

BITSAT 2025 June 23 Shift 2 Question Paper

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

1. The **BITSAT 2025** (Birla Institute of Technology and Science Admission Test) is conducted in **Computer-Based Test (CBT)** mode.
2. The duration of the test is **3 hours (180 minutes)**.
3. The question paper consists of **130 multiple-choice questions (MCQs)** divided into four sections:
 - **Physics – 30 Questions**
 - **Chemistry – 30 Questions**
 - **English Proficiency and Logical Reasoning – 20 Questions**
 - **Mathematics/Biology – 50 Questions**
4. Each correct answer carries **3 marks**, and each incorrect answer leads to a **penalty of 1 mark**.
5. After attempting all 130 questions, candidates can attempt up to **12 additional questions** (4 each from Physics, Chemistry, and Mathematics/Biology) — only if time permits.
6. The language of the question paper is **English only**.
7. Candidates must reach the test center **at least 1 hour before** the commencement of the examination.
8. Candidates must carry:
 - **BITSAT 2025 Hall Ticket**
 - **Valid Photo ID Proof** (Aadhaar, Passport, PAN, Driving Licence, etc.)
9. Rough work must be done only on the provided sheets. Additional sheets will not be supplied.
10. Use of **calculators, mobile phones, smart watches, or any other electronic devices** is strictly prohibited.
11. Follow all **invigilator's instructions** carefully. Any malpractice will result in **cancellation of candidature**.

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

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

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

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

- (A) $25\pi \text{ cm}^2$
 - (B) $50\pi \text{ cm}^2$
 - (C) $100\pi \text{ cm}^2$
 - (D) $200\pi \text{ cm}^2$
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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?

- (A) 6 J
 - (B) 9 J
 - (C) 12 J
 - (D) 18 J
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6. What is the unit of electric field?

- (A) Newton
 - (B) Coulomb
 - (C) Newton per Coulomb
 - (D) Coulomb per Newton
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7. In a series circuit, if the resistance is doubled, what happens to the current?

- (A) It doubles
 - (B) It halves
 - (C) It remains the same
 - (D) It becomes zero
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8. What is the IUPAC name of $\text{CH}_3\text{CH}_2\text{OH}$?

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

- (A) 3
 - (B) 7
 - (C) 10
 - (D) 11
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10. Choose the word most nearly opposite in meaning to "benevolent".

- (A) Malevolent
 - (B) Benign
 - (C) Kind
 - (D) Generous
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11. If all roses are flowers and some flowers are red, which statement must be true?

- (A) All roses are red.
 - (B) Some roses are red.
 - (C) Some flowers are not roses.
 - (D) None of the above.
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