

Qs. 1-6. What will come in place of the question mark (?) in the following questions?

1. $0.01 \times 0.5 = ?$

- (1) 0.005 (2) 0.05 (3) 0.0005
 (4) 0.5 (5) None of these

2. $99 \div \frac{1}{9} = ?$

- (1) 11 (2) 991 (3) 981
 (4) 9 (5) None of these

3. $-36 - (-10) + (-20) - (+5) = ?$

- (1) -66 (2) -61 (3) -51
 (4) -71 (5) None of these

4. $36 \div 4 \times 5 = ?$

- (1) 200 (2) 45 (3) 184
 (4) 56 (5) None of these

5. $-40 \times -2 - 30 = ?$

- (1) 1280 (2) 50 (3) -2400
 (4) -110 (5) None of these

6. $((4)^3)^2 = (4)^?$

- (1) 5 (2) 6 (3) 8
 (4) 7 (5) None of these

Qs. 7-12. What *approximate* value will come in place of the question mark (?) in the following questions? (You are not expected to calculate the exact value.)

7. $\sqrt{285.61} = ?$

- (1) 17 (2) 19 (3) 18
 (4) 16 (5) 15.5

8. $2\frac{3}{4} \times 3\frac{1}{4} \times 1\frac{1}{8} = ?$

- (1) 6 (2) 14 (3) 18
 (4) 8 (5) 10

9. $0.98 \times 1.01 \times 0.49 = ?$

- (1) 1 (2) 0.6 (3) 0.5
 (4) 0.75 (5) 0.35

10. $(22.2)^2 = ?$

- (1) 493 (2) 484 (3) 625
 (4) 525 (5) 505

11. $10.99898989\% \text{ of } \frac{101}{10.11} = \frac{10.1}{?}$

- (1) 1 (2) 5 (3) 15
 (4) 12.5 (5) 10

12. $\frac{1}{3} \times \frac{1}{7} + \frac{1}{5} = ?$

- (1) $\frac{1}{5}$ (2) $\frac{1}{105}$ (3) $\frac{1}{3}$
 (4) $\frac{1}{4}$ (5) $\frac{1}{7}$

Q. 13-20. What will come in place of the question mark (?) in the following number series?

13. 5 7 12 19 31 ?

- (1) 40 (2) 50 (3) 38
 (4) 41 (5) None of these

14. 2 4 16 256 ?

- (1) 65536 (2) 4096 (3) 32768
 (4) 8192 (5) None of these

15. 1 4 9 ? 25 36

- (1) 14 (2) 12 (3) 16
 (4) 18 (5) None of these

16. 1 2 3 5 7 11 13 17 19 ?

- (1) 21 (2) 20 (3) 25
 (4) 23 (5) None of these

17. 1 8 27 ? 125 216

- (1) 32 (2) 64 (3) 86
 (4) 81 (5) None of these

18. 15 16 ? 29 45

- (1) 17 (2) 25 (3) 20
 (4) 19 (5) None of these

19. 1 2 2 4 8 ? 256

- (1) 12 (2) 16 (3) 128
 (4) 64 (5) None of these

20. 4 5 14 51 ? 1125

- (1) 190 (2) 200 (3) 220
 (4) 210 (5) None of these

Qs. 21-30. Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read

both the statements and give answer:

- (1) if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
(2) if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
(3) if the data either in statement I alone or in statement II alone is sufficient to answer the question.
(4) if the data in the statements I and II together are not sufficient to answer the question.
(5) if the data in both the statements I and II together are necessary to answer the question.
- 21.** What is a two digit number?
I. The difference of the digits is 9.
II. The sum of the digits is 9.
- 22.** How much is the rate of simple interest?
I. The sum is Rs 10,000.
II. The interest earned in three years is Rs 3,000.
- 23.** Is X an odd number?
I. X is a two digit number.
II. None of the digits is 2.
- 24.** What is a two digit number?
I. One of the digits is '0'.
II. The product of the digits is '0'.
- 25.** What is the speed of 150 metres long train?
I. The train crosses a pole in 6 seconds.
II. The train crosses 300 metres long platform in 18 seconds.
- 26.** The average of the ages of A, B, C and D is 26 years. How old is D?
I. D is one year younger than C.
II. The average age of A and B is 26 years.
- 27.** What is the ratio of ages of A and B?
I. B is younger than A by 4 years.
II. The sum of their ages is 16 years.
- 28.** Is Y an even number?
I. Y is divisible by 2.
II. Y is divisible by 5.
- 29.** What is the area of a rectangular plot?
I. The length of the plot is 100 metres.
II. The area of the plot is 100 times it's breadth.
- 30.** Is the product of two numbers even?
I. The product is a three digit number.
II. One of the numbers is even.
- 31.** 25% profit is made if an article is sold for Rs 437.50. What is the cost price of the article?
(1) Rs 328.125
(2) Rs 350
(3) Rs 325
(4) Cannot be determined
(5) None of these
- 32.** How many days will 6 persons take to do a work which is done by 12 persons in 18 days?

- (1) 36 (2) 24 (3) 40
(4) 34 (5) None of these

33. Which of the following fractions are in ascending order?

- (1) $\frac{1}{3}, \frac{1}{4}, \frac{2}{5}, \frac{3}{7}$
(2) $\frac{3}{7}, \frac{2}{5}, \frac{1}{4}, \frac{1}{3}$
(3) $\frac{1}{4}, \frac{1}{3}, \frac{2}{5}, \frac{3}{7}$
(4) $\frac{3}{7}, \frac{2}{5}, \frac{1}{3}, \frac{1}{4}$
(5) None of these

34. What should be added to 14399 to make it exactly divisible by 4?

- (1) 1 (2) 2 (3) 3
(4) 4 (5) None of these

35. In how many different ways can 4 books be arranged?

- (1) 24 (2) 16 (3) $\frac{37}{4}$
(4) Cannot be determined
(5) None of these

36. 20 litres milk contains 2% water. What quantity of pure milk should be added so that water content comes down to 1%?

- (1) 10 litres (2) 20 litres (3) 40 litres
(4) Cannot be determined (5) None of these

37. Which of the following is the smallest fraction?

- (1) $\frac{1}{3}$ (2) $\frac{2}{11}$ (3) $\frac{3}{13}$
(4) $\frac{5}{21}$ (5) $\frac{1}{5}$

38. A box has 2 black, 3 blue and 4 green balls. One ball is picked up at random. What is the probability that it is green?

- (1) $\frac{2}{9}$ (2) $\frac{3}{9}$ (3) $\frac{4}{9}$
(4) $\frac{2}{5}$ (5) None of these

39. Which of the following numbers are in descending order?

- (1) -6, -5, -4
(2) -1, -2, 3
(3) 2, 2.01, 1.99
(4) 4, -4, -6
(5) None of these

40. A sum doubles itself in 10 years at simple interest. What is the p.c.p.a. rate of interest?

- (1) 5
(2) 20
(3) 12
(4) Cannot be determined
(5) None of these

Qs. 41-45. Study the following table to answer the given questions.

NUMBER OF CANDIDATES APPLIED, APPEARED AND QUALIFIED (Q)
IN DIFFERENT PROGRAMMES FOR THE GIVEN YEARS

Year	Programme A			Programme B			Programme C		
	Applied	Appeared	Q	Applied	Appeared	Q	Applied	Appeared	Q
2000	2500	2000	1000	750	500	50	150	145	100
2001	2700	2100	1200	1000	800	100	170	170	110
2002	2835	2250	1200	625	400	60	125	125	90
2003	3000	2500	1300	525	400	65	200	198	130
2004	3500	2600	1500	870	670	65	210	209	132
2005	3500	2900	1700	1200	1100	110	300	300	160
2006	3700	2900	1900	1000	900	110	275	274	140

41. For Programme B, for how many years is the per cent of Qualified to Applied more than 10?

- (1) One (2) Two (3) Three
(4) None (5) None of these

42. For Programme C, what is approximate percentage of Qualified over Appeared for the given years?

- (1) 68 (2) 70 (3) 60 (4) 55 (5) 65

43. In 2000, for Programme B, what is the respective ratio of Applied and Appeared?

- (1) 3 : 2 (2) 5 : 7 (3) 7 : 5
(4) 2 : 3 (5) None of these

44. For Programme A, which year is the percentage of Qualified to Appeared the maximum?

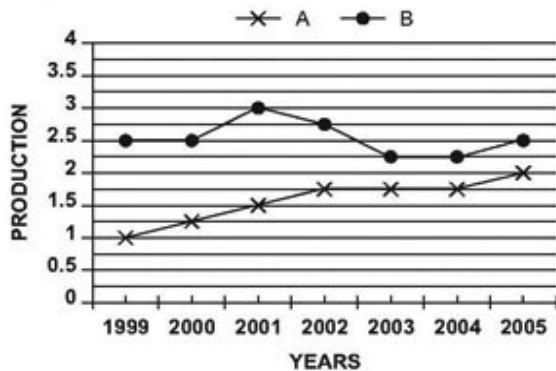
- (1) 2005 (2) 2001 (3) 2004
(4) 2006 (5) None of these

45. For Programme B, which year is the percentage of Appeared to Applied the maximum?

- (1) 2006 (2) 2000 (3) 2003
(4) 2004 (5) None of these

Qs. 46-50. Study the following graph carefully to answer the given questions.

PRODUCTION OF TWO COMPANIES A AND B
(IN CRORE UNITS) OVER THE GIVEN YEARS



46. For Company A, how much is the per cent increase in production in 2000 from 1999?

- (1) 0.25 (2) 2.5 (3) 25
(4) 12.5 (5) None of these

47. How many units is the total production of Company A for the given years?

- (1) 9 crores (2) 17.75 crores
(3) 12.25 crores (4) 11 crores
(5) None of these

48. What is the difference in units produced by the two companies in 1999?

- (1) 1,50,00,000 (2) 15,00,00,000 (3) 15,00,000
(4) 15,000 (5) None of these

49. How many units is the approximate average production of Company B for the given years?

- (1) 3 crores (2) 2.55 crores
(3) 2.75 crores (4) 2.25 crores
(5) 2.34 crores

50. In which year did both the companies have no change in production from the previous year?

- (1) 2000 (2) 2002 (3) 2003
(4) 2004 (5) None of these

ANSWERS AND EXPLANATIONS

1. (1) 2. (5) 3. (3) 4. (4) 5. (2)
6. (2) 7. (1) 8. (5) 9. (3) 10. (2)
11. (5) 12. (4)
13. (2) $5 + 7 = 12$, $12 + 7 = 19$, $12 + 19 = 31$, $19 + 31 = 50$
14. (1) 2, 4, 16, 256, x or $2^1, 2^2, 2^4, 2^8, 2^{16} = 65536$
Powers of 2 are in G.P.
15. (3) $1^2, 2^2, 3^2, 4^2, 5^2, 6^2$
 $4^2 = 16$
16. (4) All nos. are prime nos. Next no. = 23
17. (4) 1, 8, 27, ____, 125, 216 i.e. $1^3, 2^3, 3^3, 4^3, 5^3, 6^3$
 $4^3 = 64$
18. (3) By adding $1^2, 2^2, 3^2, 4^2, \dots$ we get the next no.
19. (5) $1 \times 2 = 2$, $2 \times 2 = 4$, $4 \times 2 = 8$, $4 \times 8 = 32$
 $8 \times 32 = 256$
The reqd. no. = 32
20. (3) 4, 5, 14, 51, ____, 1125
 $4 \times 1 + 1^2 = 5$, $5 \times 2 + 2^2 = 14$, $14 \times 3 + 3^2 = 51$,
 $51 \times 4 + 4^2 = 220$, $220 \times 5 + 5^2 = 1125$
 \therefore Reqd. no. = 220
21. (5) Let the digits at unit's and ten's places be x and y
A.T.S. $y + x = 9$, $y - x = 9$
 $\therefore y = 9$, $x = 0$. No. = 90

22. (5) $R = \frac{I \times 100}{P \times T}$
23. (4) 24. (4)
25. (3) Speed of train = $\frac{150}{6}$ or $\frac{300 + 150}{18}$
26. (5) Total sum of ages of A, B, C and D
 $= 26 \times 4 = 104$
 Total sum of ages of A and B = $26 \times 2 = 52$
 Total age of C and D = $104 - 52 = 52$
 Age of D = $\frac{52 - 1}{2} = 25.5$ years
 Age of C = 26.5 years
27. (5) $\frac{A - B}{A + B} = \frac{4}{16}$
 $\therefore \frac{2A}{-2B} = \frac{20}{-12} \Rightarrow \frac{A}{3} = \frac{5}{3}$ (By C and D)
28. (1) 29. (4) 30. (2)
31. (2) C.P. = $\frac{S.P. \times 100}{100 + P\%} = \frac{437.50 \times 100}{125} = \text{Rs } 350$
32. (1) Reqd. no. of days = $\frac{12 \times 18}{6} = 36$
33. (3)
34. (1) If we divide 14399 by 4, $R = 3$
 \therefore No. to be added = $4 - 3 = 1$
35. (1) No. of ways = $4! = 4 \times 3 \times 2 \times 1 = 24$
36. (2) 2% water means 98% milk
 Let the quantity of pure milk added be x l
 A.T.S. $(20 + x) \frac{99}{100} - x = \frac{20 \times 98}{100} \Rightarrow x = 20$
37. (2) Change into decimals
38. (3) Total balls = $2 + 3 + 4 = 9$
 Reqd. prob. = $\frac{4}{9}$
39. (4)
40. (5) $R = \frac{x \times 100}{x \times 10} = 10$ 10% p.a.
41. (2) In 2000 \rightarrow Reqd.% = $\frac{50}{750} \times 100$
 Sly. calculate in other years.
 In 2003 and 2006 it is more than 10
42. (3) Reqd.% = $\frac{862}{1421} \times 100 = 60$ (approx.) 60.66
43. (1) 44. (4)
45. (5) In 2005, the reqd.% is max
46. (3) % increase = $\frac{.25 \text{ crore}}{1 \text{ crore}} \times 100 = 25$
47. (4)
48. (1) $(2.5 - 1)$ crores = $1.5 \times 1,00,00,000 = 1,50,00,000$
49. (2) 50. (4)