic respiration that the yeast perform?
(A) Carbon dioxide, water and energy
(B) Alcohol, carbon dioxide and energy
(C) Lactic acid, carbon dioxide, and energy
(D) Alcohol, water and energy
(E) None of these

9. The steps involved in making a slide of epidermal peel of leaf are given as follows:
I. pull out a thin peel from the lower surface of the leaf.
II. place a drop of glycerine on the slide.
III. stain the peel in safranin.
IV. place the stained peel of the glycerine.
V. remove the extra stain by washing with water.
VI. place the cover slip over the peel.
Which one is the correct sequence of steps to be followed?
(A) I, II, III, IV, V, VI (B) I, III, V, II, IV, VI
(C) I, III, IV, II, V, VI (D) I, II, IV, III, V, VI
(E) None of these

10. Examine the given circuit and calculate the total current flowing in the circuit.
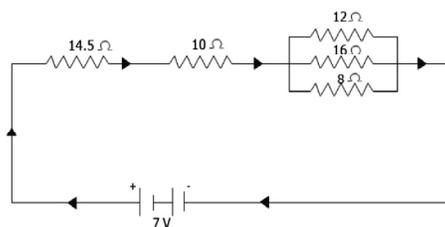
(A) 28 ampere
(B) 4 ampere
(C) 0.25 ampere
(D) 3.7 ampere
(E) None of these

ANSWERS									
1. (A)	2. (B)	3. (C)	4. (D)	5. (C)	6. (D)	7. (A)	8. (B)	9. (B)	10. (C)