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Class 10th | **Syllabus & Sample Questions**

Chemical reactions and Equations, Acids, Bases and Salts, Metals and Non-metals, Carbon and its Compounds, Periodic Classification of elements, Life Processes, Control and Coordination, Reproduction, Heredity and Evolution, Light - Reflection and refraction, Electricity, Magnetic Effects of Electric current, Sources of Energy, Our Environment, Natural Resources, Analogy, Blood relation, Classification, Coding Decoding, Direction Test , Letter Series, Mixed series , Non verbal ,Number series & syllogism.

The actual question paper contains 40 questions. The duration of the test paper is 60 minutes.

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1. Which one of the following sex chromosome is responsible for male child?

   (A) ☐ XX
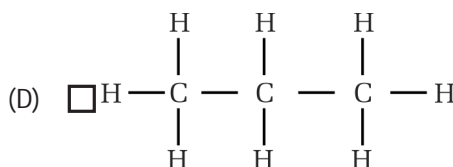   (B) ☐ XY
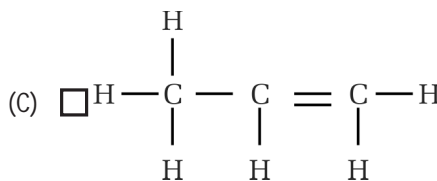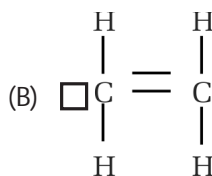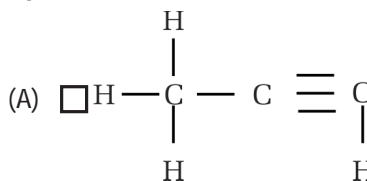   (C) ☐ YY
   (D) ☐ All of these
   (E) ☐ None of these

2. Which one of the following is the balanced equation?

   (A) ☐ $2NH_3 \rightarrow N_2 + H_2$
   (B) ☐ $NH_3 \rightarrow N_2 + 3H_2$
   (C) ☐ $2NH_3 \rightarrow 1/2N_2 + 3H_2$
   (D) ☐ $2NH_3 \rightarrow N_2 + 3H_2$
   (E) ☐ None of these

3. A current of 0.896 A is flowing when the battery is connected in series with resistors of 0.2 ohm, 0.3 ohm, 0.4 ohm, 0.5 ohm and 12 ohm. Find the potential difference produced by the battery.

   (A) ☐ 10 V   (B) ☐ 15 V
   (C) ☐ 12 V   (D) ☐ 20 V
   (E) ☐ None of these

4. Which one of the following is a saturated hydrocarbon?

   (A) ☐
   (B) ☐
   (C) ☐
   (D) ☐
   (E) ☐ None of these

5. A cross between two individuals results in a ratio of 9:3:3:1 for four possible phenotypes of progeny. This is an example of:

(A) ☐ Monohybrid Cross

(B) ☐ Dihybrid Cross

(C) ☐ Test Cross

(D) ☐ Second Generation Cross

(E) ☐ None of these

6. If P(n) denotes the number of prime numbers less than n, then find the value of P(P(P(35))), considering 1 as not a prime number.

(A) ☐ 0   (B) ☐ 1

(C) ☐ 2   (D) ☐ 3

(E) ☐ None of these

7. If the roots of the equation $ax^2 + bx + b = 0$ are in the ratio m : n, then the value of $\sqrt{\dfrac{m}{n}} + \sqrt{\dfrac{n}{m}} + \sqrt{\dfrac{b}{a}}$ is equal to:

(A) ☐ 0   (B) ☐ 1

(C) ☐ 2   (D) ☐ 4

(E) ☐ None of these

8. Sum of all two digit numbers which when divided by 4 yield unity as remainder is:

(A) ☐ 1200   (B) ☐ 1210

(C) ☐ 1250   (D) ☐ 1280

(E) ☐ None of these

9. A chord of a circle of radius 14 cm makes a right angle at the centre. Find the area of the major segment of the circle.

(A) ☐ 590 cm2   (B) ☐ 560 cm2

(C) ☐ 595 cm3   (D) ☐ 995 cm2

(E) ☐ None of these

10. The value of $\dfrac{\sin^2 45° + \cos^2 45°}{\sin^2 30°}$ is:

(A) ☐ $\dfrac{1}{2}$ (B) ☐ $\dfrac{1}{4}$

(C) ☐ 4   (D) ☐ 1

(E) ☐ None of these

11. What comes in place of the blank space to complete the series?

T÷6P 5BA+ 3Y-H Dx82

(A) ☐ 4TB

(B) ☐ CN÷

(C) ☐ +EL6

(D) ☐ V+7

(E) ☐ None of these

12. In this question, two statements followed by two conclusions, numbered I and II, are given. You have to take the two given statements as 'true' even if they seem to be at variance from commonly known facts and then decide which one of the conclusions logically follows from the two given statements.

Statements:
I. All planes are birds.
II. All birds are clouds.
Conclusions:
I. Some planes are clouds.
II. Some clouds are birds.

(A) ☐ Only I follows

(B) ☐ Only II follows

(C) ☐ Neither I nor II follows

(D) ☐ Both I and II follow

(E) ☐ None of these

Answers

1. (B)	2. (D)	3. (C)	4. (D)	5. (B)	6. (C)
7. (A)	8. (B)	9. (B)	10. (C)	11. (C)	12. (D)