BITSAT 2026 April 19 (Shift-2)

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. Young's moduli of the material of wires A and B are in the ratio of 1:4, while its area of cross sections are in the ratio of 1:3. If the same amount of load is applied to both the wires, the amount of elongation produced in the wires A and B will be in the ratio of (Assume length

of wires A and B are same)

(A) 1:12

(B) 12:1

(C) 36:1

(D) 1:36

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2. A hollow glass stopper of relative density 2.5 just sinks in water. The ratio of volume of cavity to that of stopper is

(A) 1:2

(B) 3:5

(C) 1:5

(D) 3:2

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3. A gas undergoes a process in which the pressure and volume are related by $VP^n =$ constant. The bulk modulus of the gas is

(A) nP

(B) $P^{1/n}$

(C) P/n

(D) P^n

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4. The initial pressure and volume of an ideal gas are P_0 and V_0. The final pressure of the gas when the gas is suddenly compressed to volume $V_0/4$ will be: (Given $\gamma =$ ratio of specific heats at constant pressure and at constant volume)

(A) P_0

(B) $4P_0$

(C) $P_0(4)^{\gamma}$

(D) $P_0(4)^{1/\gamma}$

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CHEMISTRY

5. The Bohr orbit radius for the hydrogen atom (n = 1) is approximately 0.530 Å. The radius for the first excited state (n = 2) orbit is (in Å)

(A) 0.13

(B) 1.06

(C) 4.77

(D) 2.12

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6. In PO_4^{3-}, the formal charge on each oxygen atom and the P - O bond order respectively are

(A) -0.75, 0.6

(B) -0.75, 1.0

(C) -0.75, 1.25

(D) -3, 1.25

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7. The value of x is maximum for

(A) $MgSO_4 \cdot xH_2O$

(B) $CaSO_4 \cdot xH_2O$

(C) $BaSO_4 \cdot xH_2O$

(D) All have the same value of x.

MATHEMATICS

8. Let P be a point on the parabola, $x^2 = 4y$. If the distance of P from the centre of the circle, $x^2 + y^2 + 6x + 8 = 0$ is minimum, then the equation of the tangent to the parabola at P, is :

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(A) $x+4y-2=0$

(B) $x+y+1=0$

(C) $x-y+3=0$

(D) $x+2y=0$

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9. If $x=\sqrt{2^{\text{cosec}^{-1}t}}$ and $y=\sqrt{2^{\sec^{-1}t}}(|t|\geq 1)$, then dy/dx is equal to :

(A) y/x

(B) $-y/x$

(C) $-x/y$

(D) x/y

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10. If $f(x)=\int_0^x t(\sin x-\sin t)dt$ then :

(A) $f'''(x)-f''(x)=\cos x-2x\sin x$

(B) $f'''(x)+f'(x)=\cos x-2x\sin x$

(C) $f'''(x)+f''(x)=\sin x$

(D) $f'''(x)+f''(x)-f'(x)=\cos x$

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