CONTINUOUS & COMPREHENSIVE EVALUATION
Model paper-1
Summative assessment 2019
General Science Paper – I
(Physics Science)
Part – A&B

| **Class: X** | **(Max. Marks: 40)** | **Time: 2.45 Hrs.** |

General instructions:
  i) This question paper contains I, II, III and IV sections.
  ii) In section-III, every question has an internal choice. Answer any one alternative.
  iii) Answer all questions from the given four sections.
  iv) Read the following question paper and understand every question thoroughly.
  v) 15 minutes time is allotted for this.

Part –A
Section – I

Note: i) Answer the following questions.
   ii) Each question carries 1 mark.
   iii) Write answers in 1-2 sentences for each question.   **7×1=7**

   1. Find the resultant potential difference from the given figure based on loops law.
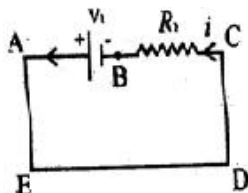
   2. Why is the normal eye unable to focus on an object placed with in 10cm from the eye?
   3. Sodium atom loses one electron and forms cation, chlorine atom gains one electron and forms anion. What are the factors that influence formation of cation and anion?
   4. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?
   5. Why lanthanoids and actinoids are placed separately at the bottom of the periodic table?
   6. Based on reactivity, arrange the given metals in descending order of their reactivity
      K, Na , Mg , Zn, Fe, Cu, Ag, Ca, Pb, Al, Au
   7. Guess the element if it has quantum number of differentiating electrons are
      $n = 2, l = 1, m_l = 0 , m_s = +1/2$.

Section – II

Note:
  i)   Answer all the questions.
  ii)   Each question carries 2 marks.
  iii)   Write the answers in 4-5 sentences.   **6× 2 =12**

   8. Given below is the electronic configuration of elements A, B, C, D
      A. $1s^2 2s^2$ i. Which are the elements coming within the same period?
      B. $1s^2 2s^2 2p^6 3s^2$ ii. Which are the elements coming from the same group?
      C. $1s^2 2s^2 2p^6 3s^2 3p^3$ iii. Which are the noble gas elements?
      D. $1s^2 2s^2 2p^6$ iv. To which period and group does the element 'C'belong?
   9. Fill the table with suitable answers.

l	Sub shell	Number of degenerated orbitals	Max.No.of Electrons
0	s		2
1		3	
2	d		10

   10. Draw the structure of Buta-1,2-diene and Pentane-2-one compounds .
   11. A boy uses spectacles of focal length -60cm.Name the defect of vision he is suffering from. Which lens is used for the correction of this defect? Compute the power of a lens.

12. Where will the image form when we place an object on the principal axis of a concave mirror at a point between focus and centre of curvature? Draw the ray diagram.
13. What is thermite process? Mention its applications in daily life.

Section – III

Note:
i)   **Answer all the questions.**
ii)   **Each question carries 4 mark.**
iii)   **In this section, internal choice is there. Answer any one alternative.**
iv)   **Answer each question in 8 to 10 sentences.**   **4×4 = 16**

14. Draw and write the differences between the structure of diamond and graphite.

(or)

Explain the underlying principle and working of an electric generator with the help of a labelled diagram. What is the function of brushes?

15. Write an activity to show that all metal carbonates and hydrogen carbonates react with acids to give a corresponding salt.

(or)

How do you verify experimentally that the focal length of a convex lens is increased when it is kept in water? Write experimental procedure, material required, precautions.

16. What is meant by refining of metals? Name the most widely used method of refining impure metals produced by various reduction processes. Describe with the help of a labelled diagram how this method maybe used for refining of copper.

(or)

a) What is meant by the power of accommodation of an eye?

b) A person with a myopic eye cannot see objects beyond 1.2 m directly. What should be the type of the corrective lens used? What would be its power?

17. The position if eight elements in the Modern Periodic Table is given below where atomic number of elements are given in the parenthesis.

Period No.	Group 1	Group 2
2	Li(3)	Be(4)
3	Na(11)	Mg(12)
4	K(19)	Ca(20)
5	Rb(37)	Sr(38)

a) Write the electronic configuration of Ca.
b) Predict the number of valence electrons in Rb.
c) Predict whether K is a metal or non-metal.
d) Arrange Be, Ca, Mg and Rb in the increasing order of the size of their respective atoms.

(or)

Sudhakar recorded several readings of voltage and current across a material wire using voltmeter and ammeter in a table and the graph plotted using the values in the table is given as follows.
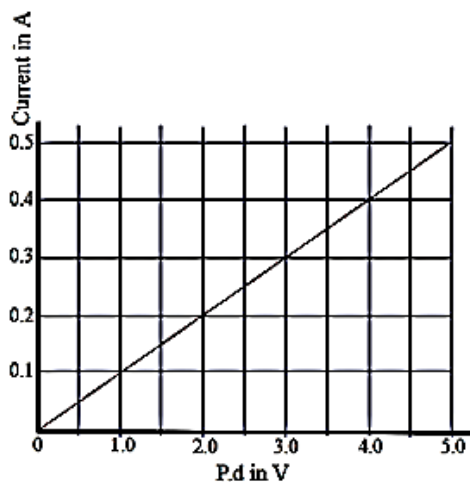
He represented the voltage (V) in volts and current (I) in amperes while plotting graph. Then answer the following basing on the information given in the graph.

    i) What kind of material sudhakar used in this experiment.

    ii) Calculate the resistance of material wire.

    iii) Calculate the power consumed by the wire when a p.d of 20V applied across it.

    iv) Write the principle present in the given graph.

Part – B

Section – IV

Note: **10x½=5**

i)   **Answer all the questions.**

ii)   **Write the CAPITAL LETTER (A/B/C/D) showing the correct answer for the following questions in the brackets provided against them.**

iii)   **Each question carries ½ mark.**

18. Electronic configuration of Alkali metal family is _____   (   )

    (A) ns^2 (B) ns^2np^1 (C) ns^2np^4 (D) ns^1

19. Size of image formed by a convex mirror is always   (   )

    (A) enlarged   (B) diminished

    (C) equal to the size of object   (D) depends on position of object

20. The focal length of lens is equal to the radius of curvature of symmetrically convergent lens then the refractive index is equal to _____.   (   )

    (A) 0   B) 1.5   (C) 1   (D) 2

21. Three resisters R_1 Ω, 4 Ω and 8 Ω are connected in series in a circuit. If the resultant resistance in the circuit is 20 Ω then the value of R_1 is _____   (   )

    (A) 8 Ω   (B) 6 Ω   (C) 9 Ω   (D) 99 Ω

22. Which of the following correctly describes the magnetic field near a long straight wire?   (   )

    (A) The field consists of straight lines perpendicular to the wire.

    (B) The field consists of straight lines parallel to the wire.

    (C) The field consists of radial lines originating from the wire.

    (D) The field consists of concentric circles centred on the wire.

23. The oil used in the froth floatation process is _____   (   )

    (A) kerosene oil   (B) pine oil   (C) coconut oil   (D) olive oil

24. The distance between eye lens and retina is about _____   (   )

    (A) 2.5 cm   (B) 25 cm   (C) 2.27 cm   (D) 2 cm

25. The distance between eye lens and retina is about _____   (   )

    (A) 2.5 cm   (B) 25 cm   (C) 2.27 cm   (D) 2 cm

26. Colour of methyl orangein alkali conditions   (   )

    (A) Orange   (B) Yellow   (C) Blue   (D)Red

27. The bond present in $CaCl_2$ _____   (   )

    (A) ionic   (B) covalent   (C) polar covalent   (D) metallic bond

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