

ANGEL'S PUBLIC SCHOOL

SAMPLE PAPER

PERIODIC TEST – II SESSION 2023 – 24

CLASS – X CODE – 086

SUBJECT : SCIENCE

TIME : 2 HRS

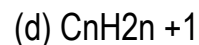
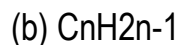
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General Instruction.

- (a) All questions are compulsory.
- (b) Section –A contains questions number 1 to 8, multiple choice question of 1 mark each.
- (c) Section – B contains questions number 9 to 12, short answer type questions of 2 marks each.
- (d) Section - C contains questions number 13 to 15, long answer questions of 3 marks each.
- (e) Section – D contains questions number 16 to 18, very long questions of 5 marks each.

SECTION – A

1. Image formed by a convex mirror is_____. (8x1=8)
(a) virtual (b) real (c) enlarged (d) inverted
2. A convex lens has focal length of 50 cm its power is_____.
(a) 2D (b) 4 D (c) 5 D (d) 9 D
3. Light travel fastest in_____.
(a) water (b) Air (c) glass (d) Diamond
4. In an ecosystem:
(i) The flow of energy is unidirectional.
(ii) The flow of material is unidirectional
(iii) The flow of material is cyclic.
(iv)The flow of energy is cyclic.
(a) i, ii (b) ii, iii (c) i, iv (d) (i)
5. The theory of evolution of species by natural selection was given by –
(a) Mendel (b) Darwin (c) Dalton (d) Lamarck
6. Self linking property of carbon is known as _____.
(a) conjugation (b) catenation (c) isomerism (d) allotropy
7. General formula of Alkene is _____.



8. Define allotropy? Write allotropic form of carbon.

SECTION – B

(4x2=8)

9. Give two basic difference between real and virtual Image.

10. A husband has 46 chromosomes and his wife has 46 chromosomes. Then why does not their offsprings have 46 pair of chromosomes which is obtained by fusion of female and male gametes.

11. Write the harmful effects of ozone depletion.

12. What is isomerism? Draw all the possible isomers of Pentane.

SECTION – C

(3x3=9)

13. Define 10% law of energy with an example.

14. A convex mirror has focal length of 20 cm. At what distance from the mirror should a 4 cm tall object be placed so that it form an image at a distance of 50 cm from the mirror. Also calculate the size of the Image formed.

15. If 1200 joules of energy is available at producer level(plants) then how much energy will be transferred to the lion in the following food chain?

Plants → goat → lion

SECTION – D

(5x3=15)

16. (a) Draw a diagram to show lateral displacement on what factor it depends.

(b) An object 5 cm in length is held 25 cm away from a converging lens of focal length 10cm. Draw the ray diagram and find the position nature and size of the Image formed.

17. A tall plant with red flowers (dominant) is crossed with a dwarf plant with white flowers (recessive). Work out a dihybrid cross and state the dihybrid ratio. What will be the effect on the dihybrid ratio if the two genes are interacting with each other?

18. (a) Define esterification. Write its chemical equation.

(b) Write the molecular formula and structural formula of acetone and acetic acid.