TERM-1
CLASS X
GENERAL SCIENCE

SECTION – A

Attempt any 20 questions out of 24 questions
The first attempted 20questions would be evaluated.

1. The neutralization reaction between an acid and a base is a type of:
   a. Double displacement reaction b. Displacement reaction
   c. Addition reaction d. Decomposition reaction

2. The phenomenon of scattering of light by the colloidal particles gives rise to Tyndall effect, these colloidal particles are
   a) Smoke and dust particles
   b) tiny water droplets
   c) molecules of air
   d) all of these
   e)

3. When green coloured ferrous sulphate crystals are heated, the colour of the crystal changes because
   (a) it is decomposed to ferric oxide (b) it loses water of crystallisation
   (c) it forms SO_2 (d) it forms SO_3

4. The inner lining of the small intestine has numerous finger-like projections called
   a) Pseudopodia c) cilia
   b) Villi d) flagella

5. On immersing an iron nail in $CuSO_4$ solution for few minutes, you will observe
   (a) no reaction takes place
   (b) the colour of solution fades away
   (c) the surface of iron nails acquire a black coating
   (d) the colour of solution changes to green

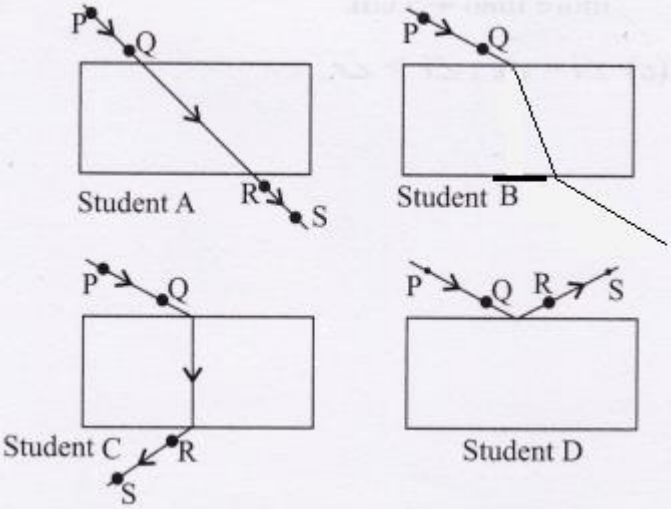
6. Animals have evolved different organs for

   a) the uptake of oxygen from the environment

b) for getting rid of the carbon dioxide
c) Both (a) and (b)
d) None of the above

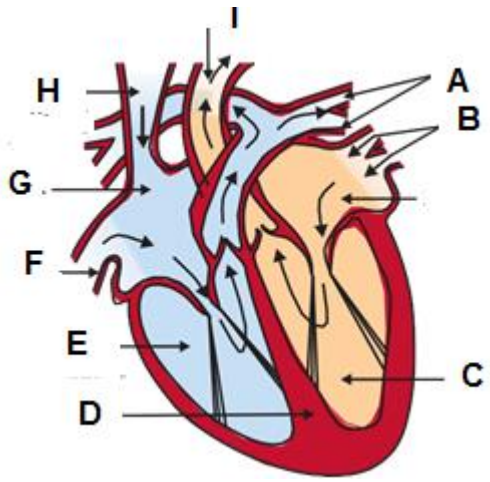
7. Alkalis are
(a) acids, which are soluble in water (b) acids, which are insoluble in water
(c) bases, which are insoluble in water (d) bases, which are soluble in water

8. **Question 13:**
Four students A, B, C and D traced the paths of incident ray and the emergent ray by fixing pins P and Q for incident ray and pins R and S for emergent ray for a ray of light passing through a glass slab.



The correct emergent ray was traced by the student:
(a) A **(b)** B **(c)** C **(d)** D

9. Copper sulphate crystals when heated strongly, lose their water of crystallization to give anhydrous copper sulphate accompanied by a change in color from:
a. Blue to green b. Blue to white
c. Blue to sky blue d. Blue to grey

10. 

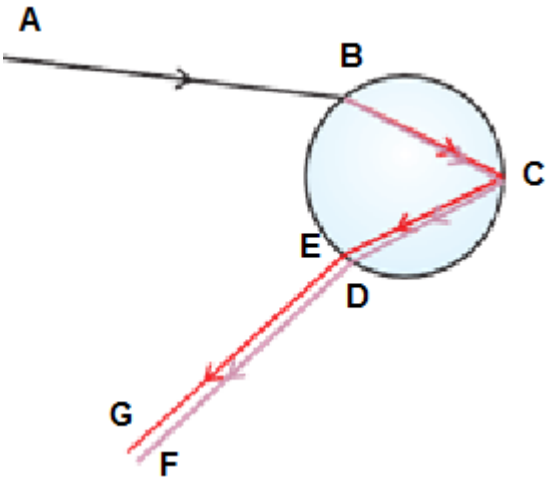
In the above figure which alphabet represents pulmonary vain

a) A
b) G
c) B
d) I

11. Which of the following represent the correct order of decreasing reactivity?
a) Mg > Al > Zn > Fe
b) Mg > Zn > Al > Fe
c) Al > Zn > Fe > Mg
d) Mg > Fe > Zn > Al

12. From the figure of Q.No. 10, the function of I is
a) Collect the impure blood from the different parts of the body
b) supply the impure blood to the different parts of the body
c) supply the pure blood from the heart to the different parts of the body
d) None of these

13. An element X is soft and can be cut with the help of a knife. It is very reactive to air and cannot be kept open in the air. It reacts vigorously with water. Identify the element from the following:
(a) Mg
(b) Na
(c) P
(d) Ca

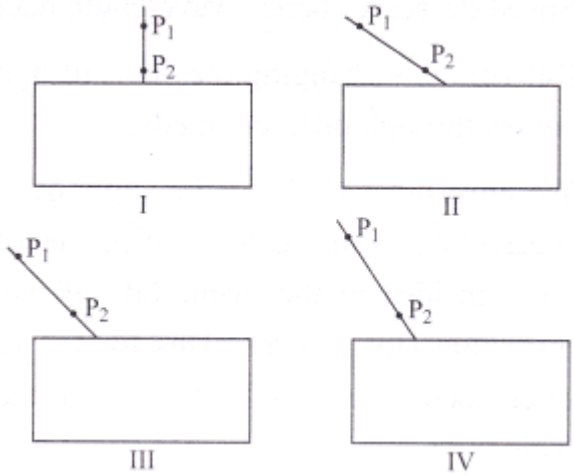
14. 

The phenomenon of light which takes place at C is

a) Reflection b) refraction c) total internal reflection d) None of these

15. **Question 14:**

Study the following four experimental set-ups I, II, III and IV for the experiment, "To trace the path of a ray of light through a rectangular glass slab".



Which of the marked set-ups is likely to give best results (P_1 and P_2 are the positions of pins fixed on the incident ray)?

(a) I **(b)** II **(c)** III **(d)** IV

16. The process of digestion is completed by:

(a) Intestinal juice (b) trypsin

(c) bile juice (d) pepsin

17. The separation of H+ ion from HCl molecules cannot occur in the absence of

a) water. c) base

b) Salt d) acid

18. The inner lining of the stomach is protected by one of the followings from hydrochloric acid is

a) Mucus b) Salivary amylase

c) Pepsin d) Bile

19. The pancreas pour their secretion into

a) Small intestine b) large intestine

c) stomach d) Duodenum

20. Which of the following components of food is digested by amylase?

a) proteins b) fats

c) Minerals d) carbohydrates

21. If an incident ray passes through the focus, the reflected ray will

(a) pass through the pole (b) be parallel to the principal axis

(c) retrace its path (d) pass through the centre of curvature

22. Magnifying power of a concave lens is

(a) always > 1 (b) always < 1

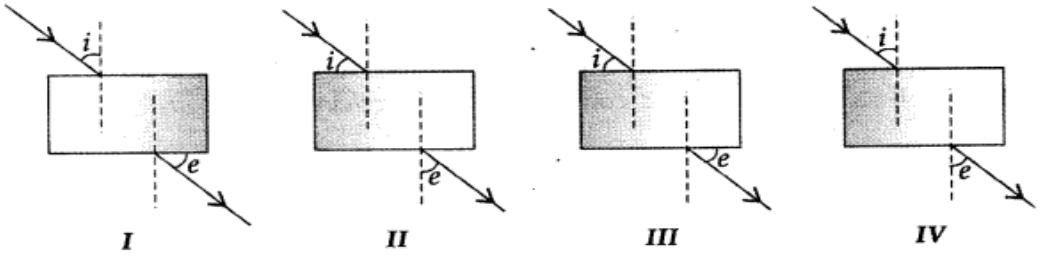
(c) always = 1 (d) can have any value

23. A spherical mirror and a spherical lens each have a focal length of -10 cm. The mirror and the lens are likely to be

(a) both concave (b) both convex

(c) the mirror is concave and the lens is convex (d) the mirror is convex and the lens is concave

24. A student does the experiment on tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. He can get a correct measure of the angle of incidence and the angle of emergence by following the labelling indicated in figure:



(a) I (b) II (c) III (d) IV

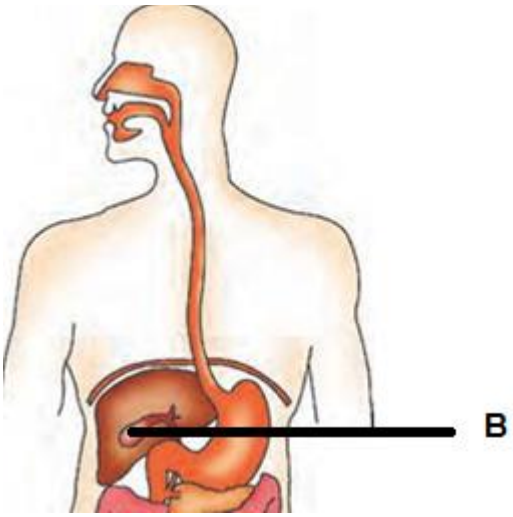
SECTION – B

Attempt any 20 questions out of 24 questions

The first attempted 20questions would be evaluated.

25. The physical states of the reactants and products are mentioned along with chemical formulae in a chemical equation to make it
    a) More convenient c) more informative
    b) to satisfy the law of conservation of mass d) None of the above
    c)

26. At noon, the Sun appears white as
    a) only a little of the blue and violet colours are scattered.
    b) Rays are falling perpendicularly
    c) Rays need to travel a shorter distance
    d) All of the above

27. 

In the above diagram, B represents for
    a) Liver c) gall bladder

b) Pancreas d) stomach

28. Which of the following is an endothermic process?
(a) Dilution of sulphuric acid (b) Sublimation of dry ice
(c) Condensation of water vapours (d) Respiration in human beings

29. **Which of the following statements about autotrophs is incorrect ?**
a) They synthesize carbohydrates by using carbon dioxide , water in presence of sunlight and chlorophyll
b) They store carbohydrates in form of starch
c) They convert carbon dioxide and water into carbohydrates in the absence of sunlight
d) They form the first trophic level in food chain

30. Which among the following is necessary to carry out the blood coagulation in a cut or wound?
(a) White Blood Cells (b) Blood plasma
(c)Platelets (d)Red blood cells

31. Brine is an
(a) aqueous solution of sodium hydroxide (b) aqueous solution of sodium carbonate
(c) aqueous solution of sodium chloride (d) aqueous solution of sodium bicarbonate

32. The red light has a wavelength about 1.8 times greater than blue light so
a) Red light scatter more than blue light c) Red light scatter equally as the blue light
b) Red light scatter less than blue light d) none of these

33. The Sun is visible to us before the actual sunrise, and after the actual sunset because of atmospheric refraction is
a) About 1 minute c) about 2 minutes
b) about 3 minutes d) Can't say definitely

34. Fatty foods become rancid due to the process of
(a) oxidation (b) corrosion
(c) reduction (d) hydrogenation

35. The apparent random wavering or flickering of objects seen through a turbulent stream of hot air rising above a fire is the phenomenon of
a) Reflection c) refraction
b) Diffraction d) None of these

36. An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change?
(a) Baking powder (b) Lime
(c) Ammonium hydroxide solution (d) Hydrochloric acid

37. The vein which brings clean blood from the lungs into the heart is known as:
a) Pulmonary vein (c) Hepatic vein
b) Superior vena cava (d) Pulmonary artery

38. Bauxite is an ore of
a) Iron b) Aluminium
c) Mercury d) Copper

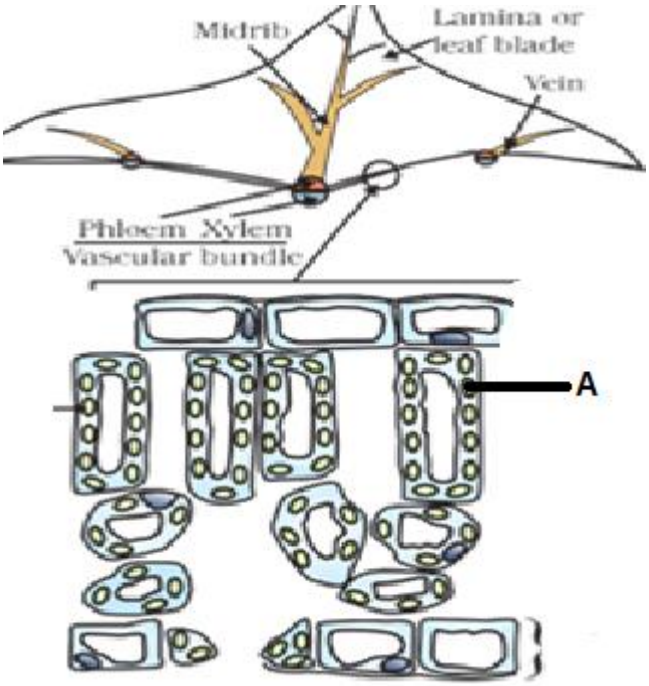
39. Any light that gives a spectrum similar to that of sunlight is often referred to as
a) white light c) ultraviolent light
b) Infrared light d) None of these

40. Which of the following pairs of reactants will go undergo a displacement reaction?
(a) $CuSO_4$ + Fe (b) $ZnSO_4$ + Fe
(c) $MgSO_4$ + Fe (d) $Ca(SO_4)_2$ + Fe

41. An object, 4.0 cm in size, is placed at 25.0 cm in front of a concave mirror of focal length 15.0 cm. The nature and the size of the image is
a) inverted and diminished c) inverted and enlarged
b) erect and enlarged d) erect and diminished

42. The diameter of the reflecting surface of spherical mirror is called its
a) Radius of curvature c) aperture
b) Aparature d) pole of the mirror

43. The rate of breathing in aquatic organisms is much faster than that seen in terrestrial organisms as
a) There is poor system of absorption of oxygen in aquatic organisms
b) Since the amount of dissolved oxygen is low compared to the amount of oxygen in the air
c) Aquatic organisms remain under the water
d) None of these

44. 

In the above diagram, A stands for

a) Upper epidermis
b) Air spaces
c) chloroplast
d) cuticle

45. The conversion of vegetable matter into compost is an example of a/an

a) exothermic reaction.
b) decomposition reaction
C) endothermic reaction
d) None of these

46. The processes, in which ATP is broken down giving rise to a fixed amount of energy which can drive the endothermic reactions taking place in the cell.

a) Exothermic process taking place in the cell
b) endothermic process taking place in the cell
c) oxidation process taking place in the cell
d) None of the above

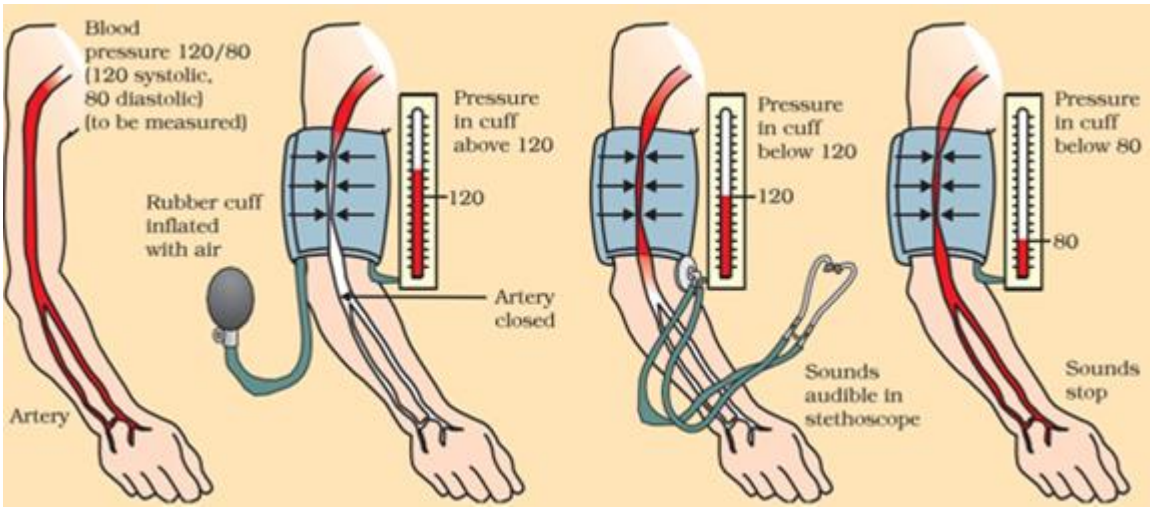
47. The centre of curvature of a spherical mirror is

a) not a part of the mirror
b) Lie on the mirror
c) a part of the mirror
d) None of these

48. The organisms, who break-down the food material outside the body and then absorb it is/are

a) Fungi
b) mushrooms
c) yeast
d) all of these

SECTION – C
Section C consists of three case based
Attempt any 10 questions out of 12 questions
The first attempted 20questions would be evaluated.



The above figure shows the conditions under which the systolic and diastolic of a man can be measured. Blood pressure plays an important role in the health of a human being.Study the figure and answer the following questions.

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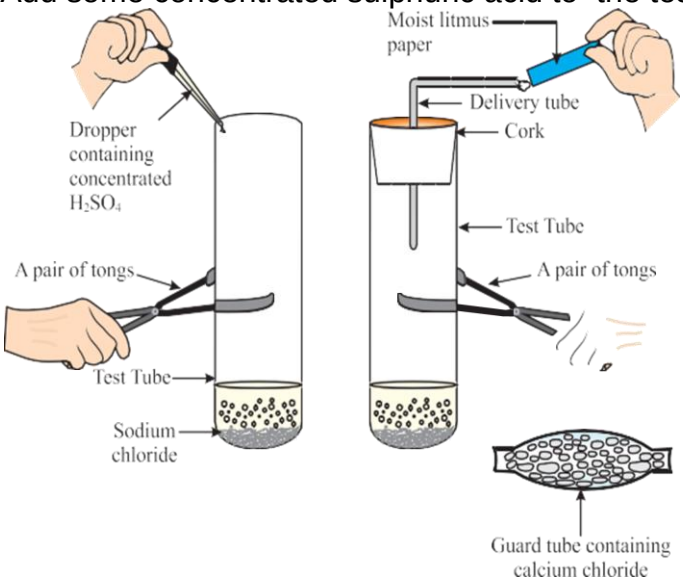
49. The name of the device used to measure blood pressure is
    a) Manometer
    b) Barometer
    c) Sphygmomanometer
    d) None of the above
50. Under which of the following condition(s) the high blood pressure is recorded
    a) caused by the constriction of arterioles
    b) caused by the constriction of capillaries
    c) caused by the constriction of veins
    d) None of the above
51. The use of a stethoscope while measuring the blood pressure is
    a) To hear the sound
    b) To record the heart beat
    c) To read the pulse rate
    d) None of the above
52. The consequences of high blood pressure is
    a) increased resistance to blood flow
    b) lead to the rupture of an artery

c) lead to the internal bleeding.
d) All of the above

Take about 1g solid NaCl in a clean and dry test tube and set up the apparatus as shown below
Add some concentrated sulphuric acid to the test tube.



53. Name the gas, coming out of the delivery tube is
    a) Hydrogen gas
    b) Hydrogen chloride gas
    c) Sulphur dioxide gas
    d) None of the above

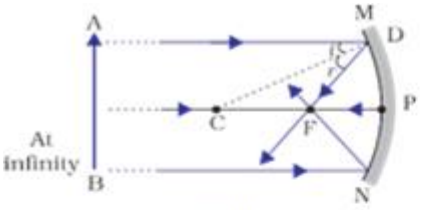
54. The gas evolved when tested with a dry litmus paper then the color of blue litmus changes to
    a) Red
    b) Remain unchanged
    c) White
    d) Non of the above

55. The gas evolved when tested with a moist litmus paper then the color of blue litmus changes to
    a) Red
    b) Remain unchanged
    c) White
    d) None of the above

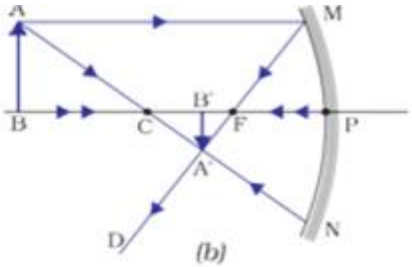
56. The role of calcium chloride in this experiment is

a) To absorb oxygen
b) To absorb carbon dioxide
c) To absorb moisture
d) None of the above

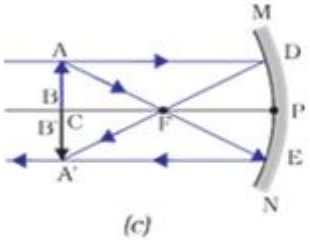
Draw neat ray diagrams for each position of the object shown below
Compare your diagram with those given in Fig. 10.7.
Tabulate the results in a convenient format.



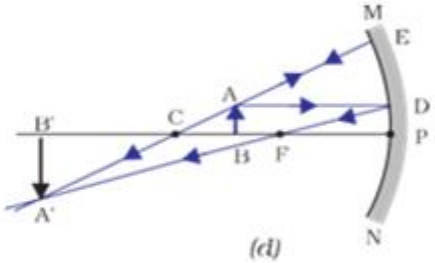
(a)



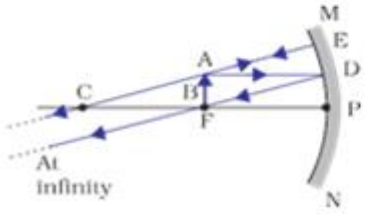
(b)



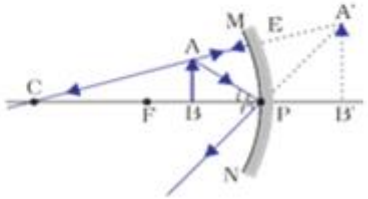
(c)



(d)



(e)



(f)

57. The convenient rays taken for the formation of image in the mirror experiment are
    a) Parallel to the principal axis
    b) Passing through the focus
    c) Passing through the centre of curvature
    d) All of the above
58. Which one of the above figure (s) is used in head light in car
    (a) c
    (b) d
    (c) a
    (d) None of these

59. Which of the above diagram shows similar property of a place mirror related to image height and image distance (without considering the real and virtual nature)
    (a) e
    (b) f
    (c) d
    (d) c

60. The information we can obtain from the above diagram is
    a) converging property of light
    b) diverging property of light
    c) Reversibility property of light
    d) None of the above