

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

Section – A

- 1. What are sexually transmitted diseases? Give example of these diseases and also give their common symptoms. Are these diseases curable?**
- 2. Discuss the importance of artificial selection selection in the derivation of the concept of natural selection.**
- 3. (a) State Snell's law of refraction of light.**
(b) a transparent medium A floats on another transparent medium B. When a ray of light travels obliquely from A into B, the reflected ray bends away form the normal. Which of the two media A or B is optically denser and why?
- 4. (a) Why do food chains in an ecosystem do not have more than 4 to 5 trophic levels?**
(b) How much energy flows from one trophic level to next in a food chain?
- 5. (a) Write the chemical equation representing the preparation reaction of ethanol from ethane.**
(b) Name the product obtained when ethanol is oxidized by either chromic anhydride or alkaline potassium permanganate.
(c) Give an example of esterification reaction.
- 6. In a group reactivity of metals increases while those of non – metals decrease when going a group. Explain.**
- 7. (a) Name the element with atomic number 2.**
(b) A gas used in coloured advertising light having 2 valence electrons.
(c) Name a metal in making cans and member of group 14.
(d) A lustrous non – metal having 7 valence electrons.
(e) Highly reactive metal given violet colour to flame.
- 8. What is the significance of fertilization? Enumerate the method of fertilization as seen in a flowering plant.**
- 9. (a) What would be the approximate focal length of a spherical lens preferred to use while reading small letters found in a dictionary?**
(b) How can you distinguish between (i) a plane mirrors, (ii) a concave mirror?
(iii) a convex mirror, just by looking at the image formed by them?
(c) The lens prescribed by the doctor has a power equal to + 2.0 D. What does it meant?
- 10. What will be the observed colour of the sky on a planet where there is no atmosphere? Why?**
- 11. Explain why atomic number is more important than atomic weight in determining chemical properties?**
- 12. List any two observations which posed a challenge to Mendeleev's periodic law.**

13. Name the organic acid present present in vinegar. Write a chemical equation which represents the commercial method for the preparation of this acid from methanol.
14. What is the focal length of a plane mirror?
15. Element 'M' is an alkali metal and it belongs to 4th period of the periodic table. What would be its valency?
16. What is lateral inversion of an image? What is the cause of lateral inversion?
17. In what SI units is power of lens required that enables him to see distant objects clearly.
18. The far point of a myopic person is 150 cm in front of the eye. Calculate the focal length and the power of the lens required that enables him to see distant object clearly.
19. What is Tyndall Effect? Give any two ways of observation.
20. A convex lens has a focal length of 25 cm. Calculate the distance of an object from the lens if the image is to be formed on the opposite side of the lens at a distance of 75 cm from the lens. What will be the nature of the image?
21. What are fossils? What do they tell us about process of evolution?
22. Give two reasons why the constructions of Sardar Sarovar Project on the river Narmada and the Tehri Dam on the river Ganga faced opposition.
23. Where in period 2 of the Modern Periodic Table do you find:
- (a) Elements forming negative ions
(b) Elements classified as non – metals
(c) Elements forming positive ions
(d) Elements with high melting point
24. Any ray passing through the optical centre of a concave lens will:
- (a) Go undeviated
(b) Get converged at focus
(c) Retrace its path
(d) Pass through 2f
25. A small protruberance is observed in yeast cell which grows into:
- (a) abnormal growth
(b) tumour
(c) an infected area
(d) bud

Section – B

26. Budding in yeast may result in the formation of:
- (a) multicellular hyphae
(b) true mycelium
(c) mycelium
(d) pseudomycelium
27. In which mode of reproduction the identity of the parent is lost:
- (a) budding
(b) multiple fission
(c) binary fission
(d) both (A) and (C)
28. Swelling of any raisins indicate that:

- (a) external solution is isotonic
- (b) external solution is hypertonic
- (c) external solution is hypotonic
- (d) skin of raisins is impermeable

29. When you place iron in copper sulphate solution, the reddish brown coating formed on the nail is:

- (a) Hard and flaky
- (b) rough and granular
- (c) smooth and shining
- (d) soft and dull

30. 2 ml of acetic acid was added in drops to 5 ml of water it was noticed that:

- (a) a clear and homogenous solution was formed
- (b) water formed a separate layer on the top of the acid
- (c) the acid formed a separate layer on the top of water
- (d) A pink and clear solution was formed

31. To determine the focal length of a concave mirror, a student focusses a distant object using the concave mirror. The best object can be:

- (a) Sun
- (b) Classroom window
- (c) A distant tree
- (d) All of these

32. If a pencil beam is allowed to fall along the principal axis of a concave mirror, the ray will:

- (a) Deviate by 30°
- (b) Deviate by 60°
- (c) Emerge out along the principal axis
- (d) Retrace its path along the principal axis

33. A few drops of ethanoic acid were added to solid sodium carbonate. The observation made was that:

- (a) Brown fumes evolved
- (b) A hissing sound was produced
- (c) A pungent smelling gas evolved
- (d) Brisk effervescence occurred

34. Which of the following statements is correct based on above experiment?

- (a) Zinc metal is less reactive than copper sulphate
- (b) Copper and Zinc are equally reactive
- (c) Zinc is more reactive than copper
- (d) Copper and Zinc are equally reactive

35. With increase in the thickness glass slab the lateral displacement:

- (a) Remain same
- (b) Decreases
- (c) Increases
- (d) May be (A) or (B)

36. What is the inference from the experiment to determine the percentage of water absorbed by raisins?

- (a) water moves out of raisins due to exosmosis
- (b) water moves out of raisins due to endosmosis
- (c) distilled water enters raisins because of endosmosis
- (d) distilled water enters raisins because of exosmosis

37. Which of the following can be used to find focal length of a lens?

- (a) Light from sun
- (b) Light from a distant tree
- (c) Light from a window of our lab.
- (d) Object at a distance of 10 cm for a focal length of 30 cm.

38. An iron nail was kept immersed in aluminum sulphate solution. After about an hour, I was observed that:

- (a) The solution remains colourless and no deposition is observed on iron nail.
- (b) The colourless solution changed to light green
- (c) The solution becomes warm
- (d) Grey – metal is deposited on the iron nail;

39. As incident angle is increased for a given pair of medium, the refraction angle will:

- (a) Decrease
- (b) Increase
- (c) Always remains same
- (d) May increase or decrease

41. If the solute concentration of raisin is more inside then:

- (a) Endosmosis rate will be more
- (b) Endosmosis process will not occur
- (c) Endosmosis rate will be less
- (d) Endosmosis rate will be same