BITSAT 2025 June 23 Shift 2 Question Paper

Time Allowed :3 Hours | **Maximum Marks :**390 | **Total questions :**130

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) $\tan^{-1}(x^2) + C$

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

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

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) $200\pi \, \text{cm}^2$

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

(3) Newton per Coulomb (4) Coulomb per Newton 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 8. What is the IUPAC name of CH ₃ CH ₂ OH? (1) Methanol (2) Ethanol (3) Propanol (4) Butanol 9. What is the pH of a solution with [H ⁺] = 10 ⁻³ M? (1) 3 (2) 7 (3) 10 (4) 11 10. Choose the word most nearly opposite in meaning to "benevolent". (1) Malevolent (2) Benign (3) Kind	(1) Newton								
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(3) Kind	(1) Malevolent								
	(2) Benign								
(4) Generous	(3) Kind								
	(4) Generous								

6. What is the unit of electric field?

11.	If all r	roses are fl	owers and	some flowers	are red, which	statement mus	st he true?
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- (1) All roses are red.
- (2) Some roses are red.
- (3) Some flowers are not roses.
- (4) None of the above.