



ANGEL'S PUBLIC SCHOOL

SAMPLE PAPER

HALF YEARLY EXAM SESSION 2025 – 26

CLASS – X

TIME: 3 HRS

SUBJECT : SCIENCE

M.M:80

General Instructions:

- (a) This question paper consists of 39 questions in 5 sections.
- (b) All questions are compulsory.
- (c) Section A consists of 20 objective type questions carrying 1 mark each.
- (d) Section B consists of 6 Very Short questions carrying 02 marks each. Answers to these questions
- (e) should be in the range of 30 to 50 words.
- (f) Section C consists of 7 Short Answer type questions carrying 03 marks each. Answers to these
- (g) questions should be in the range of 50 to 80 words.
- (h) Section D consists of 3 Long Answer type questions carrying 05 marks each. Answer to these
- (i) questions should be in the range of 80 to 120 words.
- (j) Section E consists of 3 source– based/case– based units of assessment of 04 marks each with sub– parts

SECTION – A

1. $Y + HCl \longrightarrow ZnCl_2 + H_2$. In the above reaction, Y is:
(a) Al (b) Cu (c) Na (d) Zn
2. Which of the following type of medicine is used for treating indigestion?
(a) Antibiotic (b) Analgesic (c) Antacid (d) Antiseptic
3. A solution reacts with crushed egg shell to give a gas that can turn lime water milky.
(a) NaCl (b) HCL (c) LiCl (d) KCl
4. Rusting of Iron is example of following reaction:
(a) oxidation (b) reduction (c) displacement (d) addition
5. Lemon juice have ph value:
(a) less than 7 (b) more than 7 (c) equal to 7 (d) zero
6. On adding dilute sulphuric acid to a test tube contains a metal X, a colourless gas is produced when a burning matchstick is brought near it. Which of the following correctly represents metal X.
(a) Sodium (b) Sulphur (c) Copper (d) Silver
7. The colour of the solution observed after 30 minutes of placing iron nails to copper sulphate solution is:
(a) blue (b) colourless (c) green (d) brown
8. Generally food is broken and absorbed within the body of organisms. In which of the following organisms is it done outside the body?
(a) Amoeba (b) Mushroom (c) Paramecium (d) Lice
9. Receptors are usually located in sense organs. Gustatory receptors are present in:
(a) tongue (b) nose (c) eye (d) ear

10. A farmer wants to grow banana plants genetically similar enough to the plants already available in his field. Which one of the following methods would you suggest for this purpose?
- (a) Regeneration (b) Budding
(c) Vegetative propagation (d) Sexual reproduction
11. This hormone is not a growth inhibitor:
- (a) Cytokinin (b) Absciscic acid (c) Ethylene (d) IAA
12. A sportsman, after a long break of his routine exercise, suffered muscular cramps during a heavy exercise session. This happened due to:
- (a) lack of carbon dioxide and formation of pyruvate.
(b) presence of oxygen and formation of ethanol.
(c) lack of oxygen and formation of lactic acid.
(d) lack of oxygen and formation of carbon dioxide.
13. A full length of the Image of a distant tall building can be seen using.
- (a) Convex merrier (b) Plane mirror (c) Concave mirror (d) None of these
14. The change in the focal length of an eye lens is cases by the action of the.
- (a) Pupil (b) retina (c) iris (d) ciliary muscle
15. The brain is responsible for:
- (a) Balancing (b) Thinking (c) Regulating the heart beat (d) All of the above
16. The hormone that is released from the testes is ____.
- (a) Progesterone (b) Vasopressin (c) Testosterone (d) None of the above
- Question No. 17 to 20 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:
- (a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, and R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true
17. **Assertion** : Rusting of iron is exothermic in nature
Reason : As reaction is slow, the release of heat is barely evident
18. **Assertion**: Asexual reproduction involves formation of clones of an organism.
Reason: Clones are morphologically and genetically similar individuals.
19. **Assertion** : Clear sky is blue
Reason : Blue colour has shorter wavelength and it scattered most.
20. **Assertion**: The name 'master endocrine gland of body' is given to the pituitary gland.
Reason: Hypothalamus controls over the master gland.

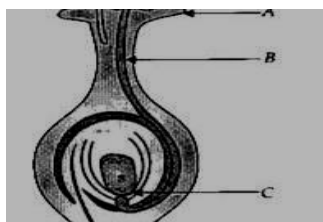
SECTION - B

21. A shiny brown coloured element X on heating in air becomes black in colour . Name the element X and the black coloured compound formed?
22. What is the purpose of making urine in the human body? Name the organs that stores and releases the urine.

OR

Why do arteries have thick and elastic walls whereas veins have valves?

23. Observe the diagram and label the parts marked (a), (b) and (c)



24. Why does a light ray incident on a rectangular glass slab immersed in any medium emerges parallel to itself? Explain using a diagram.

25. Why do we see a rainbow in the sky only after rainfall?

OR

What happens to the Image distance in the eye when we increase the distance of the object from the eye.

26. Write two different ways in which glucose is oxidised to provide energy in human body. Write the products formed in each case.

SECTION – C

27. Explain Chloro- alkali process and preparation of plaster of Paris with suitable chemical reaction.

28. With suitable chemical reactions explain why sodium bicarbonate is used in:

(a) fire extinguisher (b) baking industry

29. We are advised to take iodised salt in our diet by doctors. Justify its importance in our body.

30. What is the probability of a girl or a boy being born in a family? Justify your answer.

31. A 4.5 cm needle is placed 12 cm away from a convex mirror of focal length 15cm. Give the location of the Image and its magnification.

32. (a) Why we prefer a convex mirror as rear view mirror in a vehicle.

(b) Light enters from air to glass plate having refractive index 1.5. What is the speed of light in glass.

33. (a) Why does a ray of light bend when it travels from the one medium to another.

(b) Calculate the distance at which an object should be placed from a their convex lens of focal length 10 cm to obtain a virtual Image of double its size.

SECTION – D

34.(a) Equal lengths of magnesium ribbons are taken in test tube A and B . HCl acid is added to test tube (A) while acetic acid is added to test tube (B). Amount and concentration taken for both acids are same .In which test tube will the fizzing occurs more vigorously and why?

(b) Explain briefly the preparation of washing soda.

35. Given below are certain situations. Analyze and describe its possible impact on a person:

(a) Testes of a male boy are not able to descend into scrotum during his embryonic development.

(b) Vas deferens of a man is plugged.

(c) Prostate and seminal vesicles are not functional.

(d) Egg is not fertilised in a human female.

(e) Placenta does not attach to the uterus optimally.

OR

(a) A doctor has advised Sameer to reduce sugar intake in his diet and do regular exercise after checking his blood test reports. Which disease do you think Sameer is suffering from? Name the hormone responsible for this disease and the organ producing the hormone.

(b) Which hormone is present in the areas of rapid cell division in a plant and which hormone inhibits the growth?

36. (a) What is depression of white light? What is its cause? Draw a diagram to show the depression of white light by a glass prism?
 (b) Explain why glass slab does not show dispersion while glass prism does?

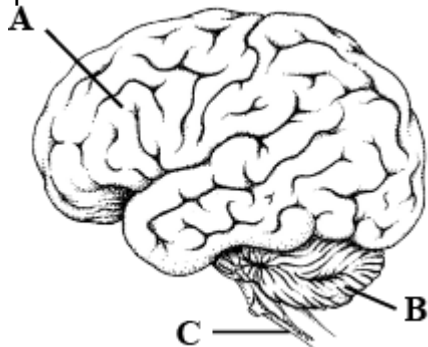
SECTION – E

37. (a) Perform an activity to prove evolution of carbon dioxide gas when acid reacts with metal carbonate

Explain with well labelled diagram and chemical reaction.

- (b) How concentration of hydroxide ion is affected when excess base is dissolved in a solution of sodium hydroxide .

38. The diagram given below is an external view of the human brain. Study the same and answer the questions:



- (a) Label the parts a, b, c.
 (b) State the main functions of the parts labelled a and b.
 (c) Mention the collective term for the membranes covering the brain.
 (d) What is the function of Cerebrospinal fluid?
39. (a) We wish to obtain an equal sized inverted image of a candle flame on a screen kept at a distance of 4m from the candle flame.
 (i) What type of lens should be used.
 (a) convex (b) concave (c) Both (a) and (b) (d) cannot say
 (ii) The distance of the candle from the lens is.
 (a) 1m (b) 2 m (c) 3 m (d) 4 m
 (b) Draw the ray diagram for the above situation