

IBPS PO PRELIMS



MODEL PAPER 1



IBPS PO Prelims Quantitative Aptitude Previous Questions

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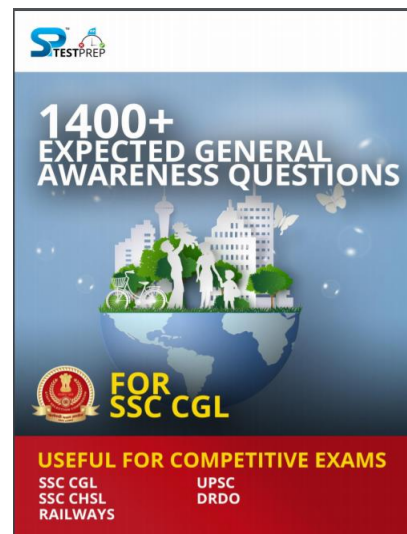
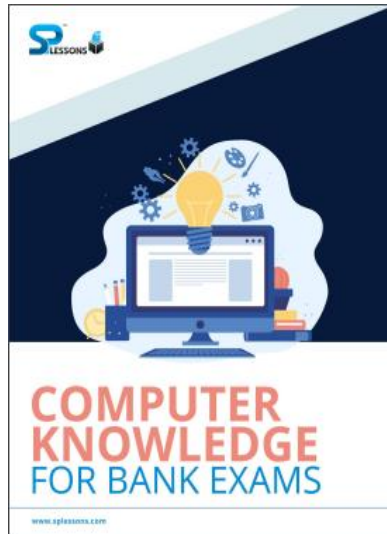
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1. 7, 11, 19, 35, 67, ?

- A. 149
- B. 131
- C. 247
- D. 202
- E. 194

2. 515, 507, 480, 416, ?, 75

- A. 291
- B. 288
- C. 176
- D. 386
- E. 198

3. 3, 9, 29, 77, 167, ?

- A. 267
- B. 285
- C. 309
- D. 356
- E. 313

4. 12, 7, 8, 17, 69, ?

- A. 498
- B. 334
- C. 553
- D. 386
- E. 207

5. 5, 10, 16, 24, 35, ?

- A. 50
- B. 67
- C. 52
- D. 78
- E. 64

Directions [6-10]: What approximate value should come in place of the x in the following questions?
(You are expected to do approximations)

6. $60.09\% \text{ of } 2535.112 + 831.94 \div 13 - 34^2 = x$

- A. 303
- B. 345
- C. 388





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- D. 457
- E. 429

7. $\sqrt{1765} + 1010 \div 14 - 64\% \text{ of } 250 = x$

- A. -46
- B. -26
- C. 32
- D. -33
- E. 39

8. $795.009 \div 15.234 + 768.123 \div 12.099 + 63.98 \div 4 - 1272.985 \div 19.195 = x$

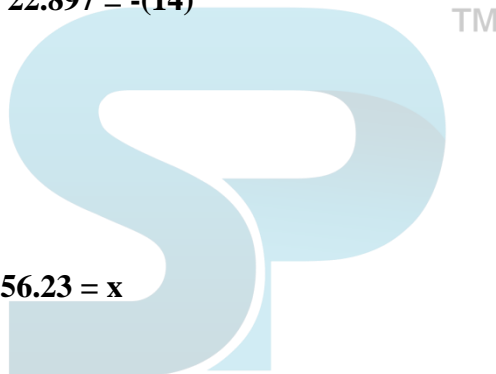
- A. 62
- B. 66
- C. 75
- D. 81
- E. 78

9. $\sqrt{x} + 36.09\% \text{ of } 350 - 16.009 \times 22.897 = -(14)^2$

- A. 2068
- B. 2025
- C. 2749
- D. 2116
- E. 2209

10) $18\% \text{ of } 649.99 - 945 \div 16 + 456.23 = x$

- A. 514
- B. 578
- C. 334
- D. 424
- E. 488



Directions (11-15): Study the following table to answer the questions that follow:

The table shows the number of products produced and sold by a company in respective years



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Product	2013		2014		2015		2016	
	P	S	P	S	P	S	P	S
A	250	224	190	146	320	275	350	319
B	180	152	200	166	250	228	280	262
C	300	283	280	222	350	309	370	341
D	280	237	300	273	310	180	360	314
E	220	187	250	206	240	196	290	245

P = Produced , S = Sold

11. What is the percentage of unsold C products in years 2013 and 2015 together?

- A. 9.82%
- B. 8.23%
- C. 7.65%
- D. 8.92%
- E. 9.28%

12. What is the average number of all products sold in all the years together?

- A. 934
- B. 953
- C. 919
- D. 902
- E. 968

13. Number of unsold A and B products in 2013 and 2016 forms what percent of sold C and E products in 2015?

- A. 24.57%
- B. 22.38%
- C. 26.54%
- D. 20.39%
- E. None of these

14. The company was able to sold how much percent of D products in the given period?

- A. 80.32%
- B. 84.45%
- C. 85.63%
- D. 84.97%
- E. 81.61%

15. What is the percentage of sold B and E products in 2014?

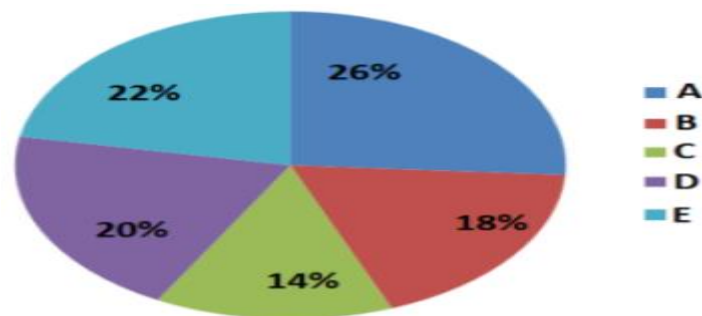
- A. 87.34%



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- B. 84.23%
- C. 82.67%
- D. 74.66%
- E. 72.29%

Directions (16-20): A company has 4 offices – P, Q, R, and S in different cities. Each office has 5 departments – A, B, C, D, and E. The company has decided to keep same % of employees in each of the 5 departments in each office. (In each office number of total number of employees vary)



16. In office P, there are total 6300 employees, what is the total number of employees in its A and D departments?

- A. 2691
- B. 2987
- C. 2365
- D. 2898
- E. 2765

17. In office P, there are total 6500 employees. Office Q has 20% more employees than in office P. What is the difference between the employees in E department of office Q and the employees in B departments of office P?

- A. 672
- B. 724
- C. 546
- D. 598
- E. 627

18. Total number of employees in offices P and R is 13,600. The difference between the employees in departments E and D in offices R and P respectively is 304. Find the total number of employees in departments D and E in offices P and R respectively.

- A. 3265
- B. 2864
- C. 2756
- D. 2891
- E. 3167



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19. In office Q, total number of employees in departments A and B is 2860. Also in office S, total number of employees in departments C and E is 2664. Find the total number of employees in offices Q and S.

- A. 13,900
- B. 15,600
- C. 14,300
- D. 13,400
- E. 15,200

20. Total number of employees in departments E, B, and C in offices P, R and S respectively is 2924. Also total number of employees in offices P and S is 10600. If total number of employees in departments P, R and S is 16200, find the number of employees in department R.

- A. 5800
- B. 5200
- C. 4900
- D. 4500
- E. 5600

21. The area of the rectangle gets reduced by 10 if its length is increased by 2 and breadth decreased by 2. Also it increases by 14, if its breadth is increased by 3 and length decreased by 2. Find the original area of the rectangle.

- A. 126 sq. units
- B. 154 sq. units
- C. 173 sq. units
- D. 187 sq. units
- E. 163 sq. units

22. Incomes of Karan, Arjun and Aarti are in ratio 3 : 5 : 7. Their expenditures are in ratio 3 : 6 : 8. If B saves 10% of his income, find the ratio of their savings.

- A. 2 : 4 : 5
- B. 5 : 4 : 2
- C. 4 : 3 : 2
- D. 3 : 2 : 4
- E. 3 : 4 : 2

23. Karan can complete a work in 60 days and Arjun can complete the same work in 5 days more than the number of days in which they both can complete work together. They both start the work and after 5 days, Karan leaves and Arjun starts working with $\frac{4}{3}$ times efficiency as before. In how much time the work will be completed?

- A. 12
- B. 8



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- C. 10
- D. 15
- E. 18

24. Kavya borrowed Rs 2460 to be paid back in 2 yearly installments at 5% rate of interest compounded annually. How much will be each installment?

- A. Rs 1323
- B. Rs 1486
- C. Rs 1545
- D. Rs 1139
- E. Rs 1376

25. A cylindrical bucket whose diameter is 14 m is partly filled with water. A cuboid whose dimensions are 33cm × 14cm × 7cm is immersed in the bucket. Find the level of water that rise?

- A. 22 cm
- B. 15 cm
- C. 18 cm
- D. 14 cm
- E. 21 cm

26. A loss of 10% is made by selling an article. Had it been sold for Rs 75 more, there would have been a profit of 5%. The initial loss is what percentage of the profit earned, if the article was sold at a profit of 20%?

- A. 44%
- B. 47%
- C. 50%
- D. 54%
- E. Cannot be determined

27. Vanya inquires about a mobile at two shops. One offers 30% discount and the other offers 25%. She has just sufficient amount of Rs 21,000 to purchase mobile at 30% discount, how much amount she has less than the amount required to purchase mobile at 25% discount?

- A. Rs 1600
- B. Rs 1500
- C. Rs 1700
- D. Rs 1300
- E. Rs 1400

28. Two containers contain mixture of milk and water. Container A contains 25% water and rest milk. Container B contains 36% water and rest milk. How much amount should be mixed from container A to 50 litres of container B so as to get a new mixture having water to milk in ratio 2 : 5?

- A. 162 l



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- B. 104 l
- C. 135 l
- D. 178 l
- E. 150 l

29. A boat travels downstream from point A to B and comes back to point C which is half distance between points A and B in a total of 40 hours. If the speed of boat in still water is 7 km/hr and distance from point A to B is 120 km, then find the upstream speed.

- A. 5 km/hr
- B. 8 km/hr
- C. 2 km/hr
- D. 3 km/hr
- E. 6 km/r

Directions (30-35): Given below is the table which shows the total students in 4 different schools and percentage of students participating in Dance and Play in 4 different classes.

Classes	Total Students	% of students participating	
		Dance	Play
VI	500	15	8
VII	400	10	6
VIII	360	25	10
IX	250	10	12

30. What is the ratio of students participating in Dance from Class VII and IX together to the students participating in Play from class VI and VIII together?

- A. 43 : 53
- B. 65 : 76
- C. 44 : 57
- D. 63 : 71
- E. 62 : 77

31. What is the average of students in Play from all the classes?

- A. $32\frac{1}{2}$
- B. $34\frac{1}{2}$
- C. $27\frac{1}{2}$
- D. $35\frac{1}{2}$
- E. $30\frac{1}{2}$



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32. Students who are participating in dance from class VII are what percent more or less than students who are participating in play from class IX.

- A. $12\frac{1}{2}$
- B. $14\frac{1}{2}$
- C. $33\frac{1}{2}$
- D. $16\frac{1}{2}$
- E. $66\frac{1}{2}$

33. What is the sum of students who do not participate in dance and play from class VI and IX together?

- A. 720
- B. 480
- C. 620
- D. 580
- E. None of these

34. If 20% of students who participate in dance from class VI also participate in play then find the ratio of students from class VI who participated only in Dance to students participated only in play.

- A. 12 : 5
- B. 16 : 25
- C. 19 : 20
- D. 20 : 19
- E. 15 : 11

35. Students participating in Dance from class VII is what percent of students participating in play from class IX.

- A. $12\frac{1}{2}$
- B. $14\frac{1}{2}$
- C. $133\frac{1}{2}$
- D. $16\frac{1}{2}$
- E. $66\frac{1}{2}$



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Answers and Explanation

1. **Answers:** B

Explanation:

$$*2 - 3, *2 - 3, *2 - 3, *2 - 3$$

2. **Answers:** A

Explanation:

$$\dots -2^3 \dots -3^3 \dots -4^3 \dots -5^3 \dots -6^3$$

3. **Answers:** E

Explanation:

$$\begin{array}{l} \dots +6 \dots +20 \dots +48 \dots +90 \\ \dots +146 \\ \dots +14 \dots +28 \dots +42 \dots \\ \dots +56 \end{array}$$



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4. **Answers:** C

Explanation:

*0.5 + 1, *1 + 1, *2 + 1, *4 + 1, *8 + 1

5. **Answers:** A

Explanation:

.....+5.....+6.....+8.....+11...
.....+15
.....+1.....+2.....+3.....
+4

6. **Answers:** E

Explanation:

60% of 2535 = 1521

832 ÷ 13 = 64

- 34² = - 1156

7. **Answers:** A

Explanation:

√1765 = 42

1010 ÷ 14 = 72

- 64% of 250 = 160

8. **Answers:** B

Explanation:

795 ÷ 15 = 53

768 ÷ 12 = 64

64 ÷ 4 = 16

- 1273 ÷ 19 = -67

9. **Answers:** D





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Explanation:

$$36\% \text{ of } 350 = 126$$

$$16 \times 23 = 368$$

$$-(14)^2 = -196$$

$$\text{so } \sqrt{x} = -196 - 126 + 368 = 46$$

$$\text{So, } x = 2116$$

10. **Answers:** A

11. **Answers:** D

Explanation:

$$\text{Unsold C in 2013} = 300 - 283 = 17, \text{ in 2015} = 350 - 309 = 41$$

$$\text{So required \%} = (17+41)/(300+350) \times 100 = 8.92\%$$

12. **Answers:** B

Explanation:

$$\text{Product A sold in all years} = 224 + 146 + 275 + 319 = 964$$

$$\text{Product B sold in all years} = 808$$

$$\text{Product C sold in all years} = 1155$$

$$\text{Product D sold in all years} = 1004$$

$$\text{Product E sold in all years} = 834$$

$$\text{So required average} = (964+808+1155+1004+834)/5 = 953$$

13. **Answers:** D

$$\text{Explanation: Unsold A and B in 2013 and 2016} = (250-224) + (180-152) + (350-319) + (280-262) = 103$$

$$\text{Sold C and E in 2015} = 309 + 196 = 505$$

$$\text{So required \%} = 103/505 \times 100 = 20.39\%$$

14. **Answers:** A



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Explanation: In all years, D products sold are = $237 + 273 + 180 + 314 = 1004$

And produced = $280 + 300 + 310 + 360 = 1250$

So required % = $1004/1250 * 100 = 80.32\%$

15. **Answers:** C

Explanation:

Sold B and E in 2014 = $166 + 206 = 372$

Total produced B and E in 2014 = $200 + 250 = 450$

Required % = $372/450 * 100 = 82.67\%$

16. **Answers:** D

Explanation:

Total number of employees in its A and D

departments = $(26+20)/100 * 6300 = 2898$

17. **Answers:** C

Explanation:

P = 6500, Q = $120/100 * 6500 = 7800$

in E in Q = $22/100 * 7800 = 1716$

in B in P = $18/100 * 6500 = 1170$

Required difference = $1716 - 1170 = 546$

18. **Answers:** B

Explanation:

$22/100 * x - 20/100 * (13600 - x) = 304$

Solve, $x = 7200$

So employees in office R = 7200, in P = $13600 - 7200 = 6400$

So total number of employees in departments E and

D in offices R and P = $22/100 * 7200 + 20/100 * 6400 = 2864$



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19. **Answers:** A

Explanation:

$$\text{In Q} = 2860 * 100 / (26 + 18) = 6500$$

$$\text{In S} = 2664 * 100 / (14 + 22) = 7400$$

$$\text{So required total} = 6500 + 7400 = 13,900$$

20. **Answers:** E

Explanation:

Employees in P = x, in S = y

$$\text{So } x + y = 10600$$

$$22/100 * x + 18/100 (16200 - x - y) + 14/100 * y = 2924$$

$$4x/100 - 4y/100 + 2916 = 2924$$

$$\text{Solve, } x - y = 200$$

$$x + y = 10600$$

$$\text{Solve, } x = 5400, y = 5200$$

$$\text{So in R} = (16200 - 5400 - 5200) = 5600$$

21. **Answers:** B

Explanation:

Let length = x, and breadth = y

$$\text{So } xy - (x+2)(y-2) = 10$$

$$\text{Gives } 2x - 2y + 4 = 10 \dots\dots\dots(1)$$

$$\text{And } (x-2)(y+3) - xy = 14$$

$$\text{Gives } 3x - 2y - 6 = 14 \dots\dots\dots(2)$$

$$\text{Solve equations, } x = 14, y = 11$$

22. **Answers:** D

Explanation:





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Incomes = $3x, 5x, 7x$

Expenditures = $3y, 6y, 8y$

B's savings = $10/100 * 5x = x/2$

So $x/2 = 5x - 6y$

Solve, $x = 4y/3$

Now savings ratio is $3x - 3y : 5x - 6y : 7x - 8y$

Put $x = 4y/3$

So ratio becomes $1 : 2/3 : 4/3 = 3 : 2 : 4$

23. **Answers:** D

Explanation:

Let they both complete work together in x days

So Arjun in $(x+5)$ days

So $1/60 + 1/(x+5) = 1/x$

Solve, $x = 15$, So Arjun can complete work in 20 days

Now they work for 5 days so completed $(1/60 + 1/20) * 5 = 1/3$ of work

Remaining work = $2/3$. Arjun works with $4/3$ times efficiency.

So now he can complete whole work in $20/(4/3) = 15$ days

So $1/15 * y = 2/3$

Solve, $y = 10$

So total number of days = $5 + 10 = 15$

24. **Answers:** A

Explanation:

$(1 + 5/100) = 21/20$

So for 2 yearly installments

$20x/21 + 400x/441 = 2460$



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Solve, $x = \text{Rs } 1323$

25. **Answers:** E

Explanation:

Volume of water that rise = Volume of cuboid

So $\pi r^2 h = l \cdot b \cdot h$

$22/7 * 7 * 7 * h = 33 * 14 * 7$

Solve, $h = 21 \text{ cm}$

26. **Answers:** C

Explanation:

Use shortcut for these types of questions:

CP of article = $75 \times 100 / [5 - (-10)] = \text{Rs } 500$ (+5 for 5% profit, -10 for 10% loss)

So loss was = $10/100 * 500 = \text{Rs } 50$ and new profit = $20/100 * 500 = \text{Rs } 100$

So required % = $50/100 * 100 = 50\%$

27. **Answers:** B

Explanation:

Let MP of mobile = Rs x

So at 30% discount, she gets mobile at Rs 70% of x

So $7x/10 = 21000$

Solve, $x = 30,000$

So SP at 25% discount = 75% of 30,000 = Rs 22,500

Required difference = $22500 - 21000 = \text{Rs } 1500$

28. **Answers:** B

Explanation:

In resultant mixture, water is $2/7 * 100 = 200/7\%$

So by method of allegation:



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25%.....36%200/7%

52/2%.....25/2%

So ratio is 52/2: 25/2 = 52: 25.

So $52/25 = x/50$

So $x = 104$ l

29. **Answers:** C

Explanation:

A to B is 120, so B to is $120/2 = 60$ km

Let speed of current = x km/hr

So $120/(7+x) + 60/(7-x) = 40$

Solve, $x = 5$ km/hr

So downstream speed = $7 - 5 = 2$ km/hr

30. **Answers:** B

Explanation:

Required ratio

$$\frac{\frac{10}{100} \times 400 + \frac{10}{100} \times 250}{\frac{8}{100} \times 500 + \frac{10}{100} \times 360} = 65:76$$

31. **Answers:** A

Explanation:

Required average

$$\frac{\frac{8}{100} \times 500 + \frac{6}{100} \times 400 + \frac{10}{100} \times 360 + \frac{12}{100} \times 250}{4} = \frac{130}{4} = \frac{65}{2} = 32\frac{1}{2}$$

32. **Answers:** C

Explanation:



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Students participating in dance from Class VII = $60/100 * 400 = 40$

Students participating in play from class IX = $12/100 * 250 = 30$

Required percentage = $10/30 * 100 = 100/3\% = 33 \frac{1}{2} \%$

33. **Answers:** D

Explanation:

Students who don't participate in dance and play from class VI

$$= 500 - (15\% + 8\%) \text{ of } 500$$

$$= 500 - \frac{23}{100} \times 500$$

$$= 500 - 115$$

$$= 385$$

Students who do not participate in dance and play in class IX

$$= 250 - (10\% + 12\%) \times 250$$

$$= 250 - 55$$

$$= 195$$

$$\text{Required sum} = 195 + 385$$

$$= 580$$

34. **Answers:** A

Explanation:

Students who participate only in dance from class VI = $15/100 * 500 - 20/100 * 15/100 * 500$

$$= 75 - 1/5 * 75 = 60$$

$$= 8/100 * 500 - 15$$

$$= 40 - 15 = 25$$

Required ratio = 60 : 25

$$= 12 : 5$$

35. **Answers:** D

Explanation:



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Required ratio

$$\begin{aligned} &= \frac{\frac{10}{100} \times 400}{\frac{12}{100} \times 250} \times 100 \\ &= \frac{10 \times 400}{12 \times 250} \times 100 = 133\frac{1}{3}\% \end{aligned}$$





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