

## SECOND PERIODIC TEST 2019-20

Sub: Science

CLASS X

Time: 90

M M: 40

### General Instruction:

1 – question

Section A: Questions carrying 1 marks each.

Section B: Questions carrying 2 marks each

Section : Questions carrying 3 marks each.

Séction : Questions carrying 5 marks each.

### Section A

1 – Write one Metal and one Non Metal , Which is liquid at room temperature.

2 – What is Ph range of acid ?

3 – Balance  $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$

4 - What will happen if platelets were absent in the blood?

5 - Define reflex action?

6 -What is DNA coping ?state its importance.

### Section B

7 –What do you understand by myopia? How we can correct it ?

8 – Why carbon form millions of compounds in our surroundings?

9 – Show the formation of MgO by transfer of electron and write any two properties of ionic compound.

10 – What is common name of the compound  $\text{CaOCl}_2$  ? How is it prepared, write chemical equation ?

11 -Draw the labelled diagram of nephron

12 -Distinguish between tropic and nastic movement in plants.

### Section C

- 13 – An object 5 cm in length is placed at a distance of 20 cm in front of a convex mirror of radius of curvature 30 cm . Find the position ,size and nature of the image.
- 14– Write one equation each for decomposition reaction where energy is supplied in form of heat, light or electricity.
- 15– write IUPAC name of  $\text{CH}_3\text{COOH}$  and  $\text{C}_2\text{H}_5\text{OH}$  and what happen when they react together in presence of conc  $\text{H}_2\text{SO}_4$  ,write the name of this reaction.
- 16 -How do Mendel's experiments show that traits may be dominant or recessive ?

### Section D

- 17 – Derive the equivalent resistance of parallel and series combination of the three resistance having resistances  $R_1, R_2, R_3$  .
- 18 -(a) Write the function of the following in human female reproductive system;
- (i)Ovary      (ii) Oviduct      (iii) Uterus
- (b) Describe the functions of placenta.
- Or
- (a) What is meant by the unisexual flowers and bisexual flowers ?write two examples of each.
- (b) Describe the process of fertilization in a flower with the help of labeled diagram.

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**SECOND PERIODIC TEST 2019-20**  
**SUBJECT: SCIENCE(MARKING SCHEME)**  
**CLASS X**

1 – Merquery , Bromine	$\frac{1}{2} + \frac{1}{2}$
2 – Less then 7	1
3 - $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2 \text{H}_2\text{O}$	1
4 - In the absence of platelets, the process will be affected.	1
5 - Reflex action is a rapid, automatic response to a stimulus which is not under the voluntary control of the brain.	1
6 - A process where a DNA molecule produces two similar copies of itself in a reproducing cell is called DNA coping.It makes the transmission of characters from parents to the next generation.	1
7 –Myopia- In this defect of vision the affected person can see nearby objects clearly but can not see far objects clearly.This defect can be corrected by using specticals having concave lens.	1+1
9 – Due to Tetra vaiency and Catenation property( Explain also)	1+1
10 – Bleaching Powder, Prepration, Equation	1+1+1
11 - NCERT book	2
12 - Tropic movement – It is directional movement. It occurs slow in plant.	1+1
Nastic movement – It is non- directional movement. It occurs fast in plant	
13 – $u = -20 \text{ cm}$ , $h_1 = 5 \text{ cm}$ , $f = R/2 = 30/2 = 15 \text{ cm}$	
$\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$	1/2
$\frac{1}{15} = \frac{1}{v} - \frac{1}{20}$	1/2

$$v = +60/7 \text{ cm} = 8.5 \text{ cm} \quad 1/2$$

$$m = h_2/h_1 = -v/u \quad 1/2$$

$$h_2/5 = -60/(7 \times -20)$$

$$h_2 = 15/7 = 2.14 \text{ cm} \quad 1/2$$

Nature of image -virtual, erect, smaller than object, formed between focus and pole of the mirror 1/2

14 - Any Decomposition reaction by heat, light or electricity. 1+1+1

15 - Ethanoic Acid, Ethanol, Ester formation, Esterification Reaction  $\frac{1}{2} + \frac{1}{2} + 1 + 1$

16 - When Mendel first crossed pure tall pea plant with pure dwarf pea plants, he found only tall plants were produced in first generation. When f1 tall plant were self-pollinated Mendel got both tall and dwarf plants in f2 generation in 3:1 ratio. 3

17 - **Series combination-**

Diagram-----1

$$V_1 = IR_1, V_2 = IR_2, V_3 = IR_3 \quad 1/2$$

Let the equivalent resistance of series combination is  $R_s$ , then the total voltage is across the series combination is given by

$$V = V_1 + V_2 + V_3 \quad 1/2$$

$$IR_s = IR_1 + IR_2 + IR_3$$

$$R_s = R_1 + R_2 + R_3 \quad 1/2$$

**Parallel combination-**

Diagram-----1

$$I_1=V/R_1, I_2=V/R_2, I_3=V/R_3$$

1/2

Let the equivalent resistance of series combination is  $R_p$ , then the total current is given by

$$I=I_1+I_2+I_3$$

1/2

$$V/R_p = V/R_1 + V/R_2 + V/R_3$$

$$1/R_p = 1/R_1 + 1/R_2 + 1/R_3$$

1/2

18 - (a)(i) Ovary : Production of female gamete and hormones

1

(ii) Oviduct : transfer of female gamete and site of fertilization.

1

(iii) Uterus : Implantation of embryo

1

(b) Placenta is a special disc like tissue, provide a surface area for nutrients to pass from mother's blood to the embryo.

1+1

OR

(a) Unisexual – In some animals, male and female reproductive organs are in different individuals. Such animals are called unisexual. e.g. human, papaya

Bisexual – In some animals, male and female reproductive organs are found in single individual. Such organisms are called bisexual. E.g. earthworm, rose etc.

(b) Male gamete fuses with egg, the process is called syngamy.

Diagram NCERT BOOK