

SAMPLE PAPER/MODEL TEST PAPER
SUBJECT – SCIENCE CBSE 10TH SA 2 2011

Section – A

1. (a) Give two reasons for avoiding pregnancies by women.
(b) Explain the following methods of contraception giving one example each:
2. (a) Why does carbon form compound mainly by covalent bonding?
(b) What is 5% solution of potassium permanganate is added drop by drop to warm ethanol taken in a test tube?
(c). Give a chemical test to distinguish ethanol from ethanoic acid.
3. Which phenomenon is exhibited by the inclined refracting surfaces surfaces of a glass prism? Explain it with the help of diagram. Why the ray of each colour becomes distinct when white light is used?
4. Draw the ray diagram in each case to show the position and nature of the image formed when the object is placed:
 - (a) In front of a concave lens.
 - (b) In front of a convex lens.
 - (c) At the centre of curvature of a concave mirror.
 - (d) Between the pole P and focus F of a concave mirror.
 - (e) At 2F of a convex lens.
5. What is biodiversity? Why is it important to conserve biodiversity?
6. What is astigmatism? How is it caused? How is it corrected?
7. (a) Where are genes located?
(b) What is gene?
(c) What is the nature of genes?
8. State the laws of reflection.
9. (a) What is the fermentation process?
(b) List the two products formed when the enzyme invertase act on sugar present in molasses.
(c) Name the gas evolved during the fermentation process.
10. How do homologous organs differ from analogous organs?
11. An object 5 cm high is placed at 20 cm away in front of a concave mirror of focal length 15 cm. At what distance from the mirror, should a screen be placed to obtain a sharp image? Calculate the size of the image formed.
12. Who are the stakeholders in respect of forests? Which one of these cause maximum damage of forest and why?
13. (a) How do you calculate the valency of an element from its electronic configuration?

(b) What is the valency of magnesium with atomic number 12 and chlorine with atomic number 17?

(c) What is different in number of shells in magnesium and sulphur?

14. State the reason for the following observations recorded from the surface of moon:

(a) Sky appears dark

15. What is the function of genes in an organism?

16. What are synthetic detergents? Give two advantages over soap.

17. State any two practice which can help in protecting our environment.

18. With respect to air, the refractive index of ice is 1.31 and that of rock salt is 1.54.

Calculate the refractive index of rock salt with respect of ice.

19. Give the name of functional groups.

(a) - CHO

(b) - C = O

20. An element M is in the third group of the periodic table. Write the formula of its oxide.

21. An organic compound 'A' is a constituent of antifreeze. The compound on heating with oxygen forms another compound B which has a molecular formula $C_2H_4O_2$. Identify the compound 'A' and 'B' Write the chemical equation of the reaction that takes place to form the compound 'B'.

22. 'X' is an element with atomic number 20.

(a) What will be its valency?

(b) Is it a metal or non - metal?

23. What are trophic levels? Give an example of food chain and state the different trophic level in it?

24. What are fossils? What do they tell us about process of evolution?

25. What is the focal length of a plane mirror?

Section - B

26. A reproduction by single organism without the production of gametes is known as:

(a) Asexual reproduction

(b) Both

(c) Bisexual reproduction

(d) none of these

27. Semi - permeable membrane in Osmosis is a:

(a) Selective membrane

(b) Porous membrane

(c) Non - porous membrane

(d) None of these

28. Which one of the following gives a colourless solution in water?

(a) NaCl

(b) $ZnSO_4$

(c) All

(d) $Al_2(SO_4)_3$

29. The colour of copper sulphate solution is:

(a) Yellow

(b) Orange

(c) Blue

(d) Colourless

30. Which one of the following metals will decolourise blue solution of copper sulphate?

- (a) Al (b) Fe (c) All (d) Zn

31. Which of the following solutions of acetic acid in water can be used as vinegar used in pickles?

- (a) 10 – 15% (b) 20 – 30% (c) 100% (d) 5 – 10%

32. When copper wire is dipped in a solution of ferrous sulphate?

- (a) Blue colour of copper sulphate is formed
(b) No reaction takes place
(c) Iron metal gets deposited on copper wire
(d) Light green colour of ferrous sulphate turns colourless

33. 2 ml of ethanoic acid was taken in each of the three test tubes A, B and C, and 2 ml, 4 ml and 8 ml water was added to them, respectively. A clear solution is obtained in:

- (a) test tubes A and B only (b) test tubes B and C only
(c) test tube A only (d) All the test tubes

34. Which one of the following reagents gives brisk effervescence with ethanoic acid?

- (a) Sodium bicarbonate (b) Sodium chloride
(c) Calcium hydroxide (d) Ammonium chloride

35. Each of the three beakers A, B and C contained 50 ml distilled water. A student placed five raisins in each beaker. The raisins for each beaker weighted the same. The beakers were kept at room temperature. The raisins were removed

36. The nature of image is not affected by the position of the object is:

- (a) Concave mirror (b) Plane mirror
(c) Convex mirror (d) Both (A) and (B)

37. The angle to which an incident ray at an angle ' θ ' deviates on getting reflected from a surface is:

- (a) θ (b) $180 - 2\theta$ (c) $180 - \theta$ (d) 2θ

38. A ray passing through the focus and falling on a convex lens will:

- (a) Will emerge parallel to principal axis
(b) Will emerge through focus on other side
(c) Retrace its path
(d) None of these

39. While positioning the pins, it is arranged such that:

- (a) The feet are in straight line (b) The mid points are in straight line
(c) The heads are in straight line (d) None of these

40. A lens of focal length 'f' is cut into two equal parts without affecting its curvature. The two pieces will have equal focal length of:

- (a) $f/2$ (b) $f/3$ (c) f (d) $2f$

41. To determine the percentage of water absorbed by raisins before weighing, gently dry the raisins with:

- (a) Cotton (b) By air (c) Filter paper (d) Cloths

www.ravijain.weebly.com