

No. of Printed Pages : 16

Roll No.

Name

I-PRE BOARD EXAMINATION (HS)

2020

[SCIENCE]

(केवल वैज्ञानिक वर्ग तथा व्यावसायिक शिक्षा के परीक्षार्थियों
के लिए)

Time : 3 hours 15 mns.]

[M.M. : 70

Instructions : First 15 minutes are allotted for the
candidates to read the question paper.

[Turn Over

SECTION - A

[PHYSICS]

1. Choose the correct alternative and write down

in your answer book :

a) If image obtained of an object is virtual and

diminished, then used mirror will be :

i) plane

ii) concave

iii) convex

iv) none of these

1

[Turn Over .

b) The focal length of a convex lens is 2 metre.

The power of the lens will be :

i) +0.5 D

ii) +5 D

iii) +50 D

iv) -5 D

1

c) Kilowatt-hour is the unit of :

i) time

ii) electric power

iii) mass

iv) electric energy

1

d) The filament in an electric bulb is of :

i) tungsten

ii) iron

iii) copper

iv) brass

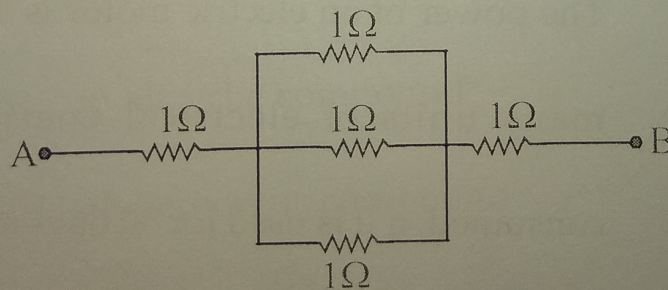
1

2. a) Write the range of vision for a healthy eye. Explain.

2

b) What will be the equivalent resistance between points A and B in the circuit given below.

2



c) What is Fleming's left hand rule?

2

[Turn Over

3. a) What is an electric motor? Describe its working by drawing its labelled diagram. 4

OR

Explain the magnetic field produced due to a current carrying circular loop by experiment. 4

- b) Derive an expression for the equivalent resistance for parallel combination of two resistances. 4

OR

The power of an electric motor is 5 KW. How many units of electrical energy will be consumed, if it is used for 30 days at the rate of 6 hours daily?

4. Explain the structure of human eye with proper diagram. 7

OR

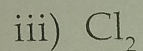
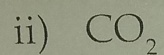
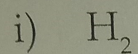
Derive a relation amongst u , v and f for a concave mirror.

SECTION - B
[CHEMISTRY]

5. Choose the most appropriate answer for the following questions :
- a) Benzene is :
- i) an open chain compound
 - ii) an alicyclic compound
 - iii) a heterocyclic compound
 - iv) an aromatic compound 1

[Turn Over

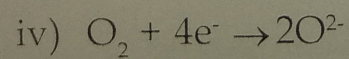
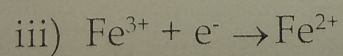
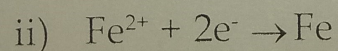
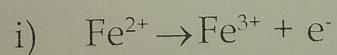
b) The gas evolved on treating calcium carbonate with HCl is :



iv) None of these

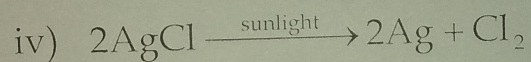
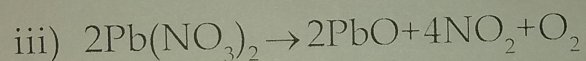
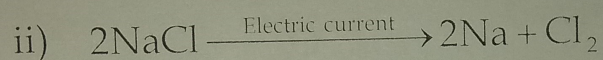
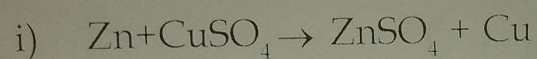
1

c) Which of the following is not a reduction process :

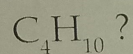


1

6. Mention the type of each of the following reactions :



7. Write all the possible isomers with the formula



2

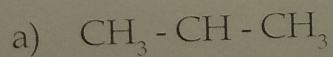
8. Why detergent is superior than soap? Mention

the saponification reaction ?

2

9. Write the IUPAC name of the following :

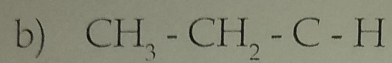
4



[Turn Over

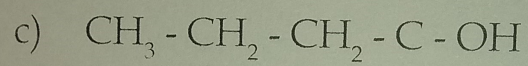
O

||



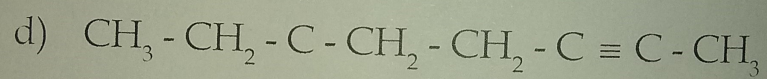
O

||



O

||

**OR**

Define the following:

- Catenation
- Esterification reaction
- Physical change
- Isomerism

8. A) The position of eight elements in the modern periodic table is given below where atomic numbers of elements are given in the parenthesis.

7

Period no.	Group-I	Group-II
2	Li(3)	Be (4)
3	Na(11)	Mg (12)
4	K (19)	Ca(20)
5	Rb(37)	Sr (38)

- Write the electronic configuration of calcium.
- Predict the number of valence electrons in Rubidium.
- What is the number of shells in Sr
- Predict whether potassium (K) is a metal or non-metal.
- Arrange Be, Ca, Mg, Rb in increasing order of the atomic size of their respective atoms.

[Turn Over

[B] Write the number of periods and group in the periodic table.

OR

- a) Draw the electron dot structure of carbon tetrachloride and Ammonia. 7
- b) Write the preparation of Washing soda and mention at least two properties.
- c) Write the balanced equation for the following :
- i) Sodium+water \rightarrow sodium hydroxide
+hydrogen
- ii) Hydrogen +chlorine \rightarrow hydrogen
chloride

SECTION - C

[BIOLOGY]

9. Multiple choice questions :

a) Green pigment is :

i) Chlorophyll

ii) Chloroplast

iii) Xanthophyll

iv) Cantere

1

b) Gas which plays an important role in respiration :

i) CO_2

ii) O_2

iii) N_2

iv) None of these

1

[Turn Over

c) Minute openings present on lower surface of leaves are :

i) Lenticels

ii) Stomata

iii) stoma

iv) none of these

1

d) Which of the gland is related to kidney?

i) Pituitary

ii) Thyroid

iii) Adnenal

iv) Testis

1

10. Very short answer type questions :

a) Define double fertilization. 2

b) Define law of segregation. 2

c) Give any four differences between Asexual and sexual reproduction. 2

11. a) Draw a labelled to show different parts of human excretory or urinary system. 4

OR

Explain different components of an ecosystem with examples.

b) How is sex determined in human ? 4

OR

Draw nitrogen cycle and define the related terms :

Nitrification and denitrification.

[Turn Over

Very long answer type questions :

a) Draw a diagram of female reproductive system and give one function of each of the following : 7

- i) Ovary
- ii) Oviduct
- iii) Uterus
- iv) Vagina

OR

Explain an experiment to show O_2 is evolved during photosynthesis. [Diagram is necessary to Support the answer]
