

RRB PO Mains Memory Based Paper 2021 Based on 25<sup>th</sup> September 2021


Quantitative Aptitude

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**Directions (1-5):** What value should come in the place of (?) in the following number series.

1) 8, 5, 7, 13.5, 31, ?

- a) 82.5
- b) 87.5
- c) 92.5
- d) 62
- e) 78.5

2) 3, 6, 12, 36, 180, ?

- a) 1145
- b) 1048
- c) 1285
- d) 1332
- e) 1308

3) 9, 28, 55, 66, 101, ?

- a) 104
- b) 108
- c) 110
- d) 112
- e) 118

4) 209, ?, 220, 187, 231, 176

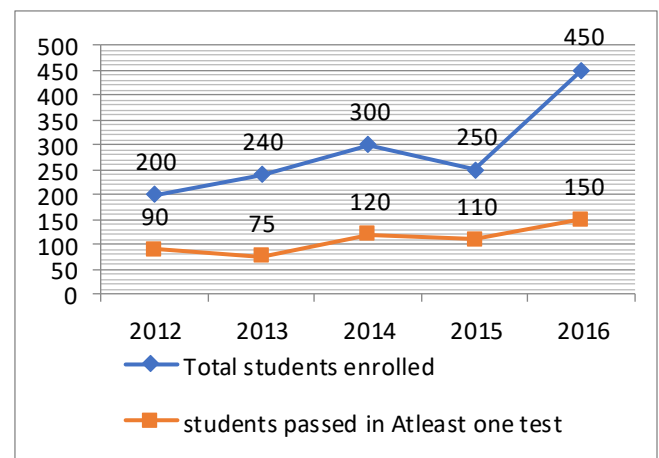
- a) 188
- b) 192
- c) 196
- d) 198
- e) 202

5) 60.75, ?, 27, 18, 12, 8

- a) 38.5
- b) 40.5
- c) 42.5
- d) 44.5
- e) 36

**Directions (6-10):** Study the following information carefully and answer the questions given below.

The given line graph shows the number of students enrolled and the number of students who passed in at least one test in five different years.



Total students enrolled = students passed in at least one test+ students not qualified.

6) In 2016, out of the total not qualified students, 20% of the students re-apply for the exam in 2017. (In 2017 total students enrolled = re-applied from 2016 + new applicants). The ratio of the number of students who passed in at least one test in 2013 and 2017 is 3:2. Out of the total passed students in 2017, 96%

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are new applicants, then find the number of re-applied students who did not qualified in 2017.

- a) 58
- b) 64
- c) 66
- d) 56
- e) 54

7) In 2012, there were three tests A, B and C. 20% of students passed in only test A, 30% students passed in only B and 20% students passed in only test C. Number of students passes in all three tests is 9, then find the number of students who passed in exactly two tests.

- a) 12
- b) 14
- c) 16
- d) 18
- e) 20

8) What is the ratio of the number of students not qualified in 2012 to the number of students qualified in 2015?

- a) 1:2
- b) 2:1
- c) 1:1
- d) 3:2
- e) 2:3

9) What is the average number of students who are not qualified in 2013, 2014 and 2016?

- a) 220

- b) 215
- c) 218
- d) 212
- e) None of these

10) The number of students who are not qualified in 2017 is 30% more than that of 2015. What is the difference between the number of students who are not qualified in 2017 and 2012?

- a) 68
- b) 70
- c) 72
- d) 74
- e) 76

**Directions (11-15):** Study the following information carefully and answer the questions given below.

The Given table shows the cumulative percentage of whole seller sold 6000kg of wheat to five different shopkeepers A, B, C, D and E and percentage of wheat sold by shopkeeper to customers.

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Shopkeepers	Cumulative percentage of whole seller sold 6000kg of wheat to five different shopkeepers	percentage of wheat sold by shopkeeper to customers
A	20%	75%
B	42%	70%
C	57%	70%
D	82%	60%
E	100%	50%

11) What is the average unsold quantity of wheat for all the shopkeepers?

- a) 421.2 kg
- b) 422.4 kg
- c) 424.5 kg
- d) 426.3 kg
- e) 425.8 kg

12) If shopkeeper B got 33% total quantity, then what is the unsold quantity for E? (All respective values are same)

- a) 480
- b) 520
- c) 500
- d) 540
- e) 560

13) If shopkeeper F got unsold wheat of shopkeeper C and he sold one-third at the cost price and remaining at the profit of 20%, then

what is the selling price of shopkeeper F. If C sold his unsold wheat at Rs.10 per kg to F?

- a) Rs.2880
- b) Rs.2940
- c) Rs.3020
- d) Rs.3040
- e) Rs.3060

14) If shopkeeper A sold wheat at Rs.51 per kg and makes an overall profit of 6.25%, then find the cost price of wheat per kg?

- a) Rs.48
- b) Rs.52
- c) Rs.50
- d) Rs.45
- e) None of these

15) What is the difference between the sold quantity of wheat in E and C?

- a) 85 kg
- b) 90 kg
- c) 95 kg
- d) 100 kg
- e) None of these

**Directions (16-20):** Study the following information carefully and answer the questions given below.

There are three companies A, B and C. The number of vacancies released by Company A, B and C are 2, 4 and 1 respectively. The number of candidates who got an interview call for each

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post in A are 24, same for company B are  $2x$  and for company C are  $x$ .

The total number of candidates who applied in C is one-fourth of the total number of candidates applied in B or three-fifth of the total number of candidates who applied in A. Difference between the number of candidates who get an interview call in B and C is 105.

**16) What is the ratio of the number of candidates who got an interview call in B and C?**

- a) 4:1
- b) 8:1
- c) 2:1
- d) 5:1
- e) None of these

**17) What is the average number of candidates who got interview calls for all the companies?**

- a) 61
- b) 62
- c) 63
- d) 59
- e) None of these

**18) Total number of candidates who applied for B is what percentage more or less than that of A?**

- a) 120%
- b) 140%
- c) 150%
- d) 110%
- e) 160%

**19) Out of the total number of candidate who got an interview call from A, 75% are females and after selection process company A allotted its posts to male and female equally, then find the number of females who did not get Job in that company.**

- a) 33
- b) 35
- c) 36
- d) 18
- e) 27

**20) Find the value of  $x$**

- a) 12
- b) 10
- c) 15
- d) 20
- e) 24

**21) A rectangle ABCD is given, whose sides  $AB = CD$ . It's given that  $BC = x$  and  $CD = 2x + 5$ . If the area of the rectangle is  $168 \text{ cm}^2$ , then find the length of AB?**

- a) 21 cm
- b) 18 cm
- c) 12 cm
- d) 8 cm
- e) 16 cm

**22) A person covers a 100 km journey into two parts, first part he travelled in AC car and the remaining journey he covered in non AC car. If the rent of AC car is Rs.7 per km and for non AC**

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car is Rs.3 per km. If he paid total rent of Rs.340. Then find the distance travelled by non AC car.

- a) 8 km
- b) 10 km
- c) 12 km
- d) 16 km
- e) 18 km

23) The area of four walls of a room is  $128 \text{ cm}^2$ . If the length and breadth of the room were equal and the height of the room is 4 cm, then what is the area of the room?

- a)  $100 \text{ cm}^2$
- b)  $36 \text{ cm}^2$
- c)  $49 \text{ cm}^2$
- d)  $81 \text{ cm}^2$
- e)  $64 \text{ cm}^2$

24) A person spent money on 16% on books. Of the remaining, he spent on travel and tuition in the ratio of 4:3. If the difference of money spent on travel and tuition is Rs.612, then find his income.

- a) Rs.5100
- b) Rs.5006
- c) Rs.5020
- d) Rs.5050
- e) Rs.5012

25) The speed of Train A and Train B is in the ratio of 3:4 and covered the same distance. Difference between their time taken to travel the

same distance is 21 minutes. What is the time taken by train A?

- a) 84 minutes
- b) 92 minutes
- c) 96 minutes
- d) 81 minutes
- e) 63 minutes

26) x men can complete the piece of work in 41 days and  $(x + 40)$  men can complete the same work in 20 days less than that of days taken by x men. Find the value of x.

- a) 40
- b) 42
- c) 44
- d) 46
- e) None of these

27) A's age 8 years hence will be twice of B's present age. C's age 6 years ago is equal to the present age of B. Ratio of A's age 4 years hence and C's age 6 years hence is 9:8. Find B's age 8 years ago.

- a) 10 years
- b) 15 years
- c) 18 years
- d) 12 years
- e) 14 years

Directions (28-31): Following questions have two quantities as Quantity I and Quantity II. You have to determine the relationship between them and give an answer as,

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28) Train A of length 100 m traveling at 50 kmph is running in the same direction overtakes train B of length 120 m in 60 seconds.

**Quantity I:** The speed of train B in kmph, if the speed of train A is faster than train B.

**Quantity II:** 40 kmph

- a) Quantity I > Quantity II
- b) Quantity I  $\geq$  Quantity II
- c) Quantity II > Quantity I
- d) Quantity II  $\geq$  Quantity I
- e) Quantity I = Quantity II (or) Relationship cannot be established

29) Three vessels A, B and C have a mixture of milk and water, equal quantity in the ratio of 2:3, 3:5 and 4:5 respectively mixed in vessel Y.

**Quantity I:** % of water in Y

**Quantity II:** % of water in vessel x, which has 75% milk

- a) Quantity I > Quantity II
- b) Quantity I  $\geq$  Quantity II
- c) Quantity II > Quantity I
- d) Quantity II  $\geq$  Quantity I
- e) Quantity I = Quantity II (or) Relationship cannot be established

30)  $((x^2 - b^2)/2) + ab = ax$ . x, a, b are positive integers

**Quantity I:** value of a

**Quantity II:** value of b

- a) Quantity I > Quantity II
- b) Quantity I  $\geq$  Quantity II
- c) Quantity II > Quantity I

d) Quantity II  $\geq$  Quantity I

e) Quantity I = Quantity II (or) Relationship cannot be established

31)

**Quantity I:**  $x^3 - 2x^2 - x + 2 = 0$

**Quantity II:**  $y + 3 = 0$ , find the value of y

- a) Quantity I > Quantity II
- b) Quantity I  $\geq$  Quantity II
- c) Quantity II > Quantity I
- d) Quantity II  $\geq$  Quantity I
- e) Quantity I = Quantity II (or) Relationship cannot be established

32) Vessel A contains the mixture of orange and apple juice in the ratio of 4:3 and the vessel B contains the mixture of orange and apple juice in the ratio of 3:2. If 28 liters of mixture is taken out from vessel A and poured into vessel B, then the ratio of the milk and water becomes 13:9. If the new quantity of mixture in vessel B is 18 liters more than the initial quantity of vessel A, find the initial quantity of orange juice in vessel A?

- a) 28 liters
- b) 40 liters
- c) 36 liters
- d) 60 liters
- e) None of these

33) A and B started the business with the investment of Rs.4800 and Rs.6400 respectively. After 6 months, B withdrew Rs.1200 from its initial investment and after 2

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more months, A added Rs.800 to its initial investment and C Joins the business with the investment of Rs.10000. At the end of one year and 2 months, the total profit of the business is Rs.53000, then what is the difference between the profit share of A and C?

- a) Rs.2000
- b) Rs.2800
- c) Rs.3000
- d) Rs.3600
- e) Rs.2700

34) Ratio of the cost price of the Battery to Charger is 2:1 and the cost price of the Battery to Pendrive is 3:1. If the selling price of Battery, Pendrive and Charger are equal and the profit percentage of selling of a battery, a charger and a Pendrive is 25%, then the cost price of the battery is approximately what percent of the selling price of the battery?

- a) 65%
- b) 126%
- c) 131%
- d) 98%
- e) 78%

35) Rahul has Rs.x. He invested 40% of his sum in SBI bank at 15% simple interest and 20% of the remaining amount he spent on shopping. After 2 years, he added 60% of the remaining amount in the same bank in the same simple interest scheme and the remaining amount spent on Food. If the difference between the

total interest received by Rahul after 4 years and the amount spend on Shopping and Food together is Rs.115.2, then find the value of x.

- a) Rs.7000
- b) Rs.9000
- c) Rs.6000
- d) Rs.5000
- e) Rs.8000

36) If the ratio of the number of boys to girls in the college is 5:4 and the number of girls who like Cricket is 720 which is 45% of the total number of girls in the college. If the percentage of students in the college who like cricket is 44%, then what percent of boys who like cricket?

- a) 38.7%
- b) 41.9%
- c) 43.2%
- d) 45.6%
- e) 48.7%

37) Usha and Nandhini started a work and worked on alternate days. If Nandhini starts the work first, the whole work is completed in  $67\frac{1}{3}$  days, while if Usha started the work first, the whole work is now completed in 67 days. Find the ratio of the efficiency of Usha to Nandhini.

- a) 3:2
- b) 2:3
- c) 2:1
- d) 1:2



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e) 4:3

38) A bag contains 54 shirts of three different colors Red, Blue and Black. The probability of drawing a Red shirt is  $\frac{1}{3}$  and the number of Black shirts is twice the number of blue shirts in the bag. Find the probability of drawing a blue shirt from the bag.

- a)  $\frac{3}{7}$
- b)  $\frac{1}{6}$
- c)  $\frac{13}{27}$
- d)  $\frac{2}{9}$
- e)  $\frac{4}{27}$

39) A boat covers 122.5 km distance downstream with 30 kmph and 240 km upstream with 6 kmph. If the speed of the boat and speed of the stream is increased by  $11\frac{1}{9}\%$  and 25% respectively, then now what is the total time

taken by the boat to cover the same distance upstream and downstream?

- a) 51.5 hours
- b) 52.5 hours
- c) 55.5 hours
- d) 53.5 hours
- e) 56.5 hours

40) Pipe A alone fill the tank in x hours and Pipe B alone fill the tank in (x – 8) hours. If the efficiency of pipe B is double of pipe A and pipe A fill the tank is 50 liters per hour, then what is the capacity of the tank?

- a) 400 liters
- b) 600 liters
- c) 780 liters
- d) 640 liters
- e) 800 liters

Answer With Explanation

1. Answer: A

$$8 * 0.5 + 1 = 5$$

$$5 * 1 + 2 = 7$$

$$7 * 1.5 + 3 = 13.5$$

$$13.5 * 2 + 4 = 31$$

$$31 * 2.5 + 5 = 82.5$$

2. Answer: D

$$3 \quad 6 \quad 12 \quad 36 \quad 180 \quad 1332$$

$$3 \quad 6 \quad 24 \quad 144 \quad 1152$$

Difference of number

$$3 * 2, 6 * 4, 24 * 6, 144 * 8$$

3. Answer: A

$$9 \quad 28 \quad 55 \quad 66 \quad 101 \quad 104$$

$$19 \quad 27 \quad 11 \quad 35 \quad 3$$

$$19-11 = 8, 27-35 = 8, 11 - 3 = 8$$

4. Answer: D

$$209 - 11 = 198$$

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$$198 + 22 = 220$$

$$220 - 33 = 187$$

$$187 + 44 = 231$$

$$231 - 55 = 176$$

**5. Answer: B**

$$60.75/1.5 = 40.5$$

$$40.5/1.5 = 27$$

$$27/1.5 = 18$$

$$18/1.5 = 12$$

$$12/1.5 = 8$$

**6. Answer: A**

Number of students who are not qualified in

$$2016 = 450 - 150 = 300$$

$$20\% \text{ of students are re-apply} = 20/100 * 300 = 60$$

$$\text{Number of students passed at least one subject in 2017} = 2/3 * 75 = 50$$

$$\text{Number of new applicant in 2017} = 50 * 96/100 = 48$$

$$\text{Total} = 48 + 60 = 108$$

$$\text{Required answer} = 108 - 50 = 58$$

**7. Answer: D**

$$\text{Number of students passed only A} = 20/100 * 90 = 18$$

$$\text{Number of students passed only B} = 30/100 * 90 = 27$$

$$\text{Number of students passed only C} = 20/100 * 90 = 18$$

$$\text{Required answer} = 90 - 18 - 27 - 18 - 9 = 18$$

**8. Answer: C**

$$\text{Required ratio} = (200 - 90):110 = 1:1$$

**9. Answer: B**

$$\text{Required average} = ((240 - 75) + (300 - 120) + (450 - 150))/3 = 215$$

**10. Answer: C**

$$\text{Required difference} = 130/100 * (250 - 110) - (200 - 90) = (182 - 110) = 72$$

**Directions (11-15):**

$$\text{Unsold quantity of wheat in A} = 25/100 * (20/100 * 6000) = 300$$

$$\text{Unsold quantity of wheat in B} = (42 - 20)/100 * 6000 * 30/100 = 396$$

$$\text{Unsold quantity of wheat in C} = (57 - 42)/100 * 6000 * 30/100 = 270$$

$$\text{Unsold quantity of wheat in D} = (82 - 57)/100 * 6000 * 40/100 = 600$$

$$\text{Unsold quantity of wheat in E} = (100 - 82)/100 * 6000 * 50/100 = 540$$

**11. Answer: A**

$$\text{Required Average} = (300 + 396 + 270 + 600 + 540)/5 = 421.2 \text{ kg}$$

**12. Answer: D**

$$\text{Unsold quantity of wheat in E} = (100 - 82)/100 * 6000 * 50/100 = 540$$

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**13. Answer: E**

$$\text{Unsold quantity of wheat in C} = (57 - 42)/100 * 6000 * 30/100 = 270$$

$$\text{Selling price of F} = 10 * 1/3 * 270 + 10 * 120/100 * 2/3 * 270 = \text{Rs.3060}$$

**14. Answer: A**

$$\text{Sold quantity of A} = 20/100 * 6000 * 75/100 = 900$$

$$\text{Total selling price} = 900 * 51 = \text{Rs.45900}$$

$$\text{Total cost price} = 100/106.25 * 45900 = 43200$$

$$\text{CP of per kg} = 43200/900 = \text{Rs.48}$$

**15. Answer: B**

$$\text{Sold quantity of wheat in C} = (57 - 42)/100 * 6000 * 70/100 = 630$$

$$\text{Sold quantity of wheat in E} = (100 - 82)/100 * 6000 * 50/100 = 540$$

$$\text{Difference} = 630 - 540 = 90$$

**16. Answer: B**

$$\text{Required ratio} = 4 * 2x : x * 1 = 8:1$$

**17. Answer: A**

$$4x * 2x - x * 1 = 105$$

$$x = 15$$

$$\text{Required average} = (24 * 2 + (8 * 15) + 15)/3 = 61$$

**18. Answer: B**

$$C = B/4$$

$$C = 3/5 * A$$

$$\text{Required percentage} = 4C - (5C/3)/(5C/3) * 100 = 140\%$$

**19. Answer: B**

Total number of candidate who call interview from A = 48

$$\text{Female candidate} = 48 * 75/100 = 36$$

$$\text{Male candidate} = 48 * 25/100 = 12$$

$$\text{Number of vacancy from A} = 2$$

I.e. The number of female candidate who did not get Job in A = 36 - 1 = 35

**20. Answer: C**

**21. Answer: A**

$$x * (2x + 5) = 168$$

$$2x^2 + 5x - 168 = 0$$

$$2x^2 + 21x - 16x - 168 = 0$$

$$2x(x - 8) + 21(x - 8) = 0$$

$$x = 8$$

$$AB = 2 * 8 + 5 = 21 \text{ cm}$$

**22. Answer: B**

$$7 \quad 3$$

$$3.4$$

$$0.4 \quad 3.6$$

$$=1:9$$

$$7x + 3(100 - x) = 340$$

$$7x - 3x = 40$$

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$$x = 10 \text{ km}$$

**23. Answer: E**

$$\text{Area of the wall} = 2lh + 2bh$$

$$l = b$$

$$4 * l * h = 128$$

$$l = 128/16 = 8 \text{ cm}$$

$$\text{Area of the floor} = 8 * 8 = 64 \text{ cm}^2$$

**24. Answer: A**

$$4x - 3x = 612$$

$$x = 612$$

$$\begin{aligned} \text{Income of the person} &= 100/(100 - 16) * (7 * \\ &612) \\ &= \text{Rs.}5100 \end{aligned}$$

**25. Answer: A**

$$\text{Time ratio of A and B} = 4:3$$

$$4x - 3x = 21 \text{ minutes}$$

$$\text{Required time} = 21 * 4 = 84 \text{ minutes}$$

**26. Answer: B**

$$x * 41 = (x + 40) * 21$$

$$41x = 21x + 840$$

$$x = 42$$

**27. Answer: D**

$$A + 8 = 2B$$

$$C - 6 = B$$

$$(A + 4)/(C + 6) = 9/8$$

$$(2B - 8 + 4)/(B + 6 + 6) = 9/8$$

$$9B + 108 = 16B - 32$$

$$B = 20$$

$$\text{Required answer} = 20 - 8 = 12 \text{ years}$$

**28. Answer: C**

**Quantity I,**

$$\text{Speed of train B} = x$$

$$100 + 120 = (50 - x) * 5/18 * 60$$

$$660 = 2500 - 50x$$

$$x = 36.8 \text{ kmph}$$

**Quantity II,**

$$40 \text{ Kmph}$$

**Quantity I < quantity II**

**29. Answer: A**

**Quantity I,**

$$\text{Let the Total quantity} = 360$$

$$\text{Water quantity} = 360 * (3/5 + 5/8 + 5/9) = 641$$

$$\text{Required \%} = 641/1080 * 100 = 59.35\%$$

**Quantity II,**

$$\text{Water} = 100 - 75 = 25\%$$

**Quantity I > quantity II**

**30. Answer: E**

$$(x^2 - b^2)/2 = ax - ab$$

$$(x + b) * (x - b) = 2a(x - b)$$

$$x + b = 2a$$

Relationship cannot be established

**31. Answer: A**

**Quantity I,**

$$x^3 - 2x^2 - x + 2 = 0$$

$$(x - 2) * (x^2 - 1) = 0$$

$$x = 2, 1, -1$$

**Quantity II,**

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$$y = -3$$

Quantity I > quantity II

**32. Answer: B**

Orange in 28 liters =  $28 * \frac{4}{7} = 16$  liters

Apple juice in 28 liters =  $28 * \frac{3}{7} = 12$  liters

Orange juice in vessel B =  $3x$

Apple juice in vessel B =  $2x$

$$(3x + 16)/(2x + 12) = 13/9$$

$$26x + 156 = 27x + 144$$

$$x = 12 \text{ liters}$$

Initial quantity of vessel B =  $12 * 5 = 60$  liters

New quantity of juice in vessel B =  $60 + 28 = 88$  liters

Initial quantity of vessel A =  $88 - 18 = 70$  liters

Initial quantity of orange juice =  $70 * \frac{4}{7} = 40$  liters

**33. Answer: C**

Profit ratio of A, B and C =  $(4800 * 8 + 5600 * 6):(6400 * 6 + 5200 * 8):(10000 * 6)$

$$= 72000:80000:60000$$

$$= 18:20:15$$

Required difference =  $\frac{3}{53} * 53000$

$$= \text{Rs.}3000$$

**34. Answer: C**

CP of Battery =  $2x$

CP of Charger =  $x$

CP of pendrive =  $\frac{1}{3} * 2x = \frac{2x}{3}$

SP of Battery = SP of Charger = SP of Pendrive

$$= y$$

$$\text{Total CP} = 2x + x + \frac{2x}{3} = \frac{11x}{3}$$

$$\text{Total SP} = y + y + y = 3y$$

$$3y - \frac{11x}{3} = \frac{11x}{3} * \frac{25}{100}$$

$$3y - \frac{11x}{3} = \frac{11x}{12}$$

$$3y = \frac{11x}{12} + \frac{11x}{3}$$

$$3y = \frac{55x}{12}$$

$$\frac{x}{y} = \frac{36}{55}$$

$$x = 36k, y = 55k$$

$$\begin{aligned} \text{Required percentage} &= \frac{(36k * 2)}{55k} * 100 \\ &= 131\%(\text{approx}) \end{aligned}$$

**35. Answer: E**

$$\text{SI} = (x * \frac{40}{100} * 15 * 4)/100 = 0.24x$$

$$\text{Shopping} = x * \frac{60}{100} * \frac{20}{100} = 0.12x$$

After 2 years he invests 60% of remaining amount in the same bank in same scheme, SI =

$$(x * \frac{60}{100} * \frac{80}{100} * \frac{60}{100} * 15 * 2)/100 = 0.0864x$$

$$\text{Food} = 0.48x * \frac{40}{100} = 0.192x$$

$$(0.24x + 0.0864x) - (0.12x + 0.192x) = 115.2$$

$$0.0144x = 115.2$$

$$x = 8000$$

**36. Answer: C**

$$\text{Number of girls} = 720 * \frac{100}{45} = 1600$$

$$\text{Number of boys} = 1600 * \frac{5}{4} = 2000$$

Total number of students who like cricket =

$$(2000 + 1600) * \frac{44}{100} = 1584$$

$$\text{Number of boys like cricket} = 1584 - 720 = 864$$

$$\text{Required percentage} = \frac{864}{2000} * 100 = 43.2\%$$

**37. Answer: A**

if Nandhini started the work, Nandhini and Usha completed the work in =  $\frac{3}{202}$

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### Quantitative Aptitude

Nandhini works for 34 days while Usha works for 33(1/3) days

If Usha started the work, then Nandhini and Usha together can complete the whole work = 67 days

Usha works for 34 days while Nandhini work for 33 days

$$34x + 33(1/3)y = 34y + 33x$$

$$x = 2/3 * y$$

Required ratio Nandhini to Usha = 2:3

**38. Answer: D**

$$\text{Number of red shirts} = 54 * 1/3 = 18$$

$$\text{Remaining} = 54 - 18 = 36$$

$$\text{Number of black shirt} = 2x$$

$$\text{Number of blue shirts} = x$$

$$2x + x = 36$$

$$x = 12$$

$$\text{Required probability} = 12C_1/54C_1$$

$$= 2/9$$

**39. Answer: A**

$$\text{Speed of downstream} = 30 \text{ kmph}$$

$$\text{Speed of upstream} = 6 \text{ kmph}$$

$$\text{Speed of boat} = (30 + 6)/2 = 18 \text{ kmph}$$

$$\text{Speed of stream} = (30 - 6)/2 = 12 \text{ kmph}$$

$$\text{New speed of boat} = 18 * 1000/900 = 20 \text{ kmph}$$

$$\text{New speed of stream} = 12 * 125/100 = 15 \text{ kmph}$$

$$\text{Required time} = 122.5/(20 + 15) + 240/(20 - 15)$$

$$= 3.5 + 48$$

$$= 51.5 \text{ hours}$$

**40. Answer: E**

Pipe A alone fill 50 liters per hour, so Pipe B alone fill 100 liters per hour.

$$\text{Capacity of the tank} = T$$

$$T/50 - T/100 = x - (x - 8)$$

$$T = 800 \text{ liters}$$

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Quantitative Aptitude

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