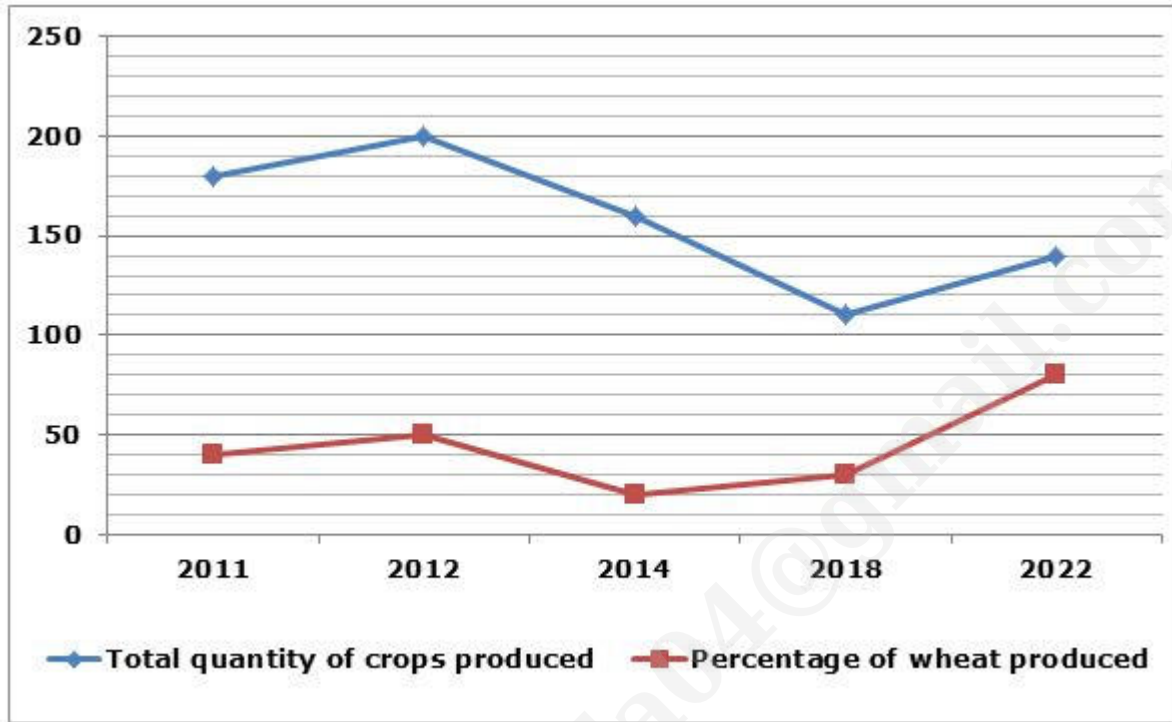


## 1. Questions

**Study the following information carefully and answer the following questions given below.**

The given line graph shows that the total quantity (in Quintal) of crops produced in five different years i.e 2011,2012,2014,2018 and 2022 and also given the percentage of wheat produced out of the total quantity of crops produced in these five years.



**Note:**

**I). Total quantity of crops produced = Quantity of Rice produced +Quantity of wheat produced.**

**If in 2018, 33.33% of the quantity of wheat produced was sold and in 2022, 14.28% of the quantity Rice produced were sold, then find the total quantity of Wheat and Rice that was unsold in 2018 and 2020 respectively.**

- 66 Quintals
- 26 Quintals
- 56 Quintals
- 36 Quintals
- 46 Quintals

## 2. Questions

**In 2010 the quantity of Rice produced was 20% more than the quantity of wheat produced in 2012 and the average quantity of Rice and wheat produced in 2010 was 120 Quintals. Find the difference between the quantity of wheat produced in 2012 and 2010.**

- 60 Quintals

- b. 20 Quintals
- c. 30 Quintals
- d. 40 Quintals
- e. 50 Quintals

### 3. Questions

**Find the difference between the average quantity of Rice produced in 2012 and 2014 and the average quantity of Wheat produced in the same years.**

- a. 88 Quintals
- b. 68 Quintals
- c. 58 Quintals
- d. 38 Quintals
- e. 48 Quintals

### 4. Questions

**Find the ratio of the difference between the quantity of rice produced in 2011 and 2012 to the average quantity of Wheat produced in 2012 and 2014.**

- a. 4:33
- b. 2:11
- c. 2:13
- d. 2:15
- e. 1:1

### 5. Questions

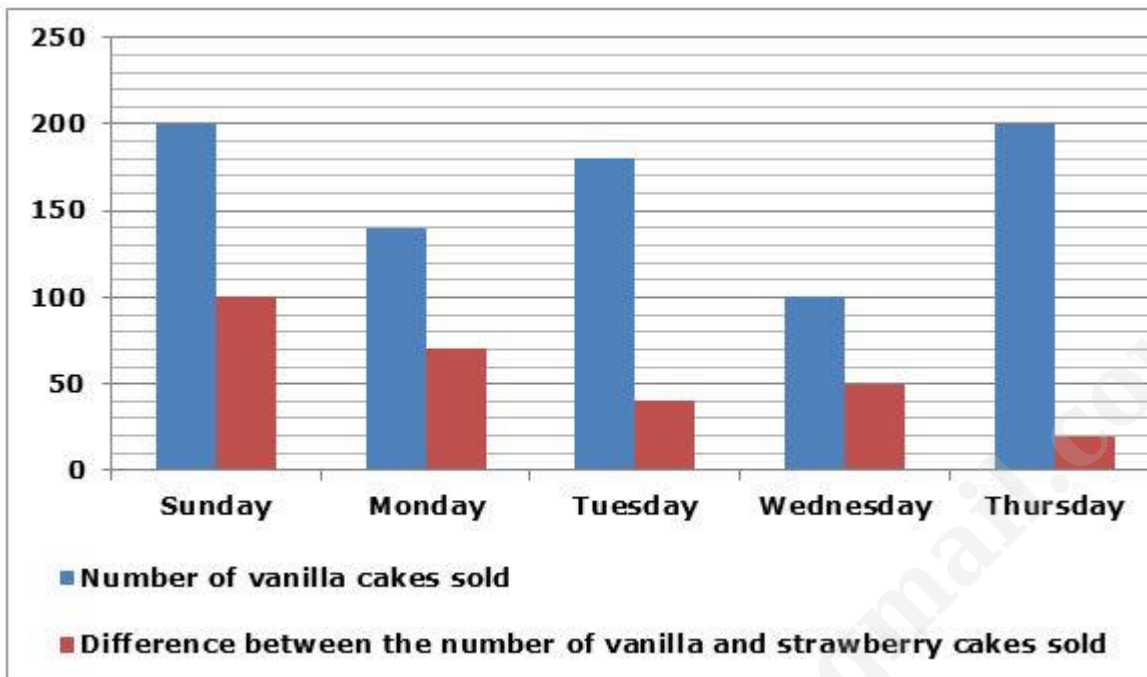
**30% of the total quantity of Rice produced in 2012 is what per cent of the total quantity of crops produced in 2014 and 2012 together?**

- a. 10%
- b. 16.77%
- c. 10.22%
- d. 8.33%
- e. 6.44%

### 6. Questions

**Study the following information carefully and answer the following questions.**

The given bar graph shows that the number of vanilla cakes sold on five different days i.e Sunday, Monday, Tuesday, Wednesday and Thursday and also given the difference between the number of vanilla and strawberry cakes sold on these days.



**Note :**

I). Number of vanilla cakes sold is more than the number of strawberry cakes sold on all the days except Tuesday.

The selling price of each vanilla cake is Rs.40 and each Strawberry cake is Rs.80. Find the total selling price of all the cakes which are sold on Tuesday.

- Rs.22000
- Rs.21500
- Rs.19000
- Rs.18000
- Rs.24800

## 7. Questions

Find the difference between the total number of Strawberry cakes sold on Sunday and Monday and the total number of vanilla cakes sold on Monday and Thursday.

- 200
- 290
- 170
- 150
- 160

## 8. Questions

The total number of vanilla cakes sold on Wednesday is what per cent of the total number of cakes sold on Tuesday?

- a. 60%
- b. 35%
- c. 29%
- d. 27%
- e. 25%

## 9. Questions

The difference between the total number of cakes sold on Monday and Thursday is  $2S$  and the average number of Strawberry cakes sold on Sunday and Wednesday is  $T$ . Find the value of  $(S+T)/2$ .

- a. 40
- b. 80
- c. 60
- d. 50
- e. 30

## 10. Questions

The ratio between the number of vanilla cakes to the chocolate cakes sold on Monday and Wednesday is 2:3 and 1:1 respectively. Find the number of chocolate cakes sold on Monday is how much more/less than the number of chocolate cakes sold on Wednesday.

- a. 200 less
- b. 110 more
- c. 190 less
- d. 340 more
- e. 230 more

## 11. Questions

A can do a piece of work in 30 days whereas B can do the same work in 25 days. The efficiency of C is 20% more than the efficiency of A. Find the time taken by B and C to complete 60% of the work, when they worked together.

- a.  $1 \frac{4}{5}$  days
- b.  $3 \frac{2}{3}$  days

- c. 2 (4/5) days
- d. 7 (1/2) days
- e. 5 (6/7) days

#### 12. Questions

A and B started a business together with A's investment 40% more than that of B and after y months B doubled his investment and after  $(2y+2)$  months A withdrew half of his capital and the ratio of the profit obtained by A to B after a year is 63:110. What is the value of 'y'?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5

#### 13. Questions

Train 'A' can cross a pole in 20 seconds. The length of train B is 40% more than that of train A and the ratio of the speed of train A to train B is 5:7. Find the time taken by both trains to cross each other travelling in opposite directions, if the length of train A is 500 meters.

- a. 15 seconds
- b. 18 seconds
- c. 20 seconds
- d. 22 seconds
- e. 28 seconds

#### 14. Questions

Ravish and Rakesh are moving in the same direction and it is observed that at 1:00 pm Rakesh is 45 km ahead of Ravish again after 4:15 pm, It was observed that Rakesh is 19 km ahead of Ravish. Find the speed of Ravish, if the speed of Rakesh is less than the speed of Ravish and the speed of Rakesh is 30 km/hr.

- a. 20 km/hr
- b. 30 km/hr
- c. 40 km/hr
- d. 38 km/hr
- e. 36 km/hr

#### 15. Questions

A invested Rs. X at 25% per annum for 4 years and B Invested Rs. Y in scheme B at 20% per annum for 2 years and the interest obtained by A is Rs.120 more than that of B. Find the difference between the amount invested by A and B, if A Invested in simple interest and B invested in compound interest and the Ratio of X to Y is 1:2.

- a. Rs.1000
- b. Rs.2000
- c. Rs.1500
- d. Rs.1700
- e. Rs.1600

#### 16. Questions

The speed of a boat in still water is 25% more than the speed of a stream and the ratio of the time taken by the boat to cover a certain distance downstream to upstream is 2:5 .If the difference between the distance covered by the boat upstream to downstream is 26km, then find the distance cover by boat in upstream speed?

- a. 17 km
- b. 16 km
- c. 10 km
- d. 15 km
- e. 12 km

#### 17. Questions

The ratio of the two parallel sides of the trapezium is 5:2 .The height of the trapezium is 2 m more than the smaller side of the trapezium. If the area of the trapezium is  $140 \text{ m}^2$ , then find the difference between the two parallel sides of the trapezium.

- a. 12 m
- b. 18 m
- c. 8 m
- d. 15 m
- e. 20 m

#### 18. Questions

Rice A which costs Rs 160 per kg is mixed with Rice B which costs Rs.300 per kg by a shopkeeper and the shopkeeper sold the mixture for Rs.224 per kg at 12% profit. Find the ratio at which Rice A is mixed with Rice B.

- a. 1:1

- b. 5:2
- c. 3:2
- d. 3:1
- e. 3:4

#### 19. Questions

The average weight of 48 students of a school is 35 kg. If the weight of the teacher is included, the average weight of the class rises by 300 grams. If the weight of the teacher is  $x$ , then find the value of  $(x+11.3)$ .

- a. 90
- b. 78
- c. 61
- d. 45
- e. 67

#### 20. Questions

Out of the total number of students who appeared for the SBI PO exam from State A and State B, 10% and 30% of the candidates were selected. Find the total number of students who got selected for SBI PO in both states together, if the ratio of the number of students who appeared for the SBI PO exam from state A to B is 2:3.

- a. 300
- b. 400
- c. 500
- d. 200
- e. Cannot be determined

#### 21. Questions

The following question contains two equations as I and II. You have to solve both equations and determine the relationship between them and give the answer as,

I).  $x^2 - 30x + 225 = 0$

II).  $y^2 - 30y + 216 = 0$

- a.  $x > y$
- b.  $x \geq y$
- c.  $x = y$  or relationship can't be determined

d.  $x < y$

e.  $x \leq y$

## 22. Questions

I).  $x^2 - 8x - 48 = 0$

II).  $3y^2 + 17y + 20 = 0$

a.  $x > y$

b.  $x \geq y$

c.  $x = y$  or relationship can't be determined

d.  $x < y$

e.  $x \leq y$

## 23. Questions

I).  $x^2 - 21x + 110 = 0$

II).  $y^2 - 47y + 480 = 0$

a.  $x > y$

b.  $x \geq y$

c.  $x = y$  or relationship can't be determined

d.  $x < y$

e.  $x \leq y$

## 24. Questions

I).  $x^2 - 11x - 126 = 0$

II).  $y^2 + 11y - 80 = 0$

a.  $x > y$

b.  $x \geq y$

c.  $x = y$  or relationship can't be determined

d.  $x < y$

e.  $x \leq y$

## 25. Questions

I).  $x^2 - 14x + 45 = 0$



II).  $y^2 + 7y + 10 = 0$

- a.  $x > y$
- b.  $x \geq y$
- c.  $x = y$  or relationship can't be determined
- d.  $x < y$
- e.  $x \leq y$

26. Questions

What value should come in the place of (?) in the following number series?

100, 113, 128, 146, 169, ?

- a. 199
- b. 156
- c. 178
- d. 150
- e. 100

27. Questions

500, 600, 1329, 1393, ?, 1772

- a. 1590
- b. 1456
- c. 1736
- d. 1700
- e. 1690

28. Questions

600, 300, 900, 225, ?

- a. 1500
- b. 1200
- c. 1125
- d. 1345
- e. 1600

29. Questions

55,78,107,138,175,?

- a. 200
- b. 211
- c. 234
- d. 219
- e. 216

30. Questions

300,311,324,339,?

- a. 100
- b. 290
- c. 365
- d. 356
- e. 400

31. Questions

What approximate value should come in the place of question mark in the following questions?

$48.02 \times 7 - 36.23 \times 6.29 = ? \times 5.32$

- a. 24
- b. 56
- c. 70
- d. 10
- e. 17

32. Questions

$17.88\% \text{ of } 1000.02 - 20.20\% \text{ of } 800 = ? \times 8.02$

- a. 5.5
- b. 7.8
- c. 6.5
- d. 2.5
- e. 9.5

33. Questions

$$43.24 \times \sqrt{9.09} + \sqrt{1602} \times 4.32 = ?^2$$

- a. 50
- b. 11
- c. 17
- d. 34
- e. 40

34. Questions

$$\sqrt{483} + \sqrt{1295} - \sqrt{1446} = ? \div 2.01$$

- a. 35
- b. 78
- c. 40
- d. 56
- e. 23

35. Questions

$$15.96/4 \text{ of } \sqrt{123} - \sqrt{224} = x \% \text{ of } 499.89$$

- a. 10
- b. 9
- c. 6
- d. 7
- e. 8

36. Questions

What value should come in the place of (?) in the following number series?

5, 5, 20, 60, 960, 4900

- a. 4900
- b. 960
- c. 60
- d. 5
- e. 20

37. Questions

**400,448,412,460,424,480**

- a. 412
- b. 448
- c. 400
- d. 480
- e. 460

**38. Questions**

**4,0,8,12,66,300**

- a. 4
- b. 0
- c. 8
- d. 12
- e. 66

**39. Questions**

**100,181,304,471,696,985**

- a. 100
- b. 304
- c. 475
- d. 696
- e. 985

**40. Questions**

**700, 268, 52, -56, -110, -140**

- a. -140
- b. 700
- c. 52
- d. -56
- e. -110

**41. Questions**

**What value should come in the place of question mark in the following questions?**

40% of 50 - ? + 36% of 300 =  $(12)^2 \times \frac{3}{4}$

- a. 55
- b. 20
- c. 45
- d. 67
- e. 34

42. Questions

$(103 + 83 + 72) \div 3 = ? \times 256 / 128$

- a. 32
- b. 43
- c. 45
- d. 67
- e. 80

43. Questions

$12 \times 32 \div 16 - 47 + 33 = ?$

- a. 67
- b. 45
- c. 10
- d. 23
- e. 90

44. Questions

40% of 1010 +  $\sqrt{49} \times 5 = 365 + ? \times 2$

- a. 34
- b. 37
- c. 50
- d. 67
- e. 80

45. Questions

70% of 3500 +  $\sqrt{324} \times 3 = 362 + ?$

- a. 1580
- b. 4560
- c. 2340
- d. 2142
- e. 1600

## Explanations:

### 1. Questions

Year	Total quantity of crops produced in Quintals	Total quantity of wheat produced in Quintals	Total quantity of Rice produced in Quintals
2011	180	$180 \times 40 / 100 = 72$	$180 - 72 = 108$
2012	200	$200 \times 50 / 100 = 100$	$200 - 100 = 100$
2014	160	$160 \times 20 / 100 = 32$	$160 - 32 = 128$
2018	110	$110 \times 30 / 100 = 33$	$110 - 33 = 77$
2022	140	$140 \times 80 / 100 = 112$	$140 - 112 = 28$

**Answer: E**

Total quantity of wheat produced in 2018 = 33 Quintals

Total quantity of wheat unsold in 2018 =  $33 \times \frac{2}{3} = 22$  Quintals

Total quantity of rice unsold in 2022 =  $28 \times \frac{6}{7} = 24$  Quintals

Required sum =  $22 + 24 = 46$  quintals

### 2. Questions

Year	Total quantity of crops produced in Quintals	Total quantity of wheat produced in Quintals	Total quantity of Rice produced in Quintals
2011	180	$180 \times 40 / 100 = 72$	$180 - 72 = 108$
2012	200	$200 \times 50 / 100 = 100$	$200 - 100 = 100$
2014	160	$160 \times 20 / 100 = 32$	$160 - 32 = 128$
2018	110	$110 \times 30 / 100 = 33$	$110 - 33 = 77$
2022	140	$140 \times 80 / 100 = 112$	$140 - 112 = 28$

**Answer: B**

Quantity of Rice produced in 2010 =  $120 / 100 \times 100 = 120$  Quintals

Quantity of Wheat produced in 2010 =  $240 - 120 = 120$  Quintals

Required difference =  $120 - 100 = 20$  Quintals

### 3. Questions

Year	Total quantity of crops produced in Quintals	Total quantity of wheat produced in Quintals	Total quantity of Rice produced in Quintals
2011	180	$180 \times 40 / 100 = 72$	$180 - 72 = 108$
2012	200	$200 \times 50 / 100 = 100$	$200 - 100 = 100$
2014	160	$160 \times 20 / 100 = 32$	$160 - 32 = 128$
2018	110	$110 \times 30 / 100 = 33$	$110 - 33 = 77$
2022	140	$140 \times 80 / 100 = 112$	$140 - 112 = 28$

**Answer: E**

Average quantity of rice produced in 2012 and 2014 =  $(100 + 128) / 2 = 114$  Quintals

Average quantity of wheat produced in 2012 and 2014 =  $(100 + 32) / 2 = 66$  Quintals

Required difference =  $114 - 66 = 48$  Quintals

### 4. Questions

Year	Total quantity of crops produced in Quintals	Total quantity of wheat produced in Quintals	Total quantity of Rice produced in Quintals
2011	180	$180 \times 40 / 100 = 72$	$180 - 72 = 108$
2012	200	$200 \times 50 / 100 = 100$	$200 - 100 = 100$
2014	160	$160 \times 20 / 100 = 32$	$160 - 32 = 128$
2018	110	$110 \times 30 / 100 = 33$	$110 - 33 = 77$
2022	140	$140 \times 80 / 100 = 112$	$140 - 112 = 28$

**Answer: A**

Difference between the quantity of Rice produced in 2011 and 2012 =  $108 - 100 = 8$  Quintals

Average quantity of wheat produced in 2012 and 2014 =  $(100 + 32) / 2 = 66$  Quintals

Required ratio =  $8 : 66 = 4 : 33$

### 5. Questions



Year	Total quantity of crops produced in Quintals	Total quantity of wheat produced in Quintals	Total quantity of Rice produced in Quintals
2011	180	$180 \times 40 / 100 = 72$	$180 - 72 = 108$
2012	200	$200 \times 50 / 100 = 100$	$200 - 100 = 100$
2014	160	$160 \times 20 / 100 = 32$	$160 - 32 = 128$
2018	110	$110 \times 30 / 100 = 33$	$110 - 33 = 77$
2022	140	$140 \times 80 / 100 = 112$	$140 - 112 = 28$

**Answer: D**

30% of the quantity of rice produced in 2012 =  $100 \times 30 / 100 = 30$  Quintals

Quantity of crops produced in 2014 and 2012 together = 360 Quintals

Required answer =  $30 / 360 \times 100 = 8.33\%$

#### 6. Questions

Days	Vanilla cakes sold	Chocolate cakes sold	Total number of cakes sold
Sunday	200	100	300
Monday	140	70	210
Tuesday	180	220	400
Wednesday	100	50	150
Thursday	200	180	380

**Answer: E**

Total selling price of all the vanilla cakes sold on Tuesday =  $180 \times 40 = \text{Rs.} 7200$

Total selling price of all the strawberry cakes sold on Tuesday =  $220 \times 80 = \text{Rs.} 17600$

Required sum =  $7200 + 17600 = \text{Rs.} 24,800$

#### 7. Questions

Days	Vanilla cakes sold	Chocolate cakes sold	Total number of cakes sold
Sunday	200	100	300
Monday	140	70	210
Tuesday	180	220	400
Wednesday	100	50	150
Thursday	200	180	380

**Answer: C**

Total number of Strawberry cakes sold on Sunday and Monday =  $100 + 70 = 170$

Total number of vanilla cakes sold on Monday and Thursday =  $140 + 200 = 340$



Required difference =  $340 - 170 = 170$

#### 8. Questions

Days	Vanilla cakes sold	Chocolate cakes sold	Total number of cakes sold
Sunday	200	100	300
Monday	140	70	210
Tuesday	180	220	400
Wednesday	100	50	150
Thursday	200	180	380

Answer: E

Required percentage =  $100/400 \times 100 = 25\%$

#### 9. Questions

Days	Vanilla cakes sold	Chocolate cakes sold	Total number of cakes sold
Sunday	200	100	300
Monday	140	70	210
Tuesday	180	220	400
Wednesday	100	50	150
Thursday	200	180	380

Answer: B

Difference between the number of cakes sold on Monday and Thursday =  $380 - 210 = 170$

$2S = 170$

$S = 85$

Average number of strawberry cakes sold on Sunday and Wednesday =  $(100 + 50)/2 = 75$

$T = 75$

Required answer =  $(85 + 75)/2 = 80$

#### 10. Questions

Days	Vanilla cakes sold	Chocolate cakes sold	Total number of cakes sold
Sunday	200	100	300
Monday	140	70	210
Tuesday	180	220	400
Wednesday	100	50	150
Thursday	200	180	380

Answer: B

Number of chocolate cakes sold on Monday =  $140/2 \times 3 = 210$

Number of chocolate cakes sold on Wednesday =  $100/1 \times 1 = 100$

Required difference =  $210 - 100 = 110$  more

#### 11. Questions

**Answer: D**

Let, the total work be 150 units

Efficiency of A =  $150/30 = 5$  units/day

Efficiency of B =  $150/25 = 6$  units/day

Efficiency of C =  $5 \times 6/5 = 6$  units/day

Time taken to complete 60% of the work =  $(60/100 \times 150)/12 = 7 \frac{1}{2}$  days

#### 12. Questions

**Answer: B**

Let, the Initial investment of B is =  $10x$

Initial investment of A =  $14x$

According to the question,

$$14 \times (2y+2) + 7 \times (12-2y-2) / (10y+240-20y) = 63/110$$

$$(28y + 28 + 70 - 14y) / (24 - y) = 63/11$$

$$154y + 1078 = 1512 - 63y$$

$$154y + 63y = 434$$

$$217y = 434$$

$$y = 2$$

Required answer = 2

#### 13. Questions

**Answer: C**

Length of train A = 500 m

Length of train B =  $500 \times 140/100 = 700$  m

Speed of train A =  $500/20 = 25$  m/s

Speed of train B =  $25/5 \times 7 = 35$  m/s

Time taken to cross each other =  $1200/60 = 20$  seconds

#### 14. Questions

**Answer: D**

Let, the speed of Ravish be  $x$  km/hr

The total distance covered by Rakesh =  $[4.15 \text{ pm} - 1 \text{ pm}] * 30 + 45$

$$= 3.15 * 30 + 45 = 142.5 \text{ km}$$

The total distance covered by Ravish =  $142.5 - 19 = 123.5 \text{ km}$

$$\text{Speed of Ravish} = 123.5 / [13/4] = 38 \text{ kmph}$$

### 15. Questions

**Answer: A**

$$x = a, y = 2a$$

$$a * 25 * 4/100 - (2a * (120/100)^2 - 2a) = 120$$

$$a - (2a * 36/25 - 2a) = 120$$

$$a - (72a/25 - 2a) = 120$$

$$a - 22a/25 = 120$$

$$3a/25 = 120$$

$$a = \text{Rs.}1000$$

### 16. Questions

**Answer: C**

Speed of the boat in still water =  $5x$

Speed of the stream =  $4x$

Upstream speed of the boat =  $x$

Downstream speed of the boat =  $9x$

Time taken by the boat to cover the distance in downstream =  $2y$

Time taken by the boat to cover the distance in upstream =  $5y$

According to the question,

$$2y * 9x - 5y * x = 26$$

$$xy * (18 - 5) = 26$$

$$xy = 2$$

$$\text{Required answer} = 2 * 5 = 10 \text{ km}$$

### 17. Questions

**Answer: A**

According to the question,

Longer side of the trapezium =  $5x$

Smaller side of the trapezium =  $2x$

Height of the trapezium =  $2x + 2$

$$\{(5x+2x)*(2x+2)\}/2=140$$

$$7x*(2x+2)=280$$

$$14x^2 + 14x - 280 = 0$$

$$x^2 + x - 20 = 0$$

$$x^2 + 5x - 4x - 20 = 0$$

$$x(x + 5) - 4(x + 5) = 0$$

$$x = 4, -5$$

$$x = 4$$

$$\text{Required difference} = 5 * 4 - 2 * 4 = 20 - 8 = 12 \text{ m}$$

### 18. Questions

**Answer: B**

According to the question,

$$\text{Cp of the mixture per kg} = 224/112 * 100 = \text{Rs.}200 \text{ per kg}$$

By the mixture of alligation,

$$\text{fd.} \quad 300$$

$$200$$

$$100 : 40$$

$$5:2$$

$$\text{Required answer} = 5:2$$

### 19. Questions

**Answer: C**

Let the weight of the teacher =  $x$  kg

According to the question,

$$48*35+x=49*\{35+(300/1000)\}$$

$$1680+x=49*(35.3)$$

$$1680+x=1729.7$$

$$x=49.7$$

$$\text{Required answer} = 49.7 + 11.3 = 61$$

**20. Questions****Answer: E**

Number of students who appeared for the SBI PO exam from state A=200x

Number of students who appeared for the SBI PO exam from state B=300x

Number of students who got selected from state A=200x\*10/100=20x

Number of students who got selected from state B=300\*30/100=90x

Hence there is no exact value, we can't find the exact answer.

**21. Questions****Answer: C**

$$x^2 - 30x + 225 = 0$$

$$x^2 - 15x - 15x + 225 = 0$$

$$x(x-15) - 15(x-15)$$

$$(x-15)(x-15)$$

$$x = 15, 15$$

$$y^2 - 30y + 216 = 0$$

$$y^2 - 12y - 18y + 216 = 0$$

$$y(y-12) - 18(y-12)$$

$$(y-12)(y-18) = 0$$

$$y = 12, 18$$

Hence, x = y or relationship can't be determined

**22. Questions****Answer: C**

$$x^2 - 8x - 48 = 0$$

$$x^2 + 4x - 12y + 48 = 0$$

$$x(x+4) - 12(y+4)$$

$$(x+4)(x-12) = 0$$

$$x = -4, +12$$

$$3y^2 + 17y + 20 = 0$$

$$3y^2 + 12y + 5y + 20 = 0$$

$$3y(y+4)+5(y+4)=0$$

$$(3y+5)(y+4)=0$$

$$y=-4, -5/3$$

Hence  $x = y$  or relationship can't be determined

### 23. Questions

**Answer: D**

$$x^2-21x+110=0$$

$$x^2-10x-11x+110=0$$

$$x(x-10)-11(x-10)$$

$$(x-10)(x-11)=0$$

$$x=10, 11$$

$$y^2-47x+480=0$$

$$y^2-15x-32x+480=0$$

$$y(y-15)-32(y-115)$$

$$(y-15)(y-32)=0$$

$$y=15, 32$$

Hence,  $x < y$

### 24. Questions

**Answer: C**

$$x^2-11x-126=0$$

$$(x-18)(x+7)=0$$

$$x=18, -7$$

$$y^2+11y-80=0$$

$$y^2+16y-5y-80=0$$

$$y(y+16)-5(y+16)$$

$$(y+16)(y-5)=0$$

$$y=-16, 5$$

Hence,  $x = y$  or relationship can't be determined

### 25. Questions

**Answer: A**

$$x^2 - 14x + 45 = 0$$

$$x^2 - 9x - 5x + 45 = 0$$

$$x(x-9) - 5(x-9)$$

$$(x-9)(x-5) = 0$$

$$x = 9, 5$$

$$y^2 + 7y + 10 = 0$$

$$y^2 + 5y + 2y + 10 = 0$$

$$y(y+5) + 2(y+5) = 0$$

$$(y+5)(y+2) = 0$$

$$y = -5, -2$$

Hence,  $x > y$

**26. Questions**

**Answer: A**

100	113	128	146	169	199
+13	+15	+18	+23	+30	
+2	+3	+5	+7		

**27. Questions**

**Answer: C**

$$500 + 10^2 = 600$$

$$600 + 9^3 = 1329$$

$$1329 + 8^2 = 1393$$

$$1393 + 7^3 = 1736$$

$$1736 + 6^2 = 1772$$

**28. Questions**

**Answer: C**

$$600 \times \frac{1}{2} = 300$$

$$300 \times 3 = 900$$

$$900 \times \frac{1}{4} = 225$$

$$225 \times 5 = 1125$$

**29. Questions**

**Answer: E**

$$\begin{array}{cccccc} 55 & 78 & 107 & 138 & 175 & 216 \\ 23 & 29 & 31 & 37 & 41 & \end{array}$$

**30. Questions**

**Answer: D**

$$300 + 11 = 311$$

$$311 + 13 = 324$$

$$324 + 15 = 339$$

$$339 + 17 = 356$$

**31. Questions**

**Answer: A**

$$48.02 \times 7 - 36.23 \times 6.29 = ? \times 5.32$$

$$48 \times 7 - 36 \times 6 = ? \times 5$$

$$336 - 216 = ? \times 5$$

$$120/5 = ?$$

$$? = 24$$

**32. Questions**

**Answer: D**

$$17.88\% \text{ of } 1000 - 20.20\% \text{ of } 800 = ? \times 8.02$$

$$18\% \text{ of } 1000 - 20\% \text{ of } 800 = ? \times 8$$

$$180 - 160 = ? \times 8$$

$$20/8 = ?$$

$$2.5 = ?$$

**33. Questions**

**Answer: C**

$$43.24 \times \sqrt{9.09} + \sqrt{1602} \times 4.32 = ?^2$$

$$43 \times 3 + 40 \times 4 = ?^2$$

$$289 = ?^2$$



?=17

**34. Questions**

**Answer: C**

$$\sqrt{483} + \sqrt{1295} - \sqrt{1446} = ? \div 2.01$$

$$\sqrt{484} + \sqrt{1296} - \sqrt{1444} = ? \div 2$$

$$22 + 36 - 38 = ? \div 2$$

$$40 = ?$$

**35. Questions**

**Answer: C**

$$15.96/4 \text{ of } \sqrt{123} - \sqrt{224} = x \% \text{ of } 499.89$$

$$16/4 \text{ of } \sqrt{121} - \sqrt{225} = x \% \text{ of } 500$$

$$4 * 11 - 15 = x * 5$$

$$29/5 = x$$

$$x = 5.8$$

$$6 = x [\text{approx}]$$

**36. Questions**

**Answer: A**

$$5 * 1 = 5$$

$$5 * 2^2 = 20$$

$$20 * 3 = 60$$

$$60 * 4^2 = 960$$

$$960 * 5 = 4800$$

**37. Questions**

**Answer: D**

$$400 + 48 = 448$$

$$448 - 36 = 412$$

$$412 + 48 = 460$$

$$460 - 36 = 424$$

$$424 + 48 = 472$$

**38. Questions**

**Answer: E**

$$(4 \times 1) - 4 = 0$$

$$(0 \times 2) + 8 = 8$$

$$(8 \times 3) - 12 = 12$$

$$(12 \times 4) + 16 = 64$$

$$(64 \times 5) - 20 = 300$$

**39. Questions**

**Answer: B**

$$100 + 9^2 = 181$$

$$181 + 11^2 = 302$$

$$302 + 13^2 = 471$$

$$471 + 15^2 = 696$$

$$696 + 17^2 = 985$$

**40. Questions**

**Answer: A**

700	268	52	-56	-110	-137
-432	-216	-108	-54	-27	
÷2	÷2	÷2	÷2		

**41. Questions**

**Answer: B**

$$40\% \text{ of } 50 - ? + 36\% \text{ of } 300 = (12)^2 \times \frac{3}{4}$$

$$40/100 \times 50 - ? + 36/100 \times 300 = 144 \times \frac{3}{4}$$

$$20 - ? + 108 - 108 = 0$$

$$20 = ?$$

**42. Questions**

**Answer: B**

$$(103 + 83 + 72) \div 3 = ? \times 256 / 128$$

$$258 \div 3 = ? \times 2$$

$$86 = ? \times 2$$

$$? = 43$$

**43. Questions**

**Answer: C**

$$12 \times 32 \div 16 - 47 + 33 = ?$$

$$384 \div 16 - 47 + 33 = ?$$

$$24 - 47 + 33 = ?$$

$$10 = ?$$

**44. Questions**

**Answer: B**

$$40\% \text{ of } 1010 + \sqrt{49} \times 5 = 365 + ? \times 2$$

$$40/100 \times 1010 + 7 \times 5 = 365 + ? \times 2$$

$$404 + 35 - 365 = ? \times 2$$

$$74 = ? \times 2$$

$$? = 37$$

**45. Questions**

**Answer: D**

$$70\% \text{ of } 3500 + \sqrt{324} \times 3 = 362 + ?$$

$$70/100 \times 3500 + 18 \times 3 = 362 + ?$$

$$2450 + 54 = 362 + ?$$

$$2504 - 362 = ?$$

$$2142 = ?$$