ANGEL'S PUBLIC SCHOOL

Strive for Perfection

SAMPLE PAPER

PERIODIC   TEST – II   SESSION 2025 – 26

CLASS – X

TIME : 1:30 HRS   SUBJECT – SCIENCE   M.M:40

General instructions:

(a) This question paper consists of 19 questions divided in to 3 sections. Section A is Biology, Section B is Chemistry and Section C is Physics.

(b) All questions are compulsory.

SECTION – A (BIOLOGY)

1. Mendel conducted his famous breeding experiments by working on the following: (1)

   (a) Drosophila   (b) Escherichia Coli

   (c) Pisum sativum   (d) All of these

2. In peas, a pure tall (TT) is crossed with a pure short plant(tt). What will be the ratio of pure tall plants to pure short plants in the F2 generation is?   (1)

   (a) 1:3   (b) 3:1   (c) 1:1   (d) 2:1

3. List any two biotic components of the biosphere.   (1)

4. What is ozone and how does it affect an ecosystem?   (2)

5. Write a difference between inherited traits and acquired traits give one example of each.   (2)

6. Why is the F_1 progeny always tall plants, when a tall plant is crossed with a short pea plant?   (3)

7. If a grass (producer) has 10,000 J of solar energy available. How much energy will be transferred to the deer (primary consumer) and then to the lion (secondary consumer)?   (4)

SECTION – B (CHEMISTRY)

8. What is the general formula of alkene.

   (a) C_nH_{2n} (b) C_nH_{2n-2} (c) C_nH_{2n+2} (d) C_nH_{2n+1}

9. Define Allotropy.

10. Define minerals and ores.

11. Write one alloy, each of Aluminium and zinc also write their molecular formula.

12. (a) Give one difference between diamond and graphite.

(b) Differentiate between ionic bond and covalent bond.

13. (a) Define isomerism? Draw all the possible isomers of butane.

(b) What do you mean by concentration of ore.

(c) Explain electrolytic reduction process of sodium.

SECTION – C (PHYSICS)

14. An electric bulb is rated 220 v & 100W. When it is operated on 110 v, the power consumed will be. (1)

(a) 100 w   (b) 75 w   (c) 50 w   (d) 25 w

15. The unit of electric power may also be expressed as: (1)

(a) Volt-ampere   (b) Kilowatt hour   (c) Watt Second   (d) Joule sec

16. In a circuit, the current becomes half when the resistance is. (1)

(a) removed   (b) doubled   (c) halved   (d) three time

17. (a) Why is the series arrangement not used for domestic circuit?

(b) Why tungsten filament is used for incandescent bulb. (2)

18. (a) 100 j of heat are produced each second in 4 Ω resistance. Find the potential difference

across the resistor.

(b) Three resistors of 6 Ω, 2 Ω and x are connected in series to a cell of emf 1.5v. The current in

the circuit is (1/6) A. Calculate the value of x. (3)

19. (a) (i) Current through each resistor   (ii) Total current in the circuit.

(iii) Total resistance of the circuit
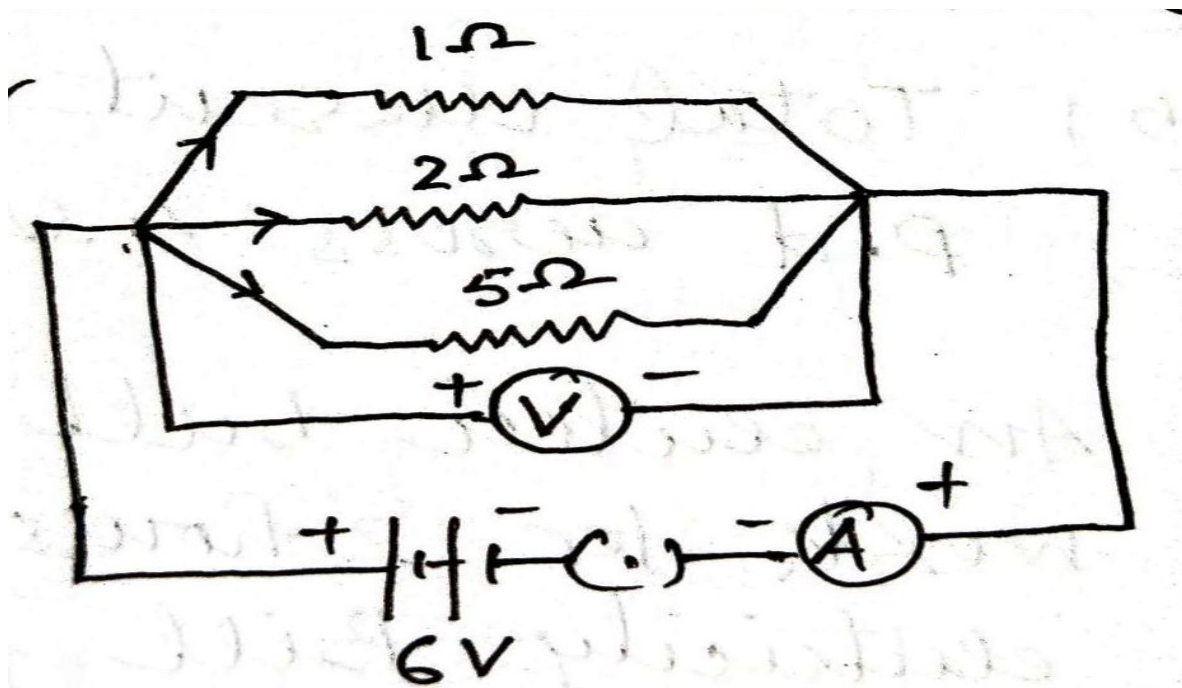
(b) An electric iron has a rating of 750w, 220 v. Calculate (i) current passing through the circuit.

(ii) its resistance when in used.   (3+2=5)