

ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ ಕ್ರಮ ಸಂಖ್ಯೆ :
Q.P. Sl. No. :
ಮೇ 2026 ರ ಪರೀಕ್ಷೆ-2
MAY 2026 EXAMINATION-2

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**)

(ಅಂಗ್ಲ ಮಾಧ್ಯಮ / **English Medium**)

(ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / ಶಾಲಾ ಪುನರಾವರ್ತಿತ ಅಭ್ಯರ್ಥಿ / ಖಾಸಗಿ ಅಭ್ಯರ್ಥಿ /

ಖಾಸಗಿ ಪುನರಾವರ್ತಿತ ಅಭ್ಯರ್ಥಿ)

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

ದಿನಾಂಕ : 19. 05. 2026]

[Date : 19. 05. 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 :

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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.

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83-E

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Tear here / ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

TEAR HERE TO OPEN THE QUESTION PAPER WITH REVERSE JACKET

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SCIENCE

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 SI unit of electric current is

- (A) ampere (B) ohm
(C) volt (D) watt



2. If a ray of light enters from denser medium to a rarer medium obliquely, then the correct statement related to the speed and bending of that light ray in the rarer medium is

- (A) speed decreases and bends towards the normal
(B) speed increases and bends away from the normal
(C) speed decreases and bends away from the normal
(D) speed increases and bends towards the normal



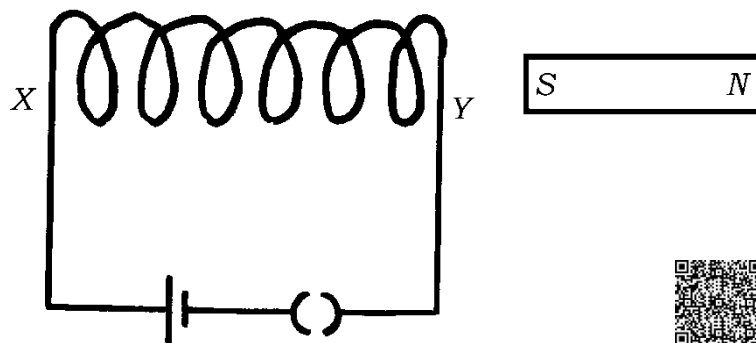
II. Answer the following questions :**2 × 1 = 2**

3. Write the symbol diagram of the wire crossing without joining used in an electric circuit.



4. Observe the below figure. When switch is put on, does the Y end of the solenoid repel the S pole of the bar magnet ?

Clarify the answer.

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

5. Explain the Newton's experiment that shows the recombination of spectrum of white light.
6. What is the function of earth wire ? Mention any two precautionary measures to be taken to avoid overloading in domestic electric circuit.



7. $2\ \Omega$ and $4\ \Omega$ resistors are connected in parallel in an electric circuit. If $6\ \Omega$ resistor is used instead of $4\ \Omega$, then find the difference between the total resistance obtained in both of these arrangements.



IV. Answer the following questions :

$3 \times 3 = 9$

8. Draw the ray diagram for the image formation in a concave mirror when the object is placed between 'C' and 'F'. Mention the position and size of the image formed.



[C : Centre of curvature, F : Principal focus]

9. a) How does rainbow form in the atmosphere ? Explain.
b) What is Tyndall effect ?

OR



What is power of accommodation of the eye ? What is myopia (near-sightedness) ? Mention the causes for this defect.

10. Explain an activity of drawing magnetic field lines around a bar-magnet using a compass needle.



OR

Explain an experiment to show that 'a current carrying conductor when kept in the magnetic field experiences a force'.

V. Answer the following questions :



2 × 4 = 8

11. a) An image of an object is formed at a distance of 20 cm from a concave lens of focal length 30 cm. Then find the object distance.
- b) An object of height 4 cm is placed perpendicular to the principal axis of a convex lens. If the image distance and the object distance are 60 cm and 30 cm respectively, then find the height and magnification of the image.



12. a) State Joule's law of heating and name any one appliance that works on the heating effect of electricity.



- b) Give reason :

- i) The tungsten is used in the filament of electric lamps

- ii) Copper and aluminium wires are usually used for electricity transmission.



OR

- a) State Ohm's law. List the factors on which the resistance of a conductor depends.

- b) "The potential difference between two points of a current carrying conductor is 1V." Mention the meaning of this statement.



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. An example for the chemical change among the following is

- (A) Dissolving of salt in water
- (B) Tearing of paper
- (C) Rusting of iron
- (D) Boiling of water



14. The gas released when metals react with dilute acids is

- | | |
|------------|------------|
| (A) H_2 | (B) CO_2 |
| (C) SO_2 | (D) NO_2 |

15. The difference between molecular formula of two successive compounds in a homologous series is

- | | |
|--------------|------------|
| (A) C_2H_4 | (B) CH_4 |
| (C) C_2H_2 | (D) CH_2 |



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

16. The pH values of four solutions *P*, *Q*, *R* and *S* are 10, 13.7, 7 and 1.2 respectively. Which solution among these can be used to prepare an antacid ? Why ?



17. "Aluminium articles do not corrode easily like iron articles." Justify this statement.

18. Compound *X* reacts with concentrated sulphuric acid to produce compounds *Y* and *Z*. If *Y* is the first member of alkene, identify the compound *X*.

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

19. Acid rain water conducts electric current but distilled water does not. Why ?
20. Write the differences between calcination and roasting.

OR

Explain the formation of ionic bond between sodium and chlorine atoms.



21. Write the molecular formula and structure of the following carbon compounds :

i) Cyclopentane

ii) Propanol.



IX. Answer the following questions :

3 × 3 = 9

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

i) Glass wool soaked in water

ii) Delivery tube.



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

i) Baking soda

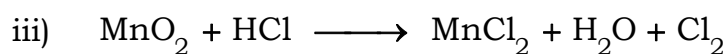
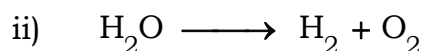
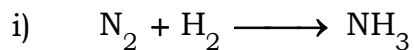
ii) Plaster of Paris.

OR

Name the products of chlor-alkali process. Write one use of each.



24. Balance the following chemical equations :



X. Answer the following question :

1 × 4 = 4

25. a) Carbon atoms do not form C^{4-} anion or C^{4+} cation.

Why ?



b) Write any two differences between saturated and unsaturated hydrocarbons.

OR

a) Explain the cleaning action of soaps.

b) Which salts are responsible for hardness of water ?

The detergents are effective even in hard water. Why ?



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 structural and functional unit of kidney is

- | | |
|------------|-----------------|
| (A) Neuron | (B) Nephron |
| (C) Cyton | (D) Muscle cell |



27. A common bacterial infection that spreads through sexual contact in human beings is

- | | |
|-----------------|-------------------|
| (A) Gonorrhoea | (B) AIDS |
| (C) Hepatitis-B | (D) Genital warts |

28. In a zygote there are 23 pairs of chromosomes. Then, the number of chromosomes present in the normal cell of parent organism is

- | | |
|--------------|--------------|
| (A) 24 pairs | (B) 23 pairs |
| (C) 46 pairs | (D) 12 pairs |



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

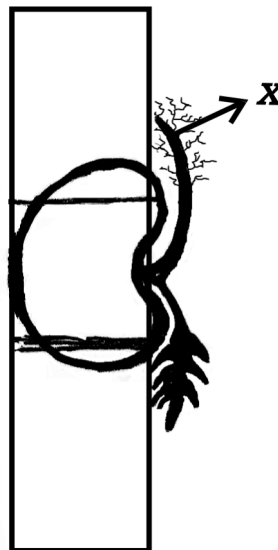
29. The extract of blood report that shows the haemoglobin content of three individuals is given in the table below :

<i>Persons</i>	<i>Haemoglobin (g/dL)</i>
A	11.1
B	12.0
C	13.3

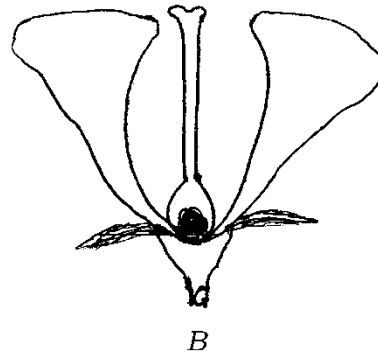
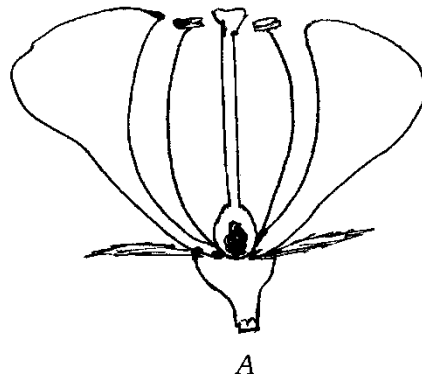
Based on this report, which person's body will receive more oxygen ?



30. While studying the growth of a seedling, the seedling is kept as shown in the figure. What type of tropism is shown by the part labelled as 'X' ? Why ?



31. Observe the figures of flower *A* and *B* given below. Which flower undergoes only cross pollination ? Justify your answer.



XIII. Answer the following questions :

2 × 2 = 4

32. How does adrenaline hormone help an athlete to prepare for running ?



OR

How do auxins promote the growth of tendrils of a climber plant around a support ?

33. Draw the diagram showing the structure of open stomata and label the following parts :

- i) Guard cells
- ii) Chloroplast



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

34. Write the differences between biodegradable and non-biodegradable substances with an example.

OR

Construct a food chain by using the organisms : snake, frog, grass and grasshopper. Which organism has more accumulation of harmful chemicals in this food chain ?

Why ?



35. Yellow seed producing (YY) pea plant is crossed with green seed producing (yy) pea plant. Show the results obtained in F_2 generation with the help of checker board.

Mention the phenotypic and genotypic ratio of the plants produced here.

36. Draw the diagram showing the structure of human brain.

Label the following parts :

i) Cerebrum

ii) Pons.



XV. Answer the following question :**1 × 4 = 4**

37. a) What is the role of following enzymes in the human digestive canal ?

- i) Trypsin
- ii) Amylase
- iii) Lipase.

b) What is transpiration ?

**XVI. Answer the following question :****1 × 5 = 5**

38. a) List the functions of the vas deferens and prostate gland in the human male reproductive system.

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

OR

a) How are reproductive processes different in Hydra and Planaria ? Explain.

b) How does the uterus prepare to receive a fertilized egg in women ? What happens if the egg is not fertilized ? Explain.



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