

NEW STANDARD ACADEMY

Exam

Date : 10-07-23

CLASS : 10TH

Marks: 60

Time: 90:MIN

PHYSICS

1. Why is blind spot so called?
2. What is meant by persistence of vision?
3. (a) Explain how a normal human eye is able to see distinctly the object placed at a distance as well as those placed at a nearer distance.
(b) What is the far point and near point of a normal human eye?
4. List two causes leading to myopia of the eye. Draw ray diagrams to show the image formation in case of defective eye and corrected eye.
5. List four common defects of vision that can be corrected with the use of spectacles.
6. (a) A student is unable to see clearly the worlds written on the blackboard placed at a distance of approximately 3 m from him. Name the defect of vision the boy is suffering from State the possible causes of this defect and explain the method of correcting it.
(b) Why do stars twinkle? Explain.
7. A 4.5 cm needle is placed 12 cm away from a convex mirror of focal length 15 cm. Give the location of the image and its magnification.

CHEMISTRY

8. On heating blue coloured powder of copper(II) nitrate in a boiling tube, copper oxide(black), oxygen gas and a brown gas X is formed.
 1. Write a balanced chemical equation of the reaction.
 2. Identify the brown gas X evolved.
 3. Identify the type of reaction.
 4. What could be the pH range of aqueous solution of the gas X?
9. Point out the oxidizing and reducing agents in the following reactions:
$$\text{SO}_2 + 2\text{HNO}_3 \rightarrow \text{H}_2\text{SO}_4 + 2\text{NO}_2$$
10. Give two important uses of washing soda and baking soda.
11. The marble statues are often slowly corroded when kept in open for a long time. Give suitable reason.
12. While eating food, you happen to spill some curry on your white shirt. You immediately scrub it with soap. What happens to its yellow colour on scrubbing with soap? Why? What happens to this stain when the shirt is washed

with plenty of water?

13. How would you distinguish between baking powder and washing soda by heating?

BIOLOGY

14. Why is abscisic acid known as stress hormone?
15. Why is the use of iodised salt advisable?
16. How does our body respond when adrenaline is secreted into the blood?
17. Why are some patients of diabetes treated by giving injections of insulin?
18. A. Name the master gland of the body.
B. Name the hormone secreted by human testes. State its functions.
19. A. Name the disease, which is caused due to deficiency of insulin.
B. Name the hormone secreted by human ovaries. State its functions.
20. A boy was not able to gain height. The doctor diagnosed that it is due to deficiency of a hormone. Name the hormone and the gland which secretes this hormone. Which disease is he suffering from?

MATHS

21. The point P is equidistant from A(1, 3), B(-3, 5) and C(5, -1) then PA is equal to-
22. The mid-points of sides AB, BC, CA of a Δ ABC are (6, -1), (-4, -3), (2, -5) respectively then centroid of Δ ABC is:
23. Circumcentre of the triangle whose vertices are (1, 0), (3, 0) and (1, 6) is
24. If the distance between the points (4, p) and (1, 0) is 5, then find p.
25. The vertices of a triangle are (6, 0), (0, 6) and (6, 6), the distance between its circumcentre and centroid is
26. Vertices of a quadrilateral ABCD are A (1, 2), B (4, 6), C (8, 9) and D (5, 5). Then quadrilateral ABCD is
27. The line segment joining the points (1, 2) and (k, 1) is divided by the line $3x + 4y - 7 = 0$ in the ratio 4 : 9, then k is

28. If coordinates of the mid points of the sides of a triangle are $(1, -1)$, $(2, 3)$ and $(3, 2)$ then area of the triangle is-
29. The line segment joining the points $(-3, -4)$ and $(1, -2)$ is divided by y-axis in the ratio-
30. The extremities of the diagonal of a parallelogram are the points $(3, -4)$ and $(-6, 5)$. Third vertex is the point $(-2, 1)$, then the fourth vertex is-

