

BITSAT 2025 June 23 Shift 2 Question Paper

Time Allowed :3 Hours	Maximum Marks :390	Total questions :130
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. Duration of Exam: 3 Hours
2. Total Number of Questions: 130 Questions
3. Section-wise Distribution of Questions:
 - Physics - 40 Questions
 - Chemistry - 40 Questions
 - Mathematics - 50 Questions
4. Type of Questions: Multiple Choice Questions (Objective)
5. Marking Scheme: Three marks are awarded for each correct response
6. Negative Marking: One mark is deducted for every incorrect answer.
7. Each question has four options; only one is correct.
8. Questions are designed to test analytical thinking and problem-solving skills.

1. What is the value of $\int \frac{1}{x^2+1} dx$?

- (1) $\ln|x+1| + C$
 - (2) $\tan^{-1}x + C$
 - (3) $\ln|x-1| + C$
 - (4) $\tan^{-1}(x^2) + C$
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2. Solve the system of equations: $x + y = 3$, $x - y = 1$.

- (1) $x = 1, y = 2$
 - (2) $x = 2, y = 1$
 - (3) $x = 3, y = 0$
 - (4) $x = 0, y = 3$
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3. Find the equation of the tangent to the curve $y = x^2$ at the point (1,1).

- (1) $y = 2x - 1$
 - (2) $y = 2x + 1$
 - (3) $y = x - 1$
 - (4) $y = x + 1$
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4. What is the area of a circle with diameter 10 cm?

- (1) $25\pi \text{ cm}^2$
 - (2) $50\pi \text{ cm}^2$
 - (3) $100\pi \text{ cm}^2$
 - (4) $200\pi \text{ cm}^2$
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5. A body of mass 2 kg is moving with a velocity of 3 m/s. What is its kinetic energy?

- (1) 6 J
 - (2) 9 J
 - (3) 12 J
 - (4) 18 J
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6. What is the unit of electric field?

- (1) Newton
 - (2) Coulomb
 - (3) Newton per Coulomb
 - (4) Coulomb per Newton
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7. In a series circuit, if the resistance is doubled, what happens to the current?

- (1) It doubles
 - (2) It halves
 - (3) It remains the same
 - (4) It becomes zero
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8. What is the IUPAC name of $\text{CH}_3\text{CH}_2\text{OH}$?

- (1) Methanol
 - (2) Ethanol
 - (3) Propanol
 - (4) Butanol
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9. What is the pH of a solution with $[\text{H}^+] = 10^{-3} \text{ M}$?

- (1) 3
 - (2) 7
 - (3) 10
 - (4) 11
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10. Choose the word most nearly opposite in meaning to "benevolent".

- (1) Malevolent
 - (2) Benign
 - (3) Kind
 - (4) Generous
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11. If all roses are flowers and some flowers are red, which statement must be true?

- (1) All roses are red.
 - (2) Some roses are red.
 - (3) Some flowers are not roses.
 - (4) None of the above.
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