

## CAT 2015 QA Slot 2 Question Paper

**Time Allowed :3 Hours**

**Maximum Marks :300**

**Total questions :100**

### General Instructions

**Read the following instructions very carefully and strictly follow them:**

1. **Duration of Section:** 40 Minutes
2. **Total Number of Questions:** 22 Questions (as per latest pattern, may vary slightly)
3. **Section Covered:** Quantitative Aptitude (QA)
4. **Type of Questions:**
  - Multiple Choice Questions (MCQs)
  - Type In The Answer (TITA) Questions – No options given, answer to be typed in
5. **Marking Scheme:**
  - +3 marks for each correct answer
  - -1 mark for each incorrect MCQ
  - No negative marking for TITA questions
6. **Syllabus Coverage:** Arithmetic, Algebra, Geometry, Number System, Modern Math, and Mensuration
7. **Skills Tested:** Numerical ability, analytical thinking, and problem-solving

## 1 Quantitative Ability

1. A shopkeeper sells an item at a 20% profit. If the cost price is increased by 10% and the selling price by Rs. 10, the profit percentage becomes 15%. What is the original cost price?

- (a) Rs. 100
  - (b) Rs. 150
  - (c) Rs. 200
  - (d) Rs. 250
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2. A car travels from A to B at 60 km/h and returns at 40 km/h. What is the average speed for the round trip?

- (a) 48 km/h
  - (b) 50 km/h
  - (c) 52 km/h
  - (d) 45 km/h
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3. A and B can complete a task in 12 days, B and C in 15 days, A and C in 20 days. How many days will A alone take?

- (a) 20
  - (b) 30
  - (c) 40
  - (d) 60
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4. A bag contains 4 red, 3 white, and 2 blue balls. Two balls are drawn at random. What is the probability that both are red?

- (a)  $\frac{1}{6}$
  - (b)  $\frac{1}{12}$
  - (c)  $\frac{1}{9}$
  - (d)  $\frac{2}{9}$
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**5.** The sum of the ages of a father and son is 50 years. Five years ago, the father's age was four times the son's age. What is the father's current age?

- (a) 35
  - (b) 40
  - (c) 45
  - (d) 50
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**6.** A rectangle has an area of  $60 \text{ cm}^2$  and a perimeter of 32 cm. What is the length if it is greater than the width?

- (a) 10 cm
  - (b) 12 cm
  - (c) 14 cm
  - (d) 16 cm
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**7.** A sum of Rs. 10,000 is invested at 5% per annum compound interest for 2 years. What is the total amount?

- (a) Rs. 11,000
  - (b) Rs. 11,025
  - (c) Rs. 11,050
  - (d) Rs. 11,100
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**8.** In a class, 60% of students are boys, and 40% are girls. If 30% of boys and 20% of girls passed an exam, what percentage of the class passed?

- (a) 26%
  - (b) 28%
  - (c) 30%
  - (d) 32%
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**9.** A man can row at 6 km/h in still water. If the river flows at 2 km/h and it takes him 1 hour to row to a place and return, what is the distance to the place?

- (a) 2 km
  - (b) 2.5 km
  - (c) 3 km
  - (d) 4 km
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**10.** If  $x^2 - 5x + 6 = 0$ , what is the sum of the roots?

- (a) 3
  - (b) 5
  - (c) 6
  - (d) 8
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**11.** The ratio of two numbers is 3:4. If their sum is 70, what is the larger number?

- (a) 30
  - (b) 40
  - (c) 50
  - (d) 60
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**12.** A train travels 360 km in 4 hours. What is its speed in km/h?

- (a) 80
  - (b) 90
  - (c) 100
  - (d) 120
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**13.** If  $\log_2 x + \log_2(x - 2) = 3$ , what is  $x$ ?

- (a) 2
  - (b) 3
  - (c) 4
  - (d) 6
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**14.** The area of a circle is  $154 \text{ cm}^2$ . What is its radius? (Use  $\pi = \frac{22}{7}$ )

- (a) 5 cm
  - (b) 6 cm
  - (c) 7 cm
  - (d) 8 cm
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**15.** A and B start a business with investments of Rs. 4000 and Rs. 6000. If the profit after 1 year is Rs. 5000, what is A's share?

- (a) Rs. 2000
  - (b) Rs. 2500
  - (c) Rs. 3000
  - (d) Rs. 3500
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**16.** If  $2x + 3y = 12$  and  $x - y = 1$ , what is the value of  $x$ ?

- (a) 3
  - (b) 4
  - (c) 5
  - (d) 6
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**17.** What is the sum of the first 20 terms of the arithmetic sequence 3, 7, 11, ...?

- (a) 800
  - (b) 820
  - (c) 840
  - (d) 860
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**18.** If  $\sin \theta + \cos \theta = \sqrt{2}$ , what is  $\sin \theta \cos \theta$ ?

- (a)  $\frac{1}{2}$
  - (b)  $\frac{1}{4}$
  - (c)  $\frac{1}{3}$
  - (d)  $\frac{1}{6}$
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**19.** A number when divided by 7 leaves a remainder of 4. What is the remainder when the square of the number is divided by 7?

- (a) 1
  - (b) 2
  - (c) 3
  - (d) 4
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**20.** A pipe can fill a tank in 6 hours, and another pipe can empty it in 8 hours. If both are opened together, how many hours will it take to fill the tank? (Enter the answer as a fraction or decimal.)

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