

## SCIENCE (THEORY)

**Question 1.** Choose the correct option

- a. When powdered lead nitrate is heated in boiling tube then produced brown smoke has -  
(i) Nitrogen mono oxide.  
(ii) Nitrogen tri oxide.  
(iii) Nitrogen di oxide.  
(iv) Nitrogen penta oxide.
- b. A solution turns red litmus paper into blue, its pH probably be -  
(i) 1 (ii) 4 (iii) 5 (iv) 10
- c. The decomposition of pyruvate to produce Carbon dioxide water and energy happens in -  
(i) Cytoplasm (ii) Mitochondria  
(iii) Chloroplast (iv) Nucleus
- d. Which of the following is not represent electric power -  
(i)  $I^2R$  (ii)  $IR^2$  (iii)  $VI$  (iv)  $\frac{V^2}{R}$
- e. The change in the focal length of eye lens is due to action of  
(i) Pupil (ii) Retina  
(iii) Ciliary Muscles (iv) Iris
- f. Dam is related to -  
(i) Thermo-electric station (ii) Nuclear power station  
(iii) Hydroelectric power station (iv) Gas initiative power station

**Question 2.** What is Amalgam ?

**Question 3.** Name a plant hormone which inhibits growth ?

**Question 4.** What is the another name of Right Hand thumb law ?

**Question 5.** Which mirror is used as rear mirror in vehicles ?

**Question 6.** Which radiation is absorbed by ozone layer ?

- Question 7.** What happens when Ethanoic Acid reacts with Sodium hydroxide, write the equation of the reaction ?
- Question 8.** What is the meaning of period & group in periodic table? How many groups & periods in extended modern periodic table ?
- Question 9.** What are the different circumstances for photo synthesis ?
- Question 10.** What is the meaning of internal fertilization & external fertilization Explain with examples ?
- Question 11.** What do you understand by Homologous & Analogous Organs ? Explain with examples ?
- Question 12.** What precautions should be followed to avoid over load in domestic electric circuit ?
- Question 13.** How much charge is possessed by an electron Calculate the number of electrons to make a one coulomb charge ?
- Question 14.** Write four properties of image formed by plane mirror ?
- Question 15.** Write advantages of electricity produced by wind energy ?
- Question 16.** Write an equation of decomposition for each where energy is provided as (a) heat (b) light & (c) electricity ?
- Question 17.** Write three physical properties of each metal and non metal ?
- Question 18.** Electronic configuration of these elements X, Y & Z are given below -

X - 2,                  Y - 2,6                  Z - 2,8,2

- (i) Which element is a member of second period ?
- (ii) Which element is a member of second group ?
- (iii) Which element is a member of eighth group ?

**OR**

What is Hydrogenation ? Explain the industrial use of this process.

- Question 19.** What is the difference between self pollination and Cross pollination ? How do insects help in cross pollination ?
- Question 20.** Name the glands which secrete following hormones -
- (i) Estrogen                          (ii) Thyroxine                          (iii) Insulin
- (iv) Testosterone                          (v) Growth hormone                          (vi) Adrenaline

**Question 20.** Name the glands which Accrete following .....

- |                  |                   |                |
|------------------|-------------------|----------------|
| (i) Estrogen     | (ii) Thyroxine    | (iii) Insulin  |
| (iv) Testosteron | (v) Groth harmone | (iv) Adrinalin |

**Question 21.** What is Blood ? Write the functions of its each component ?

**Question 22.** Cross section areas of copper wire is  $0.1964 \times 10^{-6} \text{m}^2$  if the specific resistance of copper is  $1.6 \times 10^{-8} \Omega \text{m}$

**OR**

Write three properties of Magnetic line of force ?

**Question 23.** Two thin lenses of power +5.0D and -7.5d are placed in contact to each other.

Find out the focal length and power of this lense combination. ?

**Question 24.** Explain why ?

- (i) Inner surface of solar cooker box is black.
- (ii) Solar cooker box is covered by glass sheet
- (iii) Plane mirror is used as reflection in solar cooker box.

**Question 25.** What is plaster of paris ? How it is formed ? What happens when we poured water in plaster of paris, give equation also.

**Question 26.** Write the molecular formulae of pantane. Draw the structure of all possible isomers of pantane.

**Question 27.** Which substances are found in gastric juice and what are their functions ?

**Question 28.** Draw the labelled diagram of electric motor. Clear its principle & methodology. ?

**Question 29.** What is chromatic order ? Draw a labelled diagram to show the formation of chromatic order. Write the different colours of chromatic order.

**Question 30.** Why we conserve forest and wild life ?

