

**Qs. 1-25.** What should come in place of the question mark (?) in the following questions?

**1.**  $[(4)^3 \times (5)^4] \div (4)^5 = ?$

- (1) 30.0925                      (2) 39.0625  
(3) 35.6015                      (4) 29.0825  
(5) None of these

**2.**  $\frac{1.6 \times 3.2}{0.08} = ?$

- (1) 6.4                              (2) 8  
(3) 64                                (4) 0.8  
(5) None of these

**3.**  $(7857 + 3596 + 4123) \div 96 = ?$

- (1) 155.06                        (2) 162.25  
(3) 151.83                        (4) 165.70  
(5) None of these

**4.**  $741560 + 935416 + 1143 + 17364 = ?$

- (1) 1694583                      (2) 1695438  
(3) 1695483                      (4) 1659483  
(5) None of these

**5.**  $(84)^2 + \sqrt{?} = 168$

- (1) 1936                          (2) 1521  
(3) 1681                          (4) 1764  
(5) None of these

**6.**  $514789 - 317463 - 87695 - 11207 = ?$

- (1) 96584                         (2) 98242  
(3) 96845                         (4) 98424  
(5) None of these

**7.**  $8926 - ?\% \text{ of } 650 = 8848$

- (1) 15                                (2) 8  
(3) 12                                (4) 10  
(5) None of these

**8.**  $\sqrt[3]{50653} = ?$

- (1) 39                                (2) 43  
(3) 33                                (4) 41  
(5) None of these

**9.**  $(17891 + 16239 - 26352) \times ? = 93336$

- (1) 12                                (2) 15  
(3) 18                                (4) 8  
(5) None of these

**10.**  $\frac{1}{4} \times 6624 \times \frac{1}{6} \times 12 = ?$

- (1) 3312                            (2) 3864  
(3) 2208                            (4) 4416  
(5) None of these

**11.**  $\frac{18 \times 15 - 50}{(40 \times 80) \div 160} = ?$

- (1) 20                                (2) 8.5  
(3) 11.5                              (4) 22  
(5) None of these

**12.**  $36\% \text{ of } 4800 \times 0.2\% \text{ of } 1320 = ?$

- (1) 4535.52                        (2) 4551.36  
(3) 4561.92                        (4) 4572.48  
(5) None of these

**13.**  $\sqrt{?} \times \sqrt{1681} = 2296$

- (1) 2196                            (2) 3364  
(3) 2809                            (4) 3025  
(5) None of these

**14.**  $93 \times 45 \div 25 = ?$

- (1) 167.4                          (2) 837  
(3) 279                              (4) 130.2  
(5) None of these

**15.**  $0.08 \times ? \times 1.6 = 0.2944$

- (1) 1.3                                (2) 0.4  
(3) 0.2                                (4) 2.3  
(5) None of these

**16.**  $6 \times 66 \times 666 = ?$

- (1) 263736                        (2) 267336  
(3) 263763                        (4) 263376  
(5) None of these

**17.**  $5\frac{1}{7} \times 8\frac{1}{6} \div 7\frac{7}{8} = ?$

- (1)  $1\frac{7}{9}$                                     (2)  $1\frac{7}{8}$   
(3)  $5\frac{1}{3}$                                 (4)  $5\frac{2}{3}$

(5) None of these

**18.**  $(7)^3 \div \sqrt{?} + 7 = 14$

- (1) 49                                (2) 1764  
(3) 441                                (4) 3136  
(5) None of these

**19.**  $\sqrt[3]{12167} \times ? = 1035$

- (1) 35                                (2) 25  
(3) 55                                (4) 15  
(5) None of these

**20.**  $1256 \times 3892 = ?$

- (1) 4883582                        (2) 4888352  
(3) 4888532                        (4) 4883852  
(5) None of these

- 21.**  $0.08 \times 0.5 + 0.9 = ?$   
 (1) 1.3 (2) 0.94  
 (3) 0.112 (4) 1.5  
 (5) None of these
- 22.**  $129.36 - 12.57 + 97.31 = ?$   
 (1) 218.20 (2) 44.62  
 (3) 214.10 (4) 19.48  
 (5) None of these
- 23.**  $8195 \div 745 + ? \times 12 = 7847$   
 (1) 648 (2) 593  
 (3) 601 (4) 653  
 (5) None of these
- 24.**  $35568 \div ?\% \text{ of } 650 = 456$   
 (1) 12 (2) 16  
 (3) 18 (4) 14  
 (5) None of these
- 25.**  $15\% \text{ of } 6500 = ?\% \text{ of } 12500$   
 (1) 8.2 (2) 7.5  
 (3) 6.3 (4) 7.8  
 (5) None of these
- 26.** What should come in place of the question mark (?) in the following number series?  
 3 3 12 108 ? 43200  
 (1) 2700 (2) 1728  
 (3) 972 (4) 432  
 (5) None of these
- 27.** The population of a town is 126800. It increases by 15% in the 1st year and decreases by 20% in the 2nd year. What is the population of the town at the end of 2 years?  
 (1) 174984 (2) 135996  
 (3) 116656 (4) 145820  
 (5) None of these
- 28.** If an amount of Rs 1,72,850/- is equally distributed amongst 25 people, how much amount would each person get?  
 (1) Rs 8912.50 (2) Rs 8642.50  
 (3) Rs 7130 (4) Rs 6914  
 (5) None of these
- 29.** The area of a rectangle is 4 times the area of a square. The length of the rectangle is 90 cms and the breadth of the rectangle is  $\frac{2}{3}$ rd of the side of the square. What is the side of the square?  
 (1) 10 cms (2) 20 cms  
 (3) 9 cms (4) Cannot be determined  
 (5) None of these
- 30.** What approximate value should come in place of the question mark (?) in the following question?  
 $4123 \div (2.3)^2 - 446 = ?$   
 (1) 401 (2) 441  
 (3) 301 (4) 333  
 (5) 386
- 31.** If  $x + y = 18$  and  $xy = 72$ , what is the value of  $(x)^2 + (y)^2$ ?  
 (1) 120 (2) 90
- (3) 180 (4) Cannot be determined  
 (5) None of these
- 32.** The difference between a two digit number and the number obtained after interchanging the two digits of the two digit number is 27. The sum of the two digits of the two digit number is 15. What is the two digit number?  
 (1) 87 (2) 96  
 (3) 69 (4) Cannot be determined  
 (5) None of these
- 33.** The difference between 75% of a number and 20% of the same number is 378.4. What is 40% of that number?  
 (1) 275.2 (2) 274  
 (3) 267.2 (4) 266  
 (5) None of these
- 34.** The average of four positive integers is 73.5. The highest integer is 108 and the lowest integer is 29. The difference between the remaining two integers is 15. Which of the following is the smaller of the remaining two integers?  
 (1) 80 (2) 86  
 (3) 73 (4) Cannot be determined  
 (5) None of these
- 35.** Mr Deepak invested an amount of Rs 21,250 for 6 years. At what rate of simple interest will he obtain the total amount of Rs 26,350 at the end of 6 years?  
 (1) 6 p.c.p.a. (2) 5 p.c.p.a.  
 (3) 8 p.c.p.a. (4) 12 p.c.p.a.  
 (5) None of these
- 36.** Which least number shall be added to 8115 to make it a perfect square?  
 (1) 349 (2) 166  
 (3) 144 (4) 194  
 (5) None of these
- 37.** In how many different ways can the letters of the word 'INHALE' be arranged?  
 (1) 720 (2) 360  
 (3) 120 (4) 650  
 (5) None of these
- 38.** A gold bracelet is sold for Rs 14,500 at a loss of 20%. What is the cost price of the gold bracelet?  
 (1) Rs 18,125 (2) Rs 17,400  
 (3) Rs 15,225 (4) Rs 16,800  
 (5) None of these
- 39.** Find the average of the following sets of scores.  
 124 856 331 227 963 338 259 662  
 (1) 570 (2) 660  
 (3) 480 (4) 350  
 (5) None of these
- 40.** What approximate amount of compound interest can be obtained on an amount of Rs 3,080 at the rate of 7 p.c.p.a. at the end of 3 years?

- (1) Rs 586                      (2) Rs 693  
 (3) Rs 646                      (4) Rs 596  
 (5) Rs 621

**41.** Five bells begin to toll together at intervals of 9 seconds, 6 seconds, 4 seconds, 10 seconds and 8 seconds respectively. How many times will they toll together in the span of one hour (excluding the toll at the start)?

- (1) 5                                      (2) 8  
 (3) 10                                    (4) Cannot be determined  
 (5) None of these

**42.** The ratio of the present ages of Sushma and Karishma is 6 : 7 respectively. The ratio of their ages 8 years hence would be 8 : 9 respectively. What would be the respective ratio of their ages after 12 years?

- (1) 17 : 19                      (2) 15 : 17  
 (3) 9 : 10                        (4) 10 : 11  
 (5) None of these

**43.** In an examination it is required to get 40% of the aggregate marks to pass. A student gets 265 marks and is declared fail by 55 marks. What is the maximum aggregate marks a student can get?

- (1) 800                                  (2) 750  
 (3) 650                                  (4) Cannot be determined  
 (5) None of these

**44.** The sum of four consecutive even numbers A, B, C and D is 180. What is the sum of the set of next four consecutive even numbers?

- (1) 214                                  (2) 212  
 (3) 196                                  (4) 204  
 (5) None of these

**45.** If the numerator of a fraction is increased by 200% and the denominator of the fraction is increased by 150%, the resultant fraction is  $\frac{9}{35}$ . What is the original fraction?

- (1)  $\frac{3}{10}$                                       (2)  $\frac{2}{15}$   
 (3)  $\frac{3}{16}$                                       (4)  $\frac{2}{7}$   
 (5) None of these

**46.** 40% of 15% of  $\frac{3}{4}$ th of a number is 153. What is the number?

- (1) 3400                                  (2) 3650  
 (3) 3600                                  (4) 3200  
 (5) None of these

**47.** What is 786 times 964?  
 (1) 759276                              (2) 749844  
 (3) 75416                                (4) 757704  
 (5) None of these

**48.** If  $(46)^2$  is subtracted from the square of a number, the answer so obtained is 485. What is the number?

- (1) 49                                      (2) 51  
 (3) 56                                      (4) 53

(5) None of these

**49.** In the following number series one of the numbers is wrong. Find out the wrong number.

14 28 112 672 5374 53760

- (1) 112                                      (2) 672  
 (3) 5374                                    (4) 28  
 (5) None of these

**50.** If  $47a + 47b = 5452$ , what is the average of a and b?

- (1) 116                                      (2) 23.5  
 (3) 96                                        (4) 58  
 (5) None of these

**ANSWERS AND EXPLANATIONS**

1. (3)                                      2. (3)                                      3. (2)                                      4. (3)  
 5. (4)                                      6. (4)                                      7. (3)                                      8. (5)  
 9. (1)                                      10. (1)  
 11. (5) Ans 11  
 12. (3)  
 13. (5)  $\sqrt{x} \times 41 = 2296$                        $\sqrt{1681} = 41$   
 $\therefore \sqrt{x} = \frac{2296}{41} = 56$   
 $\therefore x = 56^2 = 3136$   
 14. (1)  
 18. (5)  $\frac{343}{\sqrt{x}} = 14 - 7 = 7 \Rightarrow \sqrt{x} = \frac{343}{7}$   
 $\sqrt{x} = 49 \Rightarrow x = 49^2 = 2401$   
 19. (5)  $\sqrt[3]{12167} = 23 \therefore x = \frac{1035}{23} = 45$   
 20. (2)  
 24. (1)  $\frac{35568}{456} = \frac{x}{100} \times 650 \Rightarrow x = 12$   
 25. (4)  
 26. (2) **Multiply by  $1^2, 2^2, 3^2, 4^2, 5^2$  to get the series**  
**Reqd. no. =  $108 \times 4^2 = 1728$**   
 27. (3) **Reqd. population**  
 $= 126800 \left(1 + \frac{15}{100}\right) \left(1 - \frac{20}{100}\right) = 116656$   
 28. (4)  $\text{Rs } 172850 \div 25 = \text{Rs } 6914$   
 29. (5)  $L = 90 \text{ cm}, B = \frac{2}{3}a$   
**a = side of a square**  
 $90 \times \frac{2}{3}a = 4a^2 \Rightarrow a = 15 \text{ cm}$   
 30. (4)  
 31. (3)  $x^2 + y^2 = (x + y)^2 - 2xy = 18^2 - 2 \times 72 = 180$   
 32. (2) **Let the digits at unit's and ten's places be x and y resp.**  
 $\therefore \text{No.} = 10y + x$   
**ATS  $(10y + x) - (10x + y) = 27$**

$$\Rightarrow y - x = 3$$

$$\text{Also } y + x = 15$$

Solving the equs. we get

$$y = 9, x = 6$$

$$\therefore \text{No.} = 96$$

$$33. (1) \frac{75}{100}x - \frac{20}{100}x = \frac{55}{100}x = 378.4 \Rightarrow x = 688$$

$$688 \times \frac{40}{100} = 275.2$$

$$34. (5) 73.5 \times 4 - 108 - 29 = x + y$$

$$\Rightarrow x + y = 157,$$

$$x - y = 15$$

$$\therefore x = 86, y = 71$$

$$35. (5) R = \frac{I \times 100}{P \times R} = \frac{(26350 - 21250) \times 100}{21250 \times 6} = 4$$

$$36. (2) 90^2 < 8115 < 91^2$$

$$\therefore \text{Reqd. least no. to be added} \\ = 91^2 - 8115 = 166$$

$$37. (1) \text{INHALE}$$

There are 6 different letters which can be arranged in  $6! = 720$  ways

$$38. (1) \text{C.P.} = \frac{\text{S.P.} \times 100}{(100 - \%)} = 14500 \times \frac{100}{80} = \text{Rs } 18125$$

$$39. (5) \text{Average} = \frac{\text{Total Sum of Nos.}}{\text{No. of nos.}} = 470$$

$$40. (2) \text{CI} = P \left[ \left( 1 + \frac{R}{100} \right)^n - 1 \right] = \text{Rs } 693 \text{ (approx.)}$$

$$41. (3) \text{LCM of } 9, 6, 4, 10, 8 = 360$$

$$360 \text{ secs.} = 6 \text{ min utes}$$

Five bells will toll together after every 6 min

$\therefore$  Reqd. no. = In 1 hr they will toll together 10 times

$$42. (3) \frac{6x + 8}{7x + 8} = \frac{8}{9} \Rightarrow x = 4$$

$$\therefore \text{Reqd. ratio} = \frac{24 + 12}{28 + 12} = \frac{36}{40} = \frac{9}{10}$$

$$43. (1) 40\% \text{ of } x = 265 + 55 \Rightarrow x = 800$$

$$44. (2) x + (x + 2) + (x + 4) + (x + 6) = 180$$

$$\Rightarrow x = 42$$

Reqd. sum of next four consecutive even nos.

$$= (x + 8) + (x + 10) + (x + 12) + (x + 14)$$

$$= 4x + 44$$

$$= 4 \times 42 + 44 = 212$$

$$45. (5) \frac{\frac{100 + 200}{100}x}{\frac{100 + 150}{100}y} = \frac{9}{35} \Rightarrow \frac{x}{y} = \frac{3}{14}$$

$$46. (1) \frac{40}{100} \text{ of } \frac{15}{100} \text{ of } \frac{3}{4} \text{ of } x = 153 \Rightarrow x = 3400$$

$$47. (4)$$

$$48. (2) x^2 - 46^2 = 485 \Rightarrow x^2 = 2601 \Rightarrow x = 51$$

49. (3) Multiplying by 2, 4, 6, 8, 10 we get the next no.

$\therefore$  5374 is wrong. It should be 5376

$$672 \times 8 = 5376$$

$$50. (4) a + b = \frac{5452}{47} = 116$$

$$\therefore \text{Average of } a + b = \frac{a + b}{2} = \frac{116}{2} = 58$$

### Quantitative Aptitude

(Contd. from page 65)

$$43. (1) R = \frac{I \times 100}{P \times T} = \frac{.40 \times 100}{1 \times 4} = \text{Rs } 10$$

$$\text{Reqd. I} = \frac{450 \times 10 \times 2}{100} = \text{Rs } 90$$

$$44. (5) \text{Production in 2006}$$

$$= 70 \text{ lakh tonnes } \left( 1 + \frac{8}{100} \right)^2$$

$$= 81.648 \text{ lakh tonnes}$$

$$45. (5) \text{Computer A processes } \frac{60}{3} \text{ i.e. 20 inputs in}$$

1 hour

$$\text{Computer B processes } \frac{60}{5} = 12 \text{ inputs in}$$

1 hour

Inputs processed by A, B, C in 1 hour

$$= 14 \times 3 = 42$$

$\therefore$  Inputs processed by C in 1 hour

$$= 42 - (20 + 12) = 10$$

$$\text{Computer C alone takes } \frac{60}{8} = 7\frac{1}{2} \text{ min utes}$$

to process an input

$$46. (4)$$

$$47. (2) \text{Let Rajan's salary be Rs } x$$

$$\therefore \frac{1}{2} \text{ Sunita's salary} = \frac{2x}{5}$$

$$\therefore \text{Sunita's salary} = \frac{4x}{5}$$

Ratio of Sunita's and Rajan's salary

$$= \frac{4x}{5} : x = 4 : 5$$

$$\text{Rajan's salary} = \frac{5}{9} \times 36000 = \text{Rs } 20,000$$

$$48. (3) \text{Reqd. amount} = \frac{54 \times 60}{54 - 9} = \text{Rs } 72$$

$$\therefore \text{Additional amount} = 72 - 60 = 12$$

$$49. (3) \frac{3x}{5x + 21} = \frac{3}{8} \Rightarrow x = 7 \therefore \text{Managers} = 3x = 21$$

$$50. (1) \text{Change in decimals}$$