IBPS CLERKS

PRACTICE TEST 1

NUMERICAL ABILITY

1. In an urn there are 4 red balls and 3 blue balls. If two balls are drawn at random, find the probability that none is red.

1) $\frac{2}{7}$ 2) $\frac{4}{7}$

3) $\frac{1}{7}$ 4) $\frac{3}{7}$

5) None of these

2. On annual day of a school some chocolates were to be distributed equally among 420 children. But on that particular day, due to some reason 140 more children of another school joined them; hence each child got 1 chocolate less. How many chocolates were originally supposed to be distributed among the children?

1) 1640 2) 1680
3) 1690 4) 1600
5) None of these

3. Raj Kumar got the result of his 8th class. Each subject consists of a maximum of 140 marks. If he score 98 marks in Science; 129 marks in Sanskrit; 131 marks in Maths, 110 marks in English and 120 marks in Hindi, what was his percentage of marks in all the five subjects?

1) 84% 2) 82%
3) 77% 4) 79%
5) None of these

4. If Suresh sells an article at a price of ₹ 9300, he incurs a loss of ₹ 3100. At what price should he sell the article so that he gets a profit of 25%?

1) ₹ 7250 2) ₹ 7350
3) ₹ 7650 4) ₹ 7750
5) None of these

5. There is a circular ground whose area is 246400 sq. metre. If a person runs at the speed of 14.08 m/sec, then how much time will he take to complete the circle?

1) 125 sec 2) 130 sec
3) 100 sec 4) 120 sec
5) None of these

Directions (Q. 86-90): What should come in place of the question mark (?) in the following number series?

6. 2 4 16 96 768 ? 92160

1) 7680 2) 7580
3) 7608 4) 7090
5) 7860

7. 14 36 ? 300 894 2676 8022

1) 101 2) 102
3) 103 4) 104
5) None of these

8. 5 8 13 20 ? 44 61

1) 29 2) 30
3) 31 4) 32
5) 37

9. 11 16 31 56 91 136 ?

1) 171 2) 181
3) 185 4) 191
5) 197

10. 3 4 12 45 196 ?

1) 985 2) 990
3) 995 4) 1000
5) 1005

11. The simple interest accrued in 2 years on a principal of ₹ 24000 is one-eighth of the principal. What is the rate of simple interest p.c.p.a?

1) 5 2) 4.5
3) 6.25 4) 7.25
5) None of these

12. If the person runs 14.35 km in five weeks, then what distance does he travel everyday?

1) 400 m 2) 410 m
3) 405 m 4) 415 m
5) None of these

13. If a train 280 metre long runs at the speed of 7.4 m/second, how much time will it take to cross a platform 460 metre long?

1) 95 sec 2) 96 sec
3) 98 sec 4) 99 sec
5) 100 sec

14. If a trader sells his stock of oranges at ₹ 18270, he gain 45 percent. What is the cost price of

total stock of oranges?

1) ₹ 12600 2) ₹ 13600
3) ₹ 12650 4) ₹ 13650
5) None of these

15. If the numerator of a fraction is increased by 20% and its denominator by 25%, then the fraction so obtained is $\frac{3}{5}$. What is the original fraction?

1) $\frac{3}{5}$ 2) $\frac{3}{8}$
3) $\frac{5}{8}$ 4) $\frac{7}{11}$
5) None of these

Directions (Q. 96-105): What will come in place of the question mark (?) in the following questions?

16. $\frac{12}{13}+\frac{1}{26}+1\frac{1}{13}=?$

1) $1\frac{1}{26}$ 2) $2\frac{1}{26}$
3) $1\frac{3}{26}$ 4) $\frac{11}{26}$
5) None of these

17. $4\times566\div5+24.2-36=(?)^2$

1) 20 2) 21
3) 22 4) 23
5) 25

18. $5252 + 2525 = ? \times 25$

1) 310.8 2) 311.8
3) 311.08 4) 312.8
5) 312.08

19. $8 \times ? = 4888 \div 4$

1) 150.75 2) 125.75
3) 125.05 4) 152.75
5) None of these

20. $39254 + 5217 - 2286 = ? \times 50$

1) 813.7 2) 843.7
3) 834.7 4) 943.77
5) None of these

21. $(62.5\times14\times5)\div25+41=(?)^3$

1) 4 2) 5
3) 9 4) 8
5) 6

22. $(23\times23\times23\times23\times23\times23)^5\times (23\times23)^2\div(23)^2=(23)^?$

1) 32 2) 30
3) 9 4) 7
5) 11

23. 27% of 510 + ? = 266.3

1) 182.6 2) 122.6
3) 123.6 4) 128.6
5) None of these

24. $2\sqrt{2}\times3\sqrt{3}\times7\sqrt{2}\times4\sqrt{3}=?$

1) 1080 2) 1008
3) 1800 4) $40\sqrt{3}$
5) $108\sqrt{6}$

25. $\frac{5}{8}$ of $\frac{4}{9}$ of $\frac{3}{5}$ of 222 = ?

1) 42 2) 43
3) 39 4) 37
5) None of these

26. A car covers a distance from town A to town B at the speed of 58 kmph and covers the distance from town B to twon A at the speed of 52 kmph. What is the **approximate** average speed of the car?

1) 55 kmph 2) 52 kmph
3) 48 kmph 4) 50 kmph
5) 60 kmph

27. Mr. Phanse invests an amount of ₹ 24200 at the rate of 4 p.c.p.a for 6 years to obtain a simple interest. Later he invests the principal amount as well as the amount obtained as simple interest for another 4 years at the same rate of interest. What amount of simple interest will he obtain at the end of the last 4 years.

1) ₹ 4800 2) ₹ 4850.32
3) ₹ 4801.28 4) ₹ 4700
5) None of these

28. In a sale, perfumes are available at a discount of 25% on the selling price. If a perfume costs ₹ 5895 in the sale, what is the selling price of the perfume?

1) ₹ 6020 2) ₹ 7860
3) ₹ 7680 4) Can't be determined
5) None of these

29. What approximate value should come in place of the question mark (?) in the following question?

$754\div\sqrt{4136}\times34=?$

1) 294 2) 276

3) 265 4) 300
5) 288

30. The cost of 15 digital cameras and 21 handy cameras is ₹ 354900. What is the cost of 5 digital cameras and 7 handy cameras?

1) ₹ 125500 2) ₹ 118300
3) ₹ 215100 4) Can't be determined
5) None of these

31. A canteen required 56 kgs. of rice for seven days. How many kgs of rice will it require for the months of April and May together?

1) 496 2) 480
3) 498 4) 488
5) None of these

32. How much part of a day is 45 minutes?

1) $\frac{1}{42}$ 2) $\frac{1}{24}$
3) $\frac{1}{32}$ 4) $\frac{1}{48}$
5) None of these

33. The total number of students in a school is 31700. If the ratio of boys to the girls in the school is 743 : 842 respectively, what is the total number of girls in the school?

1) 14860 2) 16480
3) 15340 4) Can't be determined
5) None of these

34. The sum of five consecutive even numbers A, B, C, D and E is 130. What is the product of A and E?

1) 720 2) 616
3) 660 4) 672
5) None of these

SOLUTIONS

1. (3) Total balls = 4 + 3 = 7

Exhaustive number of cases

= Selection of 2 balls out of 7 balls $= {}^7C_2$

$= \frac{7\times 6}{1\times 2} = 21$

Favourable number of cases = selection of 2 blue balls out of 3 $= {}^3C_2 = 3$

$\therefore$ Required probability $= \frac{3}{21} = \frac{1}{7}$

2. (2) Let there be originally x chocolates

$\therefore \quad \frac{x}{420} - \frac{x}{560} = 1$

$\Rightarrow \quad \frac{4x-3x}{1680} = 1$

$\Rightarrow \quad \frac{x}{1680} = 1$

$\Rightarrow \quad x = 1680$

3. (1) Total marks obtained by Raj Kumar

$= 98 + 129 + 131 + 110 + 120 = 588$

Total maximum marks

$= 140 \times 5 = 700$

$\therefore$ Percentage of marks

$= \frac{588\times 100}{7400} = 84\%$

4. (4) C.P. of article

$= ₹\ (9300 - 3100) = ₹\ 6200$

To gain 25%

$\text{S.P.} = \frac{6200\times 125}{100} = ₹\ 7750$

5. (1) If the radius of circular ground be r metre, then

$\pi r^2 = 246400$

$\Rightarrow \quad \frac{22}{7}\times r^2 = 246400$

$\Rightarrow \quad r^2 = \frac{246400\times 7}{22} = 78400$

$\Rightarrow \quad r = \sqrt{78400} = 280$ metre

$\therefore$ Circumference of the ground $= 2\pi r$

$= 2\times\frac{22}{7}\times 280 = 1760$ metre

$\therefore$ Time taken $= \frac{1760}{14.08} = 125$ seconds

6. (1) The pattern is

$2 \times 2 = 4$

$4 \times 4 = 16$

$16 \times 6 = 96$

$98 \times 8 = 768$

$768 \times 10 = \mathbf{7680}$

$7680 \times 12 = 92160$

7. (2) The pattern is

$14 \times 3 - 6 = 42 - 6 = 36$

$36 \times 3 - 6 = 108 - 6 = \mathbf{102}$

$102 \times 3 - 6 = 306 - 6 = 300$

$300 \times 3 - 6 = 900 - 6 = 894$

$894 \times 3 - 6 = 2682 - 6 = 2676$

$2676 \times 3 - 6 = 8028 - 6 = 8022$

8. (3) The pattern is

$5 + 3 = 8$

$8 + 5 = 13$

$13 + 7 = 20$

$20 + 11 = \mathbf{31}$

$31 + 13 = 44$

$44 + 17 = 61$

Note: Consecutive prime numbers have been added.

9. (4) The pattern is

$11 + 5 = 16$

$16 + 15 = 31$

$31 + 25 = 56$

$56 + 35 = 91$

$91 + 45 = 136$

$136 + 55 = \mathbf{191}$

10. (5) The pattern is

$3 \times 1 + 1^2 = 3 + 1 = 4$

$4 \times 2 + 2^2 = 8 + 4 = 12$

$12 \times 3 + 3^2 = 36 + 9 = 45$

$45 \times 4 + 4^2 = 180 + 16 = 196$

$196 \times 5 + 5^2 = 980 + 25 = \mathbf{1005}$

11. (3) $\text{S.I.} = \frac{1}{8} \times \text{principal}$

$= \frac{1}{8} \times 24000 = ₹\ 3000$

$\therefore \quad \text{Rate} = \frac{\text{S.I.} \times 100}{\text{Principal} \times \text{Time}}$

$= \frac{3000 \times 100}{24000 \times 2} = 6.25\%$ per annum

Second Method

$\frac{\text{S.I.}}{\text{Principal}} = \frac{1}{8}$

$\therefore \quad \text{Rate} = \frac{\text{S.I.}}{\text{Principal}} \times \frac{100}{\text{Time}}$

$= \frac{1}{8} \times \frac{100}{2} = \frac{25}{4}$

$= 6.25\%$ per annum.

12. (2) Distance covered in 5 weeks i.e., 35 days

$= 14.35$ km $= 14350$ metre

$\therefore$ Distance covered per day

$= \frac{14350}{35} = 410$ metre

13. (5) Total length to be covered

$= 280 + 460 = 740$ metre

$\therefore$ Time taken

$= \frac{740}{7.4} = 100$ second

14. (1) Required C.P.

$= \frac{18270 \times 100}{145} = ₹\ 12600$

15. (3) Let the fraction by $\frac{x}{y}$

$\therefore \quad \frac{x \times 120}{y \times 125} = \frac{3}{5}$

$\Rightarrow \quad \frac{x}{y} = \frac{3}{5} \times \frac{125}{120} = \frac{5}{8}$

16. (1) $? = \frac{12}{13} + \frac{1}{26} + \frac{14}{13}$

$= \frac{24 + 1 + 28}{26} = \frac{53}{26} = 1\frac{1}{26}$

17. (2) $(?)^2 = \frac{4 \times 566}{5} + 24.2 - 36$

$= 452.8 + 24.2 - 36$

$= 477 - 36 = 441$

$\therefore \quad ? = \sqrt{441} = 21$

18. (3) $5252 + 2525 = ? \times 25$

$\Rightarrow \quad 7777 = ? \times 25$

$\Rightarrow \quad ? = \frac{7777}{25} = 311.08$

19. (4) $8 \times ? = \frac{4888}{4} = 1222$

$\Rightarrow \quad ? = \frac{1222}{8} = 152.75$

20. (2) $39254 + 5217 - 2286 = ? \times 50$

$\Rightarrow \quad 42185 = ? \times 50$

$\Rightarrow \quad ? = \frac{42185}{50} = 843.7$

21. (5) $(?)^3 = \frac{62.5 \times 14 \times 5}{25} + 41$

$= 175 + 41 = 216$

$\therefore \quad ? = \sqrt[3]{216} = 6$

22. (1) $\left(23^6\right)^5 \times \left(23^2\right)^2 \div (23)^2 = (23)^?$

$\Rightarrow \quad 23^{30+4-2} = (23)^{?}$

$\Rightarrow \quad 23^{32} = (23)^{?}$

$\Rightarrow \quad ? = 32$

23. (4) $\frac{27 \times 510}{100} + ? = 266.3$

$\Rightarrow \quad 137.7 + ? = 266.3$

$\Rightarrow \quad ? = 266.3 - 137.7 = 128.6$

24. (2) $? = \left(2\sqrt{2} \times 7\sqrt{2}\right)\left(3\sqrt{3} \times 4\sqrt{3}\right)$

$= 14 \times 2 \times 12 \times 3 = 1008$

25. (4) $? = \frac{5}{8} \times \frac{4}{9} \times \frac{3}{5} \times 222 = 37$

26. (1) If two equal distance are covered at two different speeds of x kmph and y kmph, then

Average speed

$= \left(\frac{2xy}{x+y}\right)$ kmph

$= \left(\frac{2 \times 58 \times 52}{58+52}\right)$ kmph

$= \left(\frac{6032}{110}\right)$ kmph $= 55$ kmph

27. (3) **Case I**

$\text{S.I.} = \frac{P \times R \times T}{100}$

$= ₹\left(\frac{24200 \times 4 \times 6}{100}\right) = ₹\ 5808$

$\therefore$ Amount = Principal + SI

$= ₹\ (24200 + 5808) = ₹\ 30008$

Case II

$\text{SI} = ₹\left(\frac{30008 \times 4 \times 4}{100}\right) = ₹\ 4801.28$

28. (2) Let the S.P. of perfume be ₹ x

Discount = 25%

$\therefore$ 75% of x = ₹ 5895

$\Rightarrow \quad x \times \frac{75}{100} = ₹\ 5895$

$\Rightarrow \quad x = ₹\left(\frac{5895 \times 100}{75}\right) = ₹\ 7860$

29. (5) $? = 754 \div \sqrt{4136} \times 24$

$\approx \frac{754}{64.3} \times 24 \approx 288$

30. (2) Let the CP of 1 digital camera be ₹ x and that of 1 handy camera be ₹ y

According to the question

$15x + 21y = ₹\ 354900$

On dividing both sides by 3, we have

$5x + 7y = ₹\left(\frac{354900}{3}\right) = ₹\ 118300$

31. (4) Number of days in April and May

$= 30 + 31 = 61$

$\because$ Requirement of rice for 7 days = 56 kgs.

$\therefore$ Requirement of rice for 61 days

$= \left(\frac{56}{7} \times 61\right)$ kgs $= 488$ kgs

32. (3) 1 days = 24 hours

$= 24 \times 60$ minutes

$\therefore$ Required part

$= \frac{45}{24 \times 60} = \frac{1}{32}$

33. (5) Boys : Girls = 743 : 842

Total number of students = 31700

$\therefore$ Number of girls

$= \frac{842}{(743+842)} \times 31700$

$= \frac{842}{1585} \times 31700 = 16840$

34. (3) Let A = x, B = x + 2, C = x + 4, D = x + 6 and E = x + 8

$\therefore \quad x + x + 2 + x + 4 + x + 6 + x + 8 = 130$

$\Rightarrow \quad 5x + 20 = 130$

$\Rightarrow \quad 5x = 130 - 20 = 110$

$\Rightarrow \quad x = \frac{110}{5} = 22$

$\therefore$ A = 22 and

$E = x + 8 = 22 + 8 = 30$

$\therefore \quad A \times E = 22 \times 30 = 660$