

## XAT 2026 Question Paper

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**1. A shopkeeper marks his goods 40% above cost price and offers a discount of 20%. What is his overall profit percentage?//**

- (A) 8%
  - (B) 12%
  - (C) 20%
  - (D) 28%
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**2. If  $x + \frac{1}{x} = 3$ , then the value of  $x^3 + \frac{1}{x^3}$  is://**

- (A) 18
  - (B) 27
  - (C) 36
  - (D) 45
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**3. A train travels 360 km at a uniform speed. If the speed had been 5 km/h more, it would have taken 1 hour less. What is the original speed?//**

- (A) 40 km/h
  - (B) 45 km/h
  - (C) 50 km/h
  - (D) 60 km/h
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**4. The value of  $\int_0^1 x(1-x)^5 dx$  is://**

- (A)  $\frac{1}{12}$
- (B)  $\frac{1}{15}$
- (C)  $\frac{1}{18}$
- (D)  $\frac{1}{30}$

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**5. In a class of 50 students, 30 play football, 25 play cricket, and 10 play both. How many play neither?//**

- (A) 5
- (B) 10
- (C) 15
- (D) 20

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**6. The number of solutions to the equation  $|x - 1| + |x - 3| = 4$  is://**

- (A) 2
- (B) 3
- (C) 4
- (D) Infinite

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**7. If  $\log_{10}(x + 1) + \log_{10}(x - 1) = 1$ , then  $x =$ //**

- (A) 3
- (B)  $\sqrt{10}$
- (C)  $\sqrt{11}$
- (D) 10

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**8. A sum of Rs. 8000 amounts to Rs. 10000 in 2 years at simple interest. What is the rate of interest?//**

- (A) 10%
- (B) 12.5%
- (C) 15%
- (D) 20%

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**9. The equation of the tangent to the parabola  $y^2 = 8x$  at point  $(2, 4)$  is://**

- (A)  $y = x + 2$
- (B)  $y = 2x + 2$

(C)  $y = x + 4$

(D)  $y = 2x$

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**10. In how many ways can 5 identical red balls and 3 identical blue balls be arranged in a row?**

(A) 56

(B) 70

(C) 126

(D) 210

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**11. If  $A = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$ , then the determinant of  $A^2$  is:**

(A) -4

(B) 4

(C) 25

(D) 49

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**12. A year selected at random has 365 days. The probability that it has 53 Sundays is:**

(A)  $\frac{1}{7}$

(B)  $\frac{2}{7}$

(C)  $\frac{1}{365}$

(D)  $\frac{53}{365}$

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**13. If  $\sin \theta + \cos \theta = \sqrt{2}$ , then  $\tan \theta + \cot \theta$  equals:**

(A) 1

(B) 2

(C)  $\sqrt{2}$

(D) 0

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**14. A bag contains 4 red and 6 black balls. Two balls are drawn without replacement. The probability that both are red is:**

- (A)  $\frac{1}{15}$
- (B)  $\frac{2}{15}$
- (C)  $\frac{3}{15}$
- (D)  $\frac{4}{15}$

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**15. The area bounded by  $y = x^2$  and  $y = 2x$  from  $x = 0$  to  $x = 2$  is:**

- (A)  $\frac{8}{3}$
  - (B)  $\frac{4}{3}$
  - (C)  $\frac{16}{3}$
  - (D)  $\frac{10}{3}$
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