

SWAMI VIVEKANANDA MATRIC HR.SEC.SCHOOL, PERAMBALUR

STD: X

TIME: 3.00 HRS

SUB: SCIENCE

MARKS: 75

PART – AI. CHOOSE THE BEST ANSWER

20 X 1 =20

1. To produce a displacement ----- is required.

- a) Velocity b) Force c) Impulse d) Momentum

2. Newton's III law is applicable -----?

- a) for a body is at rest b) for a body in motion c) both a and b d) only for bodies with equal masses

3. Inertia of a body depends on -----? a) Weight of the object b) Mass of the object

- c) both a and b d) acceleration due to gravity of the planet

4. Magnification of a convex lens is -----?

- a) Positive b) Negative c) Zero d) Either positive (or) negative

5. Amount of light entering into the eye is controlled by -----?

- a) Pupil b) Eye lens c) Iris d) Cornea

6. The eye defect 'Presbyopia' can be corrected by -----?

- a) Concave lens b) Convex lens c) Bifocal lens d) Concave mirror

7. Atomicity of phosphorous is -----? a) 3 b) 4 c) 6 d) 7

8. Which of the following is a triatomic molecule ?

- a) Glucose b) Carbon – di – oxide c) Helium d) Hydrogen

9. Casparian strips are in the ----- of the root.

- a) Cortex b) Pith c) Pericycle d) Endodermis

10. The endarch condition is the characteristics feature of -----?

- a) Root b) Leaves c) Stem d) Stem

11. Which factors affecting photosynthesis are -----?

- a) Water b) Pigments c) Leaf age d) all of the above

12. The body of leech has -----?

- a) 33 segments b) 23 segments c) 30 segments d) 38 segments

13. The brain of leech lies above the -----?

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- a) Mouth b) Buccal cavity c) Pharynx d) Crop
14. Which is used edit programs -----?
- a) Ink scape b) Script editor c) Stage d) Spirite
15. Where you will create category of blocks?
- a) Black menu b) black palette c) Script area d) Sprite
16. ----- are used in wide angle spy hole in doors.
- a) Concave lens b) Convex lens c) Bifocal lens d) Concave mirror
17. Acceleration of an object will increases as the net forces increases depending on its-----?
- a) Volume b) Mass c) Shape d) Density
18. The scattering of light by colloidal particles is ----- scattering.
- a) Reyleigh b) Mie c) Raman d) Tyndall
19. Leucoplasts are ----- plastids.
- a) Coloureless b) Yellow c) Orange d) Red
20. ----- is the largest portion of the alimentary canal of the leech.
- a) Mouth b) Buccal cavity c) Pharynx d) Crop

PART -B

ANSWER ANY 10 QUESTIONS. Q.NO 30 IS COMPULSORY.

10 X 2 = 20

21. Write the external apertures of leech?
22. (a) Give the common of the 'Hirudinaria granulosa'. (b) How does leech respire?
23. Write the role of sunlight in Photosynthesis?
24. What is respiratory quotient?
25. Draw and Label the structure of Oxysomes?
26. Calculate the number of water molecule present in one drop of water weighs 0.18 g.
27. Define atomicity?
28. How does an astronaut float in a space shuttle?
29. What is balanced unbalanced force?
30. A door is pushed at a point whose distance from the hinges is 90 cm, with a force of 40 N. Calculate the moment of the force about the hinges?
31. State the principle of moments?

32. What are causes of Myopia?
33. Why are traffic signals red in colour?
34. Write about the medicinal value of leech?
35. Draw a ray diagram to show the image formed by convex lens when the object is between F and 2F.

PART -C

ANSWER ANY 8 QUESTIONS. Q.NO 40 IS COMPULSORY.

8 X 4 = 32

36. State the universal law of gravitation and derive its mathematical expression?
37. State Newton's law of motion.
38. Explain the rules for obtaining image formed by a convex lens with the help of ray diagram.
39. An object is placed at a distance 10 cm from a convex lens of focal length 20 cm. Find the image distance and nature of the image.
40. Calculate the %relative abundance of B-10 and B-11,if its average atomic mass 10.804 amu.
41. Give the salient features of 'Modern atomic theory'
42. Which is called ATP factory of the cell and write its functions.
43. Describe the structure and functions of chloroplast?
44. List out the parasitic adaptations of leech?
45. Explain the circulatory system of rabbit with labelled diagram.
46. Differentiate the following (a) monocot and dicot root (b) Aerobic and Anaerobic respiration.
47. Write the advantages and disadvantages of telescope?

PART -D

ANSWER THE ALL QUESTIONS.

4 X 7 = 28

48. (a) Explain the construction and working of compound microscope (b) Write the uses of simple microscope (OR)
- (a) Differentiate the eye defects: Myopia and Hypermetropia (b) Differentiate convex and concave lens?
49. (a) State and prove the law of conservations of linear momentum? (b) Describe the rocket propulsion? (OR)
- (a) Derive the relation between relative molecular mass and vapour density?
- (b) Calculate the number of moles of a sample that contains 12.046×10^{23} atoms of iron?
50. (a) Write a short note on mesophyll (b) Differentiate monocot and dicot stem? (OR)
- (a) Describe and name three stages of cellular respiration that aerobic organisms use to obtain energy from glucose?
- (b) Write the reaction for photosynthesis? (c) Name the phenomenon by which carbohydrates are oxidized to release ethyl alcohol?
51. Explain about external morphology of rabbit with labelled diagram. (OR)

Explain the male and female reproductive system of leech with labelled diagram.

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PGT IN PHYSICS

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