Practice Question Paper 2019 - 20 (Ist Shift)

Class - X (Physics)

Multiple Choice Questions (1 mark each)

Q.1 For a real object, which of the following can produce a real image ?

(a) Plane mirror (b) Concave mirror

(c) Concave lens (d) Convex mirror

Q.2 Light from the Sun falling on a convex lens will converge at a point called -

(a) centre of curvature (b) radius of curvature

(c) focus (d) optical centre

Q.3 The defect of vision in which the person is able to see distant object distinctly but cannot see nearby objects clearly is called -

(a) Long sightedness (b) Far sightedness

(c) Hypermetropia (d) All above

Q.4 Bi-focal lens are required to correct -

(a) astigmatism (b) coma

(c) myopia (d) presbyopia

Q.5 Two bulbs are connected between two points say A & B in parallel. The physical quantity that will remain the same between the two points is -

(a) current (b) voltage

(c) resistance (d) None of these

Q.6 A device that helps to maintain a potential difference across a conductor is -

(a) cell or battery (b) ammeter

(c) voltmeter (d) key

Very Short Type Questions (2 marks each)

Q.7 What is meant by power of a lens ? Write its formula & S.I. unit.

Q.8 What is the commercial unit of electric energy ? Convert it into joules.

Contd.....2....

Short Type Questons (3 marks each)

Q.9 What is myopia ? Draw a ray diagram to show how it can be corrected using a lens.

Q.10 Define Ohm's law. Write the factors on which resistance of a conductor depends.

Or

Define 1 volt. Calculate the amount of energy consumed in carrying a charge of 1 coulomb through a battery of 3 volt.

Long Type Questons (5 marks each)

Q.11 (a) If the image formed by a lens is diminished in size and erect, for all positions of the object, what type of lens is it ?

(b) Name the point on the lens through which a ray of light passes undeviated.

(c) An object is placed perpendicular to the principal axis of a convex lens of focal length 20 cm. The distance of the object from the lens is 30 cm. Find (i) the position (ii) the magnification & (iii) the nature of the image formed.

Or

(a) State the two laws of reflection of light.

(b) Draw a ray diagram & also state the position, the relative size and the nature of image formed by a concave mirror when the object is placed at the centre of curvature of the mirror.

Q.12. (a) Define electric power. Express it in terms of potential difference V & resistance R.

(b) A torch bulb is rated 2.5 V and 750 mA.

Calculate (i) its power

(ii) its resistance

& (iii) the energy consumed, if this bulb is lighted for 4 hours.

Contd.....3....

Class - X (Chemistry)

Q.1 Given Reaction $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$ is :

(a) Addition Reaction (b) Combustion Reaction

(c) Displacement Reaction (d) None of these

Q.2 Name the source of Citric Acid :

(a) Lemon and Orange (b) Sour Milk

(c) Tomatoes (d) Temarind

Q.3 Cinnabar is a ore of :

(a) Iron (b) Cu

(c) Hg (d) Ag

Q.4 The gas produces when Ethanol reacts with Na

(a) H_2 (b) O_2

(c) CO_2 (d) CH_4

Q.5 What is Rencidity, Mention any two method to prevent it. 2

Q.6 What is a neutralization reaction ? Give one example. 2

Q.7 Why Sodium is kept under kerosene Oil ? 2

Q.8 Explain Esterification Reaction with Example. 2

Q.9 Discuss the cleaning action of Soap. 3

Q.10 Define activity series of Metals. Arrange the metal gold, Copper, Iron and Magnesium in the order of Reactivity. 3

Q.11 What are alloys. List any two properties of Alloys. 3

Q.12 Define the following terms : 3

(a) Corrosion (b) Decomposition reaction

(c) Precipitation Reaction

Contd...4....

Class - X (Biology)

1 Mark question :-

1. Which of the following cells is also known as soldiers of the body ?
   (a) WBCs (b) RBCs
   (c) Platelets (d) Erythrocytes
2. Select the most widely accepted theory of origin of life and the scientist who suggested it.
   (a) Natural Selection by Charles Darwin
   (b) Chemical evolution of life by Haldane and Oparin
   (c) Theory of Acquired Character by Lamarck
   (d) Chemical evolution of life by Stanley and Miller
3. Which part of the brain control respiratory rhythm ?
   (a) Mid Brain (b) Cerebrum
   (c) Cerebellum (d) Medulla Oblongata
4. Which of the following is not a part of male reproductive structure of human ?
   (a) Urethra (b) Cervix
   (c) Vas deferns (d) Testis
5. Select the correct statement.
   (a) Only quatic ecosystem derive energy from sun
   (b) Global warming is caused due to depletion of ozone layer
   (c) 10% of energy is being used by organism at each trophic level
   (d) CFCs are the major reason for the formation of ozone hole
6. Voice box is another name of
   (a) Trachea (b) Bronchi
   (c) Larynx (d) Alveoli
7. Which hormone play a major role in photoropism ?
   (a) Auxin (b) Cytokinin
   (c) Thymosin (d) Absicisic Acid

Contd....5...

Fill in the blanks :-

8. _____ is the crucial hormone for child birth.

9. _____ is the hormone responsible for the development of female specific character.

10. _____ is the unit of inheritance.

2 marks question :-

11. Name two excretory products other than oxygen and carbo dioxide in plants and how they are removed ?

12. What is speciation ? State any two factors which could lead to speciation.

13. What are decomposers ? State the role of decomposers in environment.

3 marks question :-

14. List three kinds of blood vessels of human circulatory system and write their function in tabular form.

15. What is reflex action ? Describe the steps involved in reflex action.

16. List three techniques that have been developed to prevent pregnancy. Which one of these techniques is not meant for males ? How does the use of these techniques have a direct impact on health and prosperity of a family ?

5 marks questions :-

17. (I) A cross was made between pure breeding pea plants, one with round and green seed and the other with wrinkled and yellow seed.

(a) Write the phenotype of F1 progeny. Give reason for your answer.

(b) Write the different types of F2 progeny obtained along with their ratio when F1 progeny was selfed

(II) "The chromosomal number of the sexually producing parents and their offspring is the same". Justify the statement

Or

(a) What is chemotropism ? Give one example. Name any two plant hormone and mention their function.

(b) Draw the structure of neuron and label cell body and axon.

Chemistry

Que. 1.
Ans (c) Displacement Reaction (1 M)

Que. 2
Ans (a) Lemon and Orange (1 M)

Que. 3
Ans (c) Hg (1M)

Que. 4
Ans (a) H_2 (1M)

Que. 5
Ans The Condition produced by aerial oxidation of fat and oil in foods marked by unpleasant smell and taste is called Rancidity. (1M)

Method to prevent the Rancidity

1. Rancidity can be Retarded by keeping food in refrigerator.
2. It can be prevented by Anti-oxidant. ($\frac{1}{2}$M + $\frac{1}{2}$M)

Que. 6

Ans:- When a Acid react with a base reaction is (1M)
Called Neutralization Reaction.

Ex:-

$$HCl + NaOH \longrightarrow NaCl(aq) + H_2O \quad (1M)$$

$$H_2SO_4 + 2NaOH \longrightarrow Na_2SO_4 + 2H_2O$$

Que. 7

Ans:- Sodium is very Reactive metal. It can (1M)
React with Air or water present in Air.
So it is kept in kerosene oil.

$$4Na + O_2 \longrightarrow 2Na_2O \quad (1M)$$

$$2Na + 2H_2O \longrightarrow 2NaOH + H_2\uparrow$$

Que. 8

Ans:- When an Carboxylic Acid react with any (1M)
Alcohol reaction is Called estrification
Reaction.

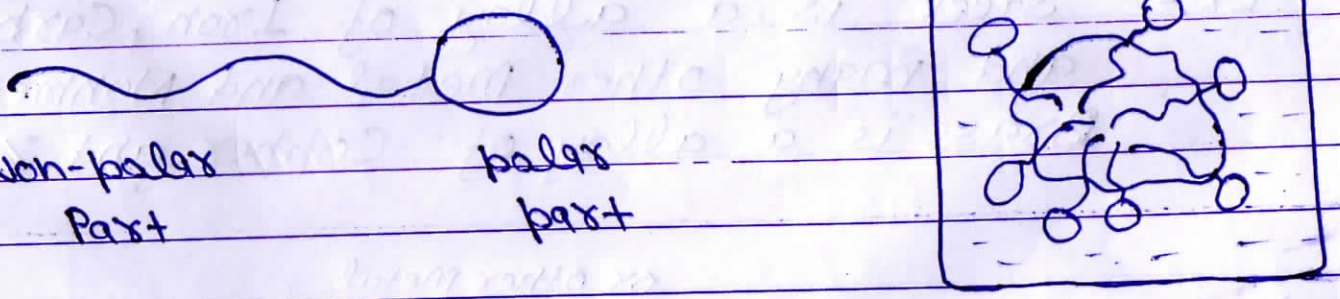
$CH_3COOH + CH_3CH_2OH \longrightarrow CH_3COOCH_2CH_3 + H_2O$ (1M)

Ester

Que.9 (2M)

Ans:- Micelle formation take place when soap is added to water. The hydrophobic part of soap molecule Attach with grease and oil. While hydrophilic part of soap connect with water. Then grease is Removed from cloth.

(1M)



Q-10

Ans:- Reactivity Series:- Metals are arranged in the order of Reactivity, this Series is called Reactivity Series. (2M)

Ex:→

Magnesium > Iron > Copper > Gold (1M)

Reactivity order

Q-11

Ans:- Alloy are the mixture of two or more than two metals. (2M)

Alloy are the responsible for better properties of metals.

Ex:- Steel is a alloy of Iron, Carbon and many other metal and Nonmetal. (1M)

Brass is a alloy of Copper and Zinc.

Q-12

Ans a) Corrosion :→ Iron or other metal Surface is slowly eaten w by Atmosphere is called Corrosio

b) Decomposition Reaction :→ When a single Subs give more than one product is called Decomposition Reaction.

(1M)

c) Precipitation Reaction :→ The Reaction in which formation of precipitate take place Reaction is called Precipitation Reaction.

$$AgNO_3 + NaCl \longrightarrow \underset{\text{ppt.}}{AgCl} + NaNO_3$$

BIOLOGY

Qus-1 (a) WBCs. [1M]

Qus 2 (b) Chemical evolution of life by Haldane and Oparin [1M]

Qus 3 (d) Medulla Oblongata. [1M]

Qus 4 (b) Cervix. [1M]

Qus 5 (d) CFCs are the major reason for the formation of ozone hole. [1M]

Qus 6 (c) Larynx. [1M]

Qus 7 (a) Auxin [1M]

Qus 8 Oxytocin [1M]

Qus 9 Estrogen. [1M]

Qus 10 Gene. [1M]

Qus 11 Resins and gums are two excretory products other than oxygen and carbon dioxide in plants. [½ + ½]
These two are stored and removed through older leaves and plants [1M]

Qus 12 Process of formation of new species from pre-existing ones is known as speciation. [1M]
Two factors which contribute to speciation are :- Natural selection [½ + ½ M]
:- Geographical isolation.
:-

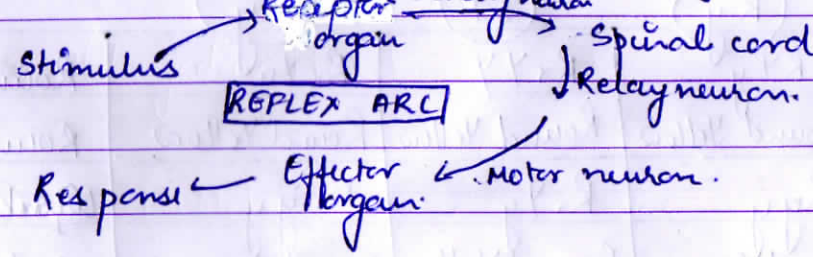
Qus 13 Decomposers are those organisms which feed on dead and decaying matter and help to breakdown complex organic substances into simple ones. [1M]
Role of decomposers :-

(a) Removal of biodegradable waste from environment. [½ + ½ M]
(b) Play a crucial role in nutrient cycling.

Ques 14

Arteries	Veins	Capillaries
These blood vessel carry oxygenated blood from heart to various parts of body. Except pulmonary artery	These blood vessel carry deoxygenated blood from various parts of body to heart. Except pulmonary vein	These are the blood vessel which establish a connection between arteries and veins. They are the site where the exchange of material between blood & cells occur
[1 M]	[1 M]	[1 M]

Ques 15 The sudden autonomic, involuntary response to a stimulus is known as reflex action. The path followed by reflex action is known as reflex arc. [1M]



[2M]

Ques 16 Three techniques which can prevent pregnancy are.
1) Barrier Method - Example Condom, diaphragm etc
2) Surgical method - Example Vasectomy, Tubectomy etc. [1M]
3) Intrauterine Devices - CuT.

Intra Uterine Devices [IUDs] are not meant for males. [1M]
Contraceptive techniques promote the health of mother as they prevent unwanted pregnancy and also support the finances of family [1M]

Ques17 I (a) Parent — Round Green × Wrinkled Yellow.

RRyy × rrYY

Gamete (Ry) (rY)

F_1 Generation. RrYy Round Yellow. [1M]

Since round and yellow are dominant character.

(b) Parent RrYy × RrYy

Gamete & F_2

	(RY)	(Ry)	(rY)	(ry)	
(RY)	RRYY Round Yellow	RRYy Round Yellow	RrYY Round Yellow	RrYy Round Yellow	Round Yellow = 9 Round Green = 3
(Ry)	RRYy Round Yellow	RRyy Round Green	RrYy Round Yellow	Rryy Round Green	Wrinkled Yellow = 3 Wrinkled green = 1
(rY)	RrYY Round Yellow	RrYy Round Yellow	rrYY Wrinkled Yellow	rrYy Wrinkled Yellow	9 : 3 : 3 : 1
(ry)	RrYy Round Yellow	Rryy Round Green	rrYy Wrinkled Yellow	rryy wrinkled green	[3M]

11 Meiosis causes reduction in chromosome number as a result only half number of chromosome move to gametes. Fusion of male and female gamete restore the number of chromosome in zygote. [1M]

OR

(a) The phenomenon of movement of parts of plants in response to chemical is known as chemotropism. Example growth of pollen tube towards ovary. [1M]

Plant hormone :-

Auxin - Play a crucial role in growth of apical region.

Ethylene :- It help in ripening of fruit. [2M]

(b)

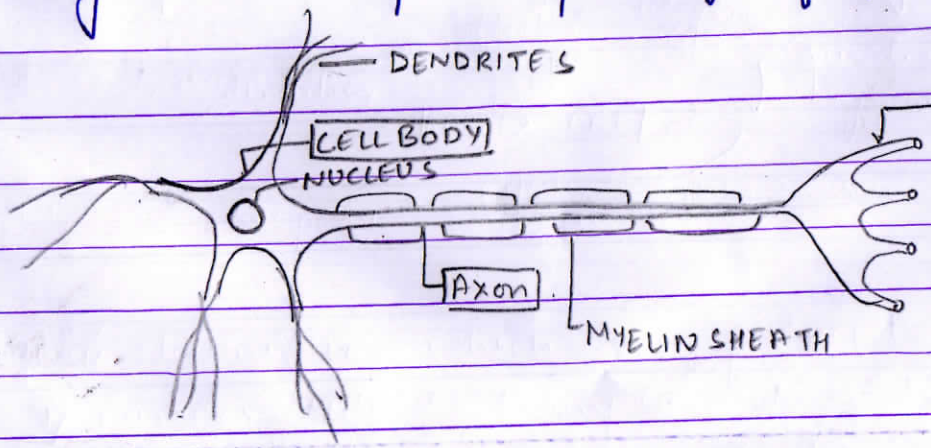


DIAGRAM OF A NEURON.

[2M]

Class → X

Blue Print (Physics)

S.No	Name of Chapter	Objective Type (1 Mark)	VSA (2 Marks)	SA (3 marks)	LA (5 marks)	Total
1)	Light - Reflection and Refraction	2Q	1Q	—	1Q	9M
2)	Human Eye & Colourful World	2Q	—	1Q	—	5M
3	Electricity	2Q	1Q	1Q	1Q	12M
	Total	6Q X 1 = 6M	2Q X 2 = 4M	2Q X 3 = 6M	2Q X 5 = 10M	26 Marks

Marking Scheme (Physics)

Q(1) → (b) Concave mirror (1M)

Q(2) → (c) focus (1M)

Q(3) → (d) All above (1M)

Q(4) → (d) presbyopia (1M)

Q(5) → (b) voltage (1M)

Q(6) → (a) cell or battery (1M)

Q(7) → For Definition of power of lens. (½M)
Its formula & S.I unit. (½M + ½M)

Q(8) → Kilowatt hour (KWh) (1M)
1 KWh = 3.6×10^6 Joule (1M)

Q(9) → For Definition of myopia. (1M)
Ray Diagram & correction. (1M + 1M)

Q(10) → For ohm's law (1½ M)
Factors on which resistance depends (1½ M)

OR

For definition of 1 Volt. (1M)
For formula E = QV (1M)
For correct ans. E = 3 Joule (1M)

Q(11) → (a) Concave lens (1M)
(b) optical centre (1M)
(c) For position of image (1M)
For magnification (1M)
For nature of image (1M)

OR

(a) For laws of reflection of light. (2M)
(b) For drawing correct ray diagram (2M)
For correct position, size & nature of image. (1M)

Q(12

Q(12) (a) For definition of electric power. (1M)

For obtaining formula $P = \frac{V^2}{R}$ (1M)

(b) $V = 2.5$ volt & $I = 750\ mA$
$= 750 \times 10^{-3}\ A$

(i) $P = VI = 2.5 \times 750 \times 10^{-3} = 1.875$ watt (1M)

(ii) $R = \frac{V}{I} = \frac{2.5}{750 \times 10^{-3}} = \frac{2500}{750} = \frac{10}{3}\ \Omega$ (1M)

(iii) $E = P \times t = 1.875 \times 4 = 7.5$ wh (1M)