BITSAT 2026 April 19 (Shift-1)

Question Paper (Memory-Based)

Conducted by BITS Pilani

General Instructions

(i) **Duration:** The total duration of the examination is 3 hours (180 minutes).

(ii) **Total Marks:** The complete paper carries a maximum of 390 marks.

(iii) **Structure:** The paper has 4 Sections:

- **Part 1:** 30 Multiple Choice Questions (Physics).
- **Part 2:** 30 Multiple Choice Questions (Chemistry).
- **Part 3:** 10 Multiple Choice Questions (English Proficiency), 20 Multiple Choice Questions (Logical Reasoning)
- **Part 4:** 40 Multiple Choice Questions (Mathematics/Biology)

(iv) **Compulsory Questions:** All 130 questions are compulsory,and +12 Questions(Optional Extra Questions)

(v) Each question has four options. Only **one** option is correct.

(vi) **Correct Answer:** +3 marks.

(vii) **Incorrect Answer:** −1 (Negative marking).

(viii) **Unanswered/Marked for Review:** 0 marks.

PHYSICS

1. In an experiment with Vernier calipers of least count 0.1 mm, when two jaws are joined together the zero of Vernier scale lies right to the zero of the main scale and 6th division of Vernier scale coincides with the main scale division. While measuring the diameter of

a spherical bob, the zero of Vernier scale lies in between 3.2 cm and 3.3 cm marks, and 4th division of Vernier scale coincides with the main scale division. The diameter of bob is measured as

A) 3.26 cm

B) 3.18 cm

C) 3.25 cm

D) 3.22 cm

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2. A passenger sitting in a train A moving at 90 km/h observes another train B moving in the opposite direction for 8 s. If the velocity of the train B is 54 km/h, then length of train B is:

A) 120 m

B) 200 m

C) 320 m

D) 80 m

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3. A vector $\sqrt{3}\hat{i}+\hat{j}$ rotates about its tail through an angle 30° in clock wise direction then the new vector is

A) $4\hat{i}$

B) $2\hat{i}$

C) $\hat{j}$

D) $\hat{i}$

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4. If the minimum force required to move a body up an inclined plane of inclination 45° is 3 times the force required to just prevent it sliding down, the coefficient of friction is

A) 0.5

B) 0.9

C) 0.3

D) 4.1

CHEMISTRY

5. The screening effect of d-electrons is

(A) Equal to p-electrons

(B) Much more than p-electrons

(C) Same as f-electrons

(D) Less than p-electrons.

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6. Chloride ion and potassium ion are isoelectronic. Then

(a) Their sizes are same

(b) Cl^- ion is bigger than K^+ ion

(c) K^+ ion is relatively bigger

(d) Their sizes depend on other cation and anion

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7. For the reaction $CO(g) + \frac{1}{2} O_2(g) \rightarrow CO_2(g)$ Which one of the statement is correct at constant T and P?

(a) $\Delta H = \Delta E$

(b) $\Delta H < \Delta E$

(c) $\Delta H > \Delta E$

(d) ΔH is independent of physical state of the reactants

MATHEMATICS

8. If $|z_1| = 2, |z_2| = 3, |z_3| = 4$ and $|2z_1 + 3z_2 + 4z_3| = 4$, then absolute value of $8z_2z_3 + 27z_3z_1 + 64z_1z_2$ equals

(A) 24

(B) 48

(C) 72

(D) 96

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9. If a >0, b >0, c >0 and a, b, c are distinct, then (a + b)(b + c)(c + a) is greater than

(A) $2(a+b+c)$

(B) $3(a+b+c)$

(C) $6abc$

(D) $8abc$

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10. If the minimum force required to move a body up an inclined plane of inclination 45° is 3 times the force required to just prevent it sliding down, the coefficient of friction is

A) 0.5

B) 0.9

C) 0.3

D) 4.1
