MODEL QUESTION PAPER

CLASS: X STD **SCIENCE** **MAX: 100 MARKS**

UNIT: 1, 2, 3,7,8,9,12,13,14

PHYSICAL SCIENCE

I. CHOOSE THE BEST ANSWER **6 X 1 =6**

1.Power of a lens is 4D, then its focal length is

a) 4m b) –40m c) –0.25 m d) 0.25 m

2) Impulse is equals to

a) rate of change of momentum b) rate of force and time

c) change of momentum d) rate of change of mass

3. If a substance is heated or cooled, the change in mass of that substance is

a) positive b) negative c) zero d) none of the above

4. In the nucleus of $_{20}Ca^{40}$, there are

a. 20 protons and 40 neutrons b. 20 protons and 20 neutrons

c. 20 protons and 40 electrons d. 40 protons and 20 electrons

5. Neon shows zero electron affinity due to ____.

a) stable arrangement of neutrons b) stable configuration of electrons

c) reduced size d) increased density

6. A 25% alcohol solution means

a. 25 ml alcohol in 100 ml of water b. 25 ml alcohol in 25 ml of water

c. 25 ml alcohol in 75 ml of water d. 75 ml alcohol in 25 ml of water

II ANSWER THE FOLLOWING QUESTIONS Q.NO: 10 IS COMPULSORY **5 x 2 =10**

7.While catching a cricket ball the fielder lowers his hands backwards. Why?

8.State Snell's law.

9. State-the law of volume

10. Two blocks of masses 8 kg and 2 kg respectively lie on a smooth horizontal surface in contact with one other. They are pushed by a horizontally applied force of 15 N. Calculate the force exerted on the 2 kg mass.

(or)

Calculate the number of moles in i) 27g of Al ii) 1.51×10^{23} molecules of NH_4Cl

11. a)Define : Atomicity b) State two conditions necessary for rusting of iron.

12. a) Match the following

1. Blue vitriol – $CaSO_4.2H_2O$
2. Gypsum – CaO
3. Deliquescence – $CuSO_4.5H_2O$
4. Hygroscopic – $NaOH$

B) What is mean by binary solution.

III ANSWER THE FOLLOWING QUESTIONS Q.NO: 17 IS COMPULSORY **5 x 4 = 20**

13.What are the types of inertia? Give an example for each type.

14. Explain the experiment of measuring the real and apparent expansion of a liquid with a neat diagram.

15. a) The aquatic animals live more in cold region Why?

b) Define modern periodic law.

16. Relationship between vapour density and relative molecular mass

17. How many grams are there in the following?

i. 2 moles of hydrogen molecule, H_2 ii. 3 moles of chlorine molecule, Cl_2

iii. 5 moles of sulphur molecule, S_8 iv. 4 moles of phosphorous molecule, P_4

(or)

An object of height 3cm is placed at 10cm from a concave lens of focal length 15cm. Find the size of the image.

IV ANSWER IN BRIEF **2 X 7 = 14**

18. (a)Define coralent radius (b)What is innertransition elements (c)What is periodicity

19. i) State and prove the law of conservation of linear momentum.

ii) How does an astronaut float in a space shuttle?

(or)

a) Differentiate the eye defects: Myopia and Hypermetropia
b) Why are traffic signals red in colour?

20. A) Give the salient features of "Modern atomic theory". (3m)
B) write the difference between minerals and ores.(2m)
c) Define Hydrated salt. (2m)

(or)

21 i) Write notes on i) saturated solution ii) unsaturated solution (3m)
ii) What is rust? Give the equation for formation of rust. (2m)
iii) Give any two examples for hetero diatomic molecules. (2m)

BIOLOGY

SECTION – A

I.Choose the correct answer **6x1=6**

1.The endarch condition is the characteristic feature of _____a)root b)stem c)leavesd)flower
2.Which is formed during anaerobic respiration
a)carbohydrate b)ethyl alcohol c)acetyl coA d)pyruvate
3.The brain of leech lies above the a)Mouth b)Buccal cavity c)Pharynx d)Crop
4.The animals which give birth to young one
a)oviparous b)viviparous c)ovovivi parous d)all the above
5.During transpiration there is loss of _____a)CO2 b)oxygen c)water d)none of the above
6.Which of the following process requires energy?
A)active transport b)diffusion c)osmosis d)all of them

SECTION – B

IIAnswer briefly: Q.No : 10 is compulsory **5x2=10**

7.What is respiratory quotient?
8.Write the reaction for photosynthesis.
9.Why are the rings of cartilages found in trachea of rabbit?
10.How are arteries and veins structurally different from one another?
11.What is the importance of valves in the heart?
12.Why is the circulation in man reffered to as double circulation?
13.What is cohesion?

III.Answer in paragraph.Q.No : 18 is compulsory **5x4=20**

14.Differentiate between systemic circulation and pulmonary circulation.
15.What is photosynthesis ? where in a cell does it occur?
16.Differentiate monocot and dicotroot
17.List out the parasitic adaptative in leeeh
18.Explain the functions of mitochondria.
19.How does locomotion take place in leech?
20.Write the importance of transpiration?

SECTION – D

IV.Answer in Detail **2x7=14**

21. Describe and name three stage s of calculate respiration that aerobic organism use to obtain energy from glucose.

OR

Explain the male reproductive system of rabbit with a labelled diagram.

22. Why are leucocytes are classified as granulocytes and agranulocytes?
Name each cell and mention it's function **(OR)** Enumerate the functions of blood.

ALL THE BEST

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