

ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ ಸಂಖ್ಯೆ :
Q.P. Sl. No. :

ಮಾರ್ಚ್/ಏಪ್ರಿಲ್ 2026 ರ ಪರೀಕ್ಷೆ-1
MARCH/APRIL 2026 EXAMINATION-1

ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 16]

Total No. of Printed Pages : 16]

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 38]

Total No. of Questions : 38]

A

**CCE RF/RR/
PF/PR**

ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E**

Code No. : **83-E**

ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE

(ಭೌತ ವಿಜ್ಞಾನ, ರಸಾಯನ ವಿಜ್ಞಾನ ಮತ್ತು ಜೀವ ವಿಜ್ಞಾನ / Physics, Chemistry & Biology)

(ಆಂಗ್ಲ ಮಾಧ್ಯಮ / English Medium)

(ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / ಶಾಲಾ ಪುನರಾವರ್ತಿತ ಅಭ್ಯರ್ಥಿ / ಖಾಸಗಿ ಅಭ್ಯರ್ಥಿ /

ಖಾಸಗಿ ಪುನರಾವರ್ತಿತ ಅಭ್ಯರ್ಥಿ)

(Regular Fresh / Regular Repeater / Private Fresh / Private Repeater)

ದಿನಾಂಕ : 23. 03. 2026]

[Date : 23. 03. 2026

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 10-00 ರಿಂದ ಮಧ್ಯಾಹ್ನ 1-15 ರವರೆಗೆ] [Time : 10-00 A.M. to 1-15 P.M.

ಗರಿಷ್ಠ ಅಂಕಗಳು : 80]

[Max. Marks : 80

General Instructions to the Candidate :

Cut here / ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

1. There are *three* parts in the question paper :
Part A : Physics, Part B : Chemistry, Part C : Biology.
2. This question paper consists of 38 questions in all.
3. This question paper has been sealed by reverse jacket. **You have to cut on the right side to open the paper** at the time of commencement of the examination (**Follow the arrow mark**). **Do not cut the left side to open the paper.** Check whether all the pages of the question paper are intact.
4. Follow the instructions given against the questions.
5. Figures in the right hand margin indicate maximum marks for the questions.
6. The maximum time to answer the paper is given at the top of the question paper. It includes 15 minutes for reading the question paper.

PART – A
(PHYSICS)

- I. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.

$2 \times 1 = 2$

1. The power of a lens is + 2D. Then the focal length of that lens is

- (A) 0.5 m (B) 2 m
(C) 0.2 m (D) 5 m



2. The resistivities of some materials at 20°C are given in the table below :

<i>Materials</i>	<i>Resistivity (Ωm)</i>
K	2.63×10^{-8}
L	5.20×10^{-8}
M	1.60×10^{-8}
N	6.84×10^{-8}



The best conductor of electricity among these materials is

- (A) N (B) K
(C) M (D) L



II. Answer the following questions :**2 × 1 = 2**

3. Write the symbol diagram of the following components used in the electric circuit :



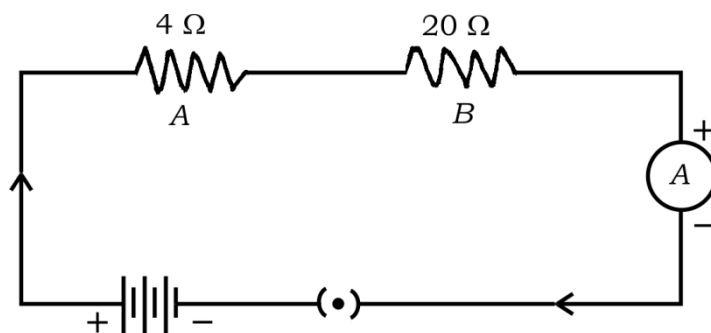
- i) Rheostat
- ii) Wire crossing without joining

4. How many times the magnetic field produced by a circular coil of a conductor having 5 turns is larger than the magnetic field produced by a coil of 1 turn ?

**III. Answer the following questions :****3 × 2 = 6**

5. Observe the figure given below. Among the resistors *A* and *B*, through which of the resistors more current flows ?

Give reason for your answer.



6. What is the colour of danger signal lights ? Why is that colour used ?



7. a) State Fleming's left hand rule.
- b) What is the potential difference between the live wire and the neutral wire in domestic electric circuit in our country ?

IV. Answer the following questions :

3 × 3 = 9

8. What is presbyopia ? What are the reasons for this defect ? Suggest a remedy for this defect.



OR

What is short-sightedness ? What are the reasons for this defect ? How can this defect be corrected ?

9. What is fuse ? What are the reasons for causing overload and short circuit in an electric circuit ?

OR



What is earth wire ? Explain the function of the earth wire.

10. Draw the ray diagram that shows the image formation when an object is kept at 'C' of a concave mirror. Write the nature of the image formed.



[C : Centre of curvature]

V. Answer the following questions :

2 × 4 = 8

11. a) State the laws of refraction of light.
- b) Mention any two differences between convex mirror and convex lens.



OR

- a) What is magnification ? Write the formula used to calculate the magnification of the image produced by a lens.
- b) State the laws of reflection of light.
12. Two resistors having resistance $2\ \Omega$ are first connected in series and then in parallel in an electric circuit to a potential difference of 6 V. Find the electric power of this circuit in series and parallel combinations.



PART – B
(CHEMISTRY)

VI. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.

3 × 1 = 3

13. The gas liberated when dilute sulphuric acid is added to zinc is

- (A) Oxygen (B) Hydrogen
(C) Nitrogen (D) Chlorine

14. To make pure iron hard and strong,

- (A) it will be fused with some other metals
(B) anodisation will be done
(C) zinc will be added
(D) carbon will be added in definite proportion

15. The unique property of carbon to form a large molecule by forming bonds with other carbon atoms is

- (A) Tetravalency (B) Inflammability
(C) Catenation (D) Allotropism

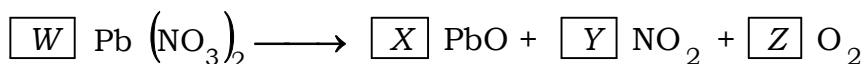


VII. Answer the following questions :**3 × 1 = 3**

16. How many single and double bonds are present in C_3H_7COOH molecule ?



17. Observe the given equation.



Which numbers respectively will be in the positions W, X, Y and Z when this equation is balanced ?

18. Which metal among aluminium and copper is used as reducing agent in the extraction of manganese metal ?
Why ?

**VIII. Answer the following questions :****3 × 2 = 6**

19. While diluting an acid, water should not be added to acid.
Why ?
20. Write the name, molecular formula and structural formula of the compound obtained when one hydrogen atom of ethane is replaced by $-CHO$ group.
21. Write any two differences between roasting and calcination.

OR

Show the formation of sodium chloride molecule by the transfer of electrons with the help of electron dot diagram.

IX. Answer the following questions :**3 × 3 = 9**

22. Write the molecular formula of the following compounds and mention two uses of each :



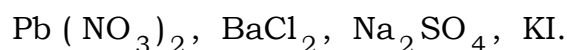
- i) Washing soda
- ii) Plaster of Paris.

OR

- a) What is water of crystallisation ?
- b) Name the salts used in the following.
 - i) In fire extinguishers
 - ii) Bleaching of wood pulp in paper factories.



23. Observe the solutions of compounds given below and answer the following questions :



- a) Which solutions are to be reacted with each other to get white precipitate ? Mention the type of this reaction.
- b) Which positive and negative ions combine to form this precipitate ?



24. Draw the diagram of the arrangement of the apparatus used to show the action of steam on a metal. Label the following parts :



- i) Metal sample
- ii) Delivery tube

X. Answer the following question :

1 × 4 = 4

25. a) Carbon could not form C^{4-} anion or C^{4+} cation. Why ?



- b) Explain the mechanism of the cleaning action of soap.

OR

- a) Write the electron dot structures of the following molecules :

- i) Nitrogen molecule

- ii) Ethene molecule.



- b) Explain the oxidation reaction of converting ethanol into ethanoic acid.

PART – C

(BIOLOGY)

XI. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.

**3 × 1 = 3**

26. The important role of stomata in transportation of water is

- (A) performing continuous transpiration
- (B) absorbing carbon dioxide
- (C) releasing oxygen
- (D) creating upward tension

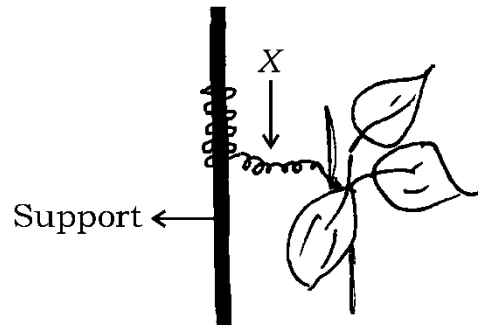


27. As the food moves forward in the human digestive system the enzymes that help for the digestion respectively are

- (A) Pepsin → Trypsin → Lypase
- (B) Amylase → Pepsin → Lypase
- (C) Lypase → Amylase → Trypsin
- (D) Trypsin → Pepsin → Amylase



28. Observe the given diagram. The response shown by part X is



- (A) Positive thigmotropism and directional movement
- (B) Positive geotropism and independent movement
- (C) Positive phototropism and non-directional movement
- (D) Positive chemotropism and independent movement

XII. Answer the following questions :



3 × 1 = 3

29. Draw the diagram that shows the germination of pollen on stigma.

30. Identify the group of plants that can be grown by vegetative propagation among the following.



P : Rose, Jackfruit, Bryophyllum

Q : Money plant, Mustard, Watermelon

R : Banana, Rose, Hibiscus

S : Papaya, Hibiscus, Mustard.



31. The number of male turtles in the sea shore is decreasing nowadays. What is the reason for this ?

XIII. Answer the following questions :

2 × 2 = 4

32. Name the glands that secrete the following hormones and mention the function of these hormones.

i) Insulin

ii) Thyroxin.



OR

Mention two important plant hormones that help for the growth of the stem. Give an example for the hormone that stops the growth of the plant.



33. The rate of respiration is more in which organism among Human and Fish ? Why ?

XIV. Answer the following questions :

3 × 3 = 9

34. Mention the function of each part of the human brain given below :

- i) Cerebrum (Forebrain)
- ii) Cerebellum
- iii) Medulla



35. a) Define the following :

- i) Food chain
- ii) Biomagnification.

- b) Mention the importance of ozone.

OR



a) What are biodegradable substances ? Write two examples for decomposers.



b) Which synthetic chemical is responsible for the depletion of the ozone layer ?

36. A red flowering pea plant (RR) is crossed with a white flowering pea plant (rr). Show the result of F_2 generation with the help of checker board. Write the phenotypic and genotypic ratio of the plants obtained in F_2 generation.

XV. Answer the following question :



$1 \times 4 = 4$

37. Draw the diagram that shows the cross-section of human heart and label the following parts :

- i) Septum
- ii) Right atrium.

XVI. Answer the following question :

$1 \times 5 = 5$

38. a) How does a fertilized egg develop into a foetus in the female uterus ? How does the embryo get nourishment in mother's womb ? Explain.



- b) What are the changes that occur in a flower after fertilization ?



OR

- a) List any two methods of contraception that human beings usually follow.
- b) How does menstrual cycle occur ? Explain.
- c) Write any two differences between self and cross pollination.



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83-E 10/602

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