



IBPS PO Quantitative Aptitude Questions

| Topics | No. Of Questions | No. Of Marks |
|---------------------------------------|------------------|--------------|
| Tabular Data Interpretation | 5 Questions | 5 Marks |
| Pie Chart + Table Data Interpretation | 6 Questions | 6 Marks |
| Quadratic equation | 5 Questions | 5 Marks |
| Caselet Data Interpretation | 4 Questions | 4 Marks |
| Missing Number Series | 5 Questions | 5 Marks |
| Arithmetic Questions | 10 Questions | 10 Marks |

Memory Based Quantitative Aptitude Questions

Directions (1– 5): What comes at the place of question marks in below series:

1) 8, 12, 30, 105, ?

Answer: 2598.75

Explanation:

Pattern of series

$$8 \times 1.5 = 12$$

$$12 \times 2.5 = 30$$

$$30 \times 3.5 = 105$$

$$105 \times 4.5 = 472.5$$

$$472.5 \times 5.5 = 2598.75$$



2) 9,19,39,?,159

Answer: 79

Explanation:

Pattern of series

$$9 \times 2 + 1 = 19$$

$$19 \times 2 + 1 = 39$$

$$39 \times 2 + 1 = 79$$

$$79 \times 2 + 1 = 159$$

$$159 \times 2 + 1 = 319$$

3) 580, 557, 528, 497, ?

Answer: 460

Explanation:

Pattern of series

Subtraction of consecutive prime number –

$$580 - 23 = 557$$

$$557 - 29 = 528$$

$$528 - 31 = 497$$

$$497 - 37 = 460$$

$$460 - 41 = 419$$

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4) 81, 72, 136, 111, ?

Answer: 327

Explanation:

Pattern of series

$$81 - 32 = 72$$

$$72 + 43 = 136$$

$$136 - 52 = 111$$

$$111 + 63 = 327$$

$$327 - 72 = 278$$

5) 14, 20, 28, 39, ?

Answer: 54

Explanation:

5. Pattern of series -

| | | | | | |
|-----------|-----|------|------|---------------|----|
| <u>14</u> | 20, | 28, | 39, | ? = <u>54</u> | 74 |
| + 6 | + 8 | + 11 | + 15 | + 20 | |
| | + 2 | + 3 | + 4 | + 5 | |



Directions (6-10): Table given below shows total item in six branches of a Store and ratio of Pen to Copy in these branches. Study the data carefully & answer the following question.

| Cities | Total Item | Pen :Copy |
|---------|------------|-----------|
| Delhi | 1440 | 7 : 11 |
| Mumbai | 1200 | 3 : 5 |
| Gurgaon | 1800 | 7 : 8 |
| Meerut | 1680 | 2 : 5 |
| Imphal | 1320 | 5 : 6 |
| Gwalior | 1600 | 11 : 9 |

Note: - 1. Total Item = Pen+ Copy

Q6. Total number of Pen in Gurgaon and Meerut together is what percent of the total number of Copy in Delhi and Gwalior together?

- (a) 77.5%
- (b) 80%
- (c) 85%
- (d) 82.5%
- (e) 87.5%

Answer: 82.5%

Explanation:

6. Ans. d

$$\begin{aligned} \text{Total number of Pen in Gurgaon and Meerut together} &= \frac{1680}{7} \times 2 + \frac{1800}{15} \times 7 \\ &= 480 + 840 = 1320 \end{aligned}$$

$$\begin{aligned} \text{Total number of Copy in Delhi and Gwalior together} &= \frac{1440}{18} \times 11 + \frac{1600}{20} \times 9 \\ &= 880 + 720 = 1600 \end{aligned}$$

$$\text{Required \%} = \frac{1320}{1600} \times 100 = 82.5\%$$

Q7. Find the average number of Copy in Mumbai, Gurgaon and Imphal together?

- (a) 800
- (b) 810



- (c) 820
- (d) 830
- (e) 840

Answer: 810

Explanation:

7. Ans. b

$$\begin{aligned}\text{Copy in Mumbai, Gurgaon \& Imphal together} &= \frac{1200}{8} \times 5 + \frac{1800}{15} \times 8 + \frac{1320}{11} \times 6 \\ &= 750 + 960 + 720 \\ &= 2430\end{aligned}$$

$$\text{Required average} = \frac{2430}{3} = 810$$

Q8. Find the ratio of Copy in Imphal and Gwalior together to Pen in Gurgaon and Meerut together?

- (a) 2 : 3
- (b) 4 : 5
- (c) 5 : 6
- (d) 7 : 8
- (e) 11 : 12

Answer: 2:3

Q9. In another city Lucknow, Pen are 20% more than the Pen in Gwalior while Copy are 10% more than Copy in Imphal. Total number of items in Lucknow is what percent more than total number of officers in Meerut?

- (a) 20%
- (b) 15%
- (c) 10%
- (d) 5%
- (e) 25%

Answer: 327



Explanation:

9. Ans. c

$$\text{Pen in Lucknow} = \frac{1600}{20} \times 11 \times \frac{120}{100}$$

$$= 1056$$

$$\text{Copy in Lucknow} = \frac{1320}{11} \times 6 \times \frac{11}{10}$$

$$= 792$$

$$\text{Total officers in Lucknow} = 792 + 1056$$

$$= 1848$$

$$\text{Required \%} = \frac{1848 - 1680}{1680} \times 100$$

$$= \frac{168}{1680} \times 100$$

$$= 10\%$$

Q10. Not Remember

Directions (11-15): Two equations I and II are given below in each question. You have to solve these equations and give answer

- (a) if $x < y$
- (b) if $x > y$
- (c) if $x \leq y$
- (d) if $x \geq y$
- (e) if $x = y$ or no relation can be established



Q11. I. $x^2 + 5x + 6 = 0$

II. $y^2 + 3y + 2 = 0$

Q12. I. $x^2 + 91 = 20x$

II. $10y^2 - 29y + 21 = 0$

Q13. I. $6x^2 + 13x + 5 = 0$

II. $9y^2 + 22y + 8 = 0$

Q14. I. $5x + 2y = 31$

II. $3x + 7y = 36$

Q15. I. $2x^2 + 11x + 12 = 0$

II. $5y^2 + 27y + 10 = 0$

11. **Answer: C**

12. **Answer: B**

13. **Answer: E**

14. **Answer: B**

15. **Answer: E**

Direction (16 – 19): Read the given paragraph carefully and answer the questions.

Total 150 employees in four different departments, i.e. Management, HR, Sells, Operation of a company. Total employees in HR are $33 \frac{1}{3}$ % of total employees in the company and ratio of total employees in Management to Sells is 1 : 3. Total employees in Operation are 20% less than that of in HR.



$$\text{Total employees in HR} = 150 \times \frac{1}{3} = 50$$

Let total employees in Management and Sells be x and $3x$ respectively

$$\text{And, Total employees in Operation} = 50 \times \left(1 - \frac{20}{100}\right) = 40$$

$$(50 + x + 3x + 40) = 150$$

$$4x = 60$$

$$x = 15$$

| Departments | Employees |
|-------------|-----------|
| Management | 15 |
| HR | 50 |
| Sells | 45 |
| Operation | 40 |

Q16. Find difference between total employee in HR and Management?

- (a) 35
- (b) 45
- (c) 25
- (d) 15
- (e) 5

Q17. Total employee in Management are what percent less than that of in Operation?

- (a) 57.5%
- (b) 60.5%
- (c) 62.5%
- (d) 50%
- (e) 55%

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Q18. If ratio of male to female in Operation is 5 : 3, then find total male employees in Operation are what percent of total employees in HR?

- (a) 40%
- (b) 30%
- (c) 60%
- (d) 80%
- (e) 50%

Q19. Find ratio of total employees in Management to that of in HR?

- (a) 2 : 10
- (b) 10 : 3
- (c) 3 : 8
- (d) 3 : 10
- (e) 3 : 5

16. Ans(a)

Required difference = $50 - 15 = 35$

17. Ans(c)

Required percentage = $\frac{40-15}{40} \times 100 = 62.5\%$

18. Ans(e)

Total male employees in Operation = $40 \times \frac{5}{8} = 25$

Required percentage = $\frac{25}{50} \times 100 = 50\%$

19. Ans(d)

Required ratio = $15 : 50 = 3 : 10$



Q20. Perimeter of a square is equal to perimeter of a rectangle, if area of square is 576 sq.cm and length of rectangle is two times that of breath. Find the area of rectangle?

- (a) 502 sq.cm
- (b) 508 sq.cm
- (c) 510 sq.cm
- (d) 512 sq.cm
- (e) 524 sq. cm

Answer:

20.Ans. d

$$a^2 = 576 \text{ cm. sq.}$$

$$a = 24 \text{ cm}$$

$$4 \times 24 = 2(2b + b)$$

$$48 = 3b$$

$$b = 16 \text{ cm}$$

$$l = 32 \text{ cm}$$

Area of rectangle = $(32 \times 16) = 512 \text{ cm. sq.}$

Q21. A cylinder having height 196 cm radius 14 cm is casted into 'x' number of cubes having side 7 cm. Find the value of 'x'.

- (a) 44
- (b) 352
- (c) 308
- (d) 392
- (e) 2816

Answer: B

Volume of cylinder = Volume of 'x' cubes

$$\frac{22}{7} \times 14 \times 14 \times 196 = x \times 7^3$$

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Q22. There are 4 red balls, 5 blue balls and 3 green balls in a jar. 2 balls are drawn at random. Find the probability that both are either green or red.

- (a) $\frac{2}{31}$
- (b) $\frac{2}{33}$
- (c) $\frac{1}{22}$
- (d) $\frac{3}{22}$
- (e) $\frac{4}{11}$

Answer: D

$$(\text{}^3\text{C}_2 + \text{}^4\text{C}_2) \div \text{}^{12}\text{C}_2 = \frac{3}{22}$$

Q23. A shopkeeper sold an article A at 20% gain and another article B at 20% loss. Find her overall gain or loss percent if S.P. of both articles were same ?

- (a) 4% loss
- (b) 5% loss
- (c) 5% gain
- (d) 2.5% loss
- (e) 2.5% gain

Answer: A

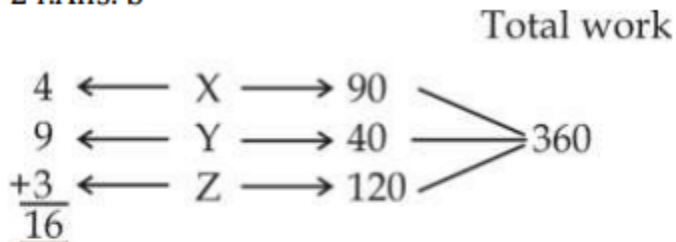
Q24. X, Y and Z can do a piece of work in 90 days, 40 days and 120 days respectively. If all three works alternatively each day starting with X, Y than Z respectively. Find the total time in which work will be completed?

- (a) $65\frac{4}{9}$ days
- (b) $67\frac{4}{9}$ days
- (c) $66\frac{4}{9}$ days
- (d) 66 days
- (e) 67 days

Answer: A



24. Ans. b



Work done by x, y, z together in 3 days = 16

Work done by x, y, z in 66 days = 352

Remaining work = 360 - 352 = 8

Total time required to complete the work

$$= 66 + 1 + \frac{4}{9}$$

$$= 67 + \frac{4}{9}$$

Q25. Train A is 180 metre long, while another train B is 240 metre long. Train A has a speed of 30 kmph and train B's speed is 40 kmph, if the trains move in opposite directions, then in what time will Train A pass Train B completely?

- (a) 21 seconds
- (b) 21.6 seconds
- (c) 26.1 seconds
- (d) 26 seconds
- (e) 16 seconds

Answer: B

Total distance = 180 + 240 = 420 metre

Relative speed =



$$= (30 + 40) \times \frac{5}{18}$$

$$= \frac{70 \times 5}{18} \text{ m/s}$$

$$\begin{aligned} \text{Required time} &= \frac{420 \times 18}{70 \times 5} \\ &= 21.6 \text{ seconds} \end{aligned}$$

Q27. Two vessel A and B contain mixture of milk and water. Ratio of milk and water in vessel A and B are in ratio 1 : 2 and 3 : 2 respectively. In what ratio these two mixtures should be mixed so that new mixture contains 50% milk and 50% water.

- (a) 3 : 5
- (b) 2 : 3
- (c) 5 : 2
- (d) 1 : 2
- (e) 3 : 7

Answer: B

27. Ans. a

$$\begin{array}{ccc} \mathbf{A} & & \mathbf{B} \\ \frac{1}{3} & & \frac{3}{5} \\ & \diagdown \quad \diagup & \\ & \frac{1}{2} & \\ & \diagup \quad \diagdown & \\ \frac{3}{5} - \frac{1}{2} & & \frac{1}{2} - \frac{1}{3} \\ \frac{6-5}{10} & : & \frac{3-2}{6} \end{array}$$

$$\Rightarrow \frac{1}{10} : \frac{1}{6}$$

$$3 : 5$$



Q28. A boat can cover 40 km upstream and 60 km downstream in 13 hour. Also it can cover 50 km upstream and 72 km downstream in 16 hour. Find the speed of boat in still water.

- (a) 8.5 kmph
- (b) 7.5 kmph
- (c) 9.5 kmph
- (d) 6 kmph
- (e) 7 kmph

Answer: A

Let upstream speed = u

Downstream speed = d

$$\text{Now } \frac{40}{u} + \frac{60}{d} = 13 \quad \dots (i)$$

Also

$$\frac{50}{u} + \frac{72}{d} = 16 \quad \dots (ii)$$

Solving eqn. (i) and (ii)

$$u = 12$$

$$d = 5$$

$$\therefore b = \frac{u + d}{2} = \frac{12 + 5}{2} = 8.5 \text{ kmph}$$

Q29. 2n years ago, the age of Raju was four times that of his son and n years ago, the age of Raju was thrice that of his son. If n years later, the sum of the ages of Raju and his son will be 80 years, then the difference in the ages of Raju and his son is

- (a) 20 years
- (b) 40 years
- (c) 24 years



- (d) 30 years
- (e) 34 years

Answer: D

Let, the present ages of Raju and his son be x and y respectively.

2n years ago,

$$x - 2n = 4(y - 2n)$$

$$x = 4y - 6n \dots\dots\dots(i)$$

n years ago,

$$x - n = 3(y - n)$$

$$\Rightarrow x = 3y - 2n \dots\dots\dots(ii)$$

Solving (i) and (ii),

$$y = 4n$$

And, $x = 4 \times 4n - 6n = 10n$

N years later,

$$\begin{aligned} x + n + y + n &= 80 \\ \Rightarrow 4n + n + 10n + n &= 80 \\ \Rightarrow 16n &= 80 \\ \Rightarrow n &= 5 \end{aligned}$$

Difference in their ages = $10n - 4n = 50 - 20 = 30$

Q30.

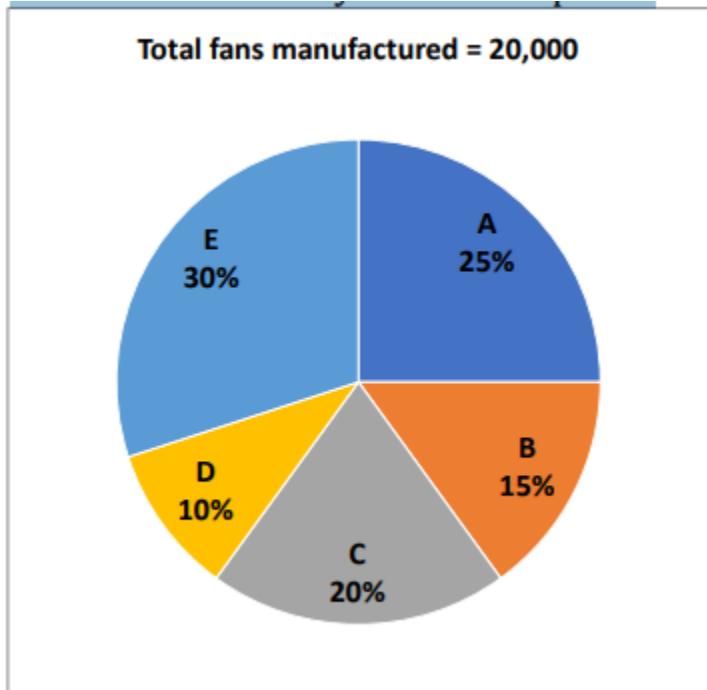
Answer: B

Non – defective fans manufactured by A = $(20,000 \times 25/100) - 500$
 = 4500
 Total fans manufactured by C = $(20,000 \times 20/100)$
 = 4000
 Required % = $4500 - 4000 / 4000 \times 100$
 = 12.5%

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Pie chart shows the percentage distribution of total fans manufactured by 5 different fan manufacturers (A, B, C, D & E) and table shows the defective fans manufactured by these 5 companies



| Company | Defective fans |
|---------|----------------|
| A | 500 |
| B | 600 |
| C | 800 |
| D | 500 |
| E | 900 |



Q30. Non – defective fans manufactured by A are what percent more or less than total fans manufactured by C?

- (a) 24.5%
- (b) 12.5%
- (c) 19.5%
- (d) 27.5%
- (e) 32.5%

Answer: B

Q31. Q31. Non – defective fans manufactured by E are how much more than defective fans manufactured by A, B & C together?

- (a) 3600
- (b) 2800
- (c) 2500
- (d) 3700
- (e) 3200

Answer: E

$$\text{Non – defective fans manufactured by E} = \left(20,000 \times \frac{25}{100} \right) - 900$$

$$= 5100$$

$$\text{Defective fans manufactured by A, B \& C together} = 500 + 600 + 800$$

$$= 1900$$

$$\text{Required difference} = 5100 - 1900$$

$$= 3200$$

Q32. If cost of manufacturing a fan for D is Rs.100 and D wants to earn 20% profit on the total cost of manufacturing and D does not sell defective fans, then find at what price D should sell all the non-defective fans.

- (a) Rs.160
- (b) Rs.156
- (c) Rs.145



- (d) Rs.148
- (e) Rs.154

Answer: A

$$\text{Total cost of manufacturing fans for D} = \left(20,000 \times \frac{10}{100}\right) \times 100$$

$$= \text{Rs.}2,00,000$$

$$\text{Total revenue that D wants} = 2,00,000 \times \frac{120}{100}$$

$$= \text{Rs.}2,40,000$$

$$\text{Non-defective fans of D} = \left(20,000 \times \frac{10}{100}\right) - 500$$

$$= 1500$$

Required selling price = $2,40,000/1500$
= Rs.160

Q33. Find the central angle (in degrees) of total fans manufactured by A & C together.

- (a) 144
- (b) 150
- (c) 180
- (d) 162
- (e) 200

Answer: D

33. Ans.(d)

$$\text{Required central angle} = \left(\frac{25+20}{100}\right) \times 360$$

$$= 162^\circ$$

Q34. If E also manufactures coolers and ratio of fans to coolers manufactured by E is 5 : 7, then find coolers manufactured by E are how much more than non-defective fans manufactured by C?

- (a) 5200



- (b) 4600
- (c) 4800
- (d) 5400
- (e) 5000

Answer: A

34. Ans.(a)

$$\begin{aligned} \text{Coolers manufactured by E} &= \left(20,000 \times \frac{30}{100}\right) \times \frac{7}{5} \\ &= 8400 \end{aligned}$$

$$\begin{aligned} \text{Non-defective fans manufactured by C} &= \left(20,000 \times \frac{20}{100}\right) - 800 \\ &= 3200 \end{aligned}$$

$$\begin{aligned} \text{Required difference} &= 8400 - 3200 \\ &= 5200 \end{aligned}$$

Q35. Find ratio of defective fans manufactured by E to non-defective fans manufactured by B.

- (a) 7 : 13
- (b) 2 : 7
- (c) 1 : 4
- (d) 5 : 11
- (e) 3 : 8

Answer: E

$$\begin{aligned} \text{Non-defective fans manufactured by B} &= (20,000 \times 15/100) - 600 \\ &= 2400 \end{aligned}$$

$$\begin{aligned} \text{Required ratio} &= 900/2400 \\ &= 3 : 8 \end{aligned}$$