Quiz Date: 29th March 2020

Directions (1-5): In each of these questions, two equations (I) and (II) are given. You have to solve both the equations and give answer accordingly.
(a) if x>y
(b) if x≥y
(c) if x<y
(d) if x ≤y
(e) if x = y or no relation can be established between x and y.

Q1. I. 5x + 2y = 4
II. –2x + y = 11

Q2. I. $20x^2 + 37x + 15 = 0$
II. $8y^2 + 26y + 15 = 0$

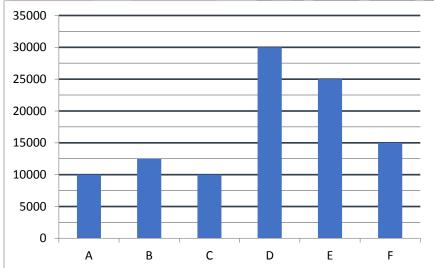Q3. I. $3x^2 - 7x + 4 = 0$
II. $2y^2 - 9y + 10 = 0$
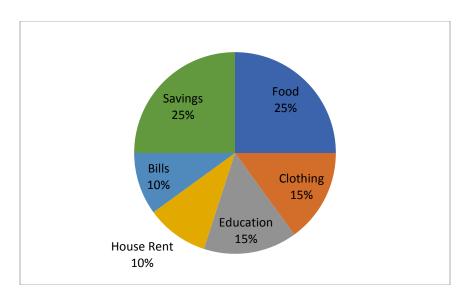
Q4. I. $2x^2 + 17x + 36 = 0$
II. $2y^2 + 13y + 20 = 0$

Q5. I. 2x - 4 = 5
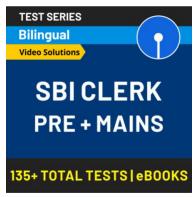II. $4y^2 - 24y + 27 = 0$

Directions (6–10)): Study the following graph carefully and answer the following question. Bar graph given below shows the monthly expenditure (in Rs.) of 6 employees A, B, C, D, E, F of a firm.

Given below is the pie chart showing percentage break-up of monthly income of person D.
Note: Income = Expenditure + saving. Consider person D don't have any other expenditure

Q6. If expenditure of B on food and education are in the ratio 2 : 3 and expenditure of B on food is $66\frac{2}{3}\%$ less than expenditure of D on education then what is the sum of expenditure of B on food and education together.
(a) 4000
(b) 4500
(c) 5000
(d) 3500
(e) 4200

Q7. What is the ratio of expenditure on food for C and E together to the expenditure of D on Clothing if expenditure on food for C, E and D are in the ratio 3 : 8 : 10.
(a) 11 : 6
(b) 12 : 7
(c) 13 : 5
(d) 9 : 4
(e) 19 : 8

Q8. If A and C have savings in the ratio 2 : 3 and Income of A is $\frac{1300}{4}\%$ of expenditure of D on bills, then find the total income of A and C ?
(a) 26200
(b) 23400

(c) 18200
(d) 27500
(e) None of these

Q9. If B and F spends 20% and $33\frac{1}{3}$% of their monthly expenditure on education then expenditure of D on clothing is what percent of expenditure of B and F together on education ?
(a) 35%
(b) 42%
(c) 75%
(d) 82%
(e) 80%

Q10. If Income of B and C is equal and saving of C is 25% more than saving of B then saving of B is what percent of saving of D ?
(a) 75%
(b) 82%
(c) 87%
(d) 93%
(e) 100%

Direction (11-15): Find the value of (?) in following number series:
Q11. 23, 27, 36, 61, 110, ?
(a) 221
(b) 231
(c) 225
(d) 191
(e) 204

Q12. 4, 2, 3, 7.5, ?, 118.125
(a) 26.5
(b) 24.25
(c) 26.25
(d) 18.25
(e) 18.625

Q13. 90, 139, 103, 128, ?, 121
(a) 112
(b) 114
(c) 104
(d) 125
(e) 110

Q14. 81, 87, 107, 149, ?, 331
(a) 222

(b) 220
(c) 138
(d) 221
(e) 119

Q15. 26, 36, 54, 80, 114, ?
(a) 146
(b) 133
(c) 201
(d) 134
(e) 156

Solutions

S1. Ans.(c)
Sol.
$5x + 2y = 4$ …(i)
$- 2x + y = 11$ …(ii)
Multiply (i) by 2 and (ii) by 5; and on adding
$y = 7$
And $x = -2$
∴ $y > x$

S2. Ans.(e)
Sol.
I. $20x^2 + 37x + 15 = 0$
    $\Rightarrow 20x^2 + 25x + 12x + 15 = 0$
    $\Rightarrow 5x (4x + 5) + 3(4x + 5) = 0$
    $\Rightarrow (5x + 3) (4x + 5) = 0$
    $x = \frac{-3}{5}$ or $\frac{-5}{4}$
II. $8y^2 + 26y + 15 = 0$
    $\Rightarrow 8y^2 + 20y + 6y + 15 = 0$
    $\Rightarrow 4y (2y + 5) + 3 (2y + 5) = 0$
    $\Rightarrow (4y + 3) (2y + 5) = 0$
    $y = \frac{-3}{4}$ or $\frac{-5}{2}$

No relation

S3. Ans.(c)
Sol.
I. $3x^2 - 7x + 4 = 0$

$\Rightarrow 3x^2 - 4x - 3x + 4 = 0$

$\Rightarrow (3x - 4)(x - 1) = 0$

$x = \frac{4}{3}$ or 1

II. $2y^2 - 9y + 10 = 0$

$\Rightarrow 2y^2 - 4y - 5y + 10 = 0$

$\Rightarrow (2y - 5)(y - 2) = 0$

$\Rightarrow y = \frac{5}{2}$ or 2

$y > x$

S4. Ans.(d)
Sol.
I. $2x^2 + 17x + 36 = 0$

$2x^2 + 9x + 8x + 36 = 0$

$x(2x + 9) + 4(2x + 9) = 0$

$\Rightarrow (x + 4)(2x + 9) = 0$

$x = -4$ or $-\frac{9}{2}$

II. $2y^2 + 13y + 20 = 0$

$\Rightarrow 2y^2 + 8y + 5y + 20 = 0$

$\Rightarrow 2y(y + 4) + 5(y + 4) = 0$

$\Rightarrow y = -4$ or $\frac{-5}{2}$

$y \geq x$

S5. Ans.(b)
Sol.
I. $2x = 9$

$x = \frac{9}{2}$

II. $4y^2 - 24y + 27 = 0$

$\Rightarrow 4y^2 - 18y - 6y + 27 = 0$

$\Rightarrow 2y(2y - 9) - 3(2y - 9) = 0$

$\Rightarrow y = \frac{3}{2}$ or $\frac{9}{2}$

$x \geq y$

S6. Ans.(c)
Sol. Expenditure of D on Education $= \frac{30000}{75} \times 15 = Rs\ 6000$

Expenditure of B on Food $= 6000 \times \frac{1}{3} = Rs\ 2000$

Required sum = 2000 + 3000 = Rs 5000

S7. Ans.(a)

Sol. Expenditure of D on Food $= \frac{30000}{75} \times 25 = Rs\ 10000$

Expenditure of C and E together on Food = 3000 + 8000 = Rs 11,000

Expenditure of D on Clothing $= \frac{30000}{75} \times 15 = Rs\ 6000$

Required ratio = 11 : 6

S8. Ans.(d)

Sol. Expenditure of D on Bill $= \frac{30000}{75} \times 10 = Rs\ 4000$

Income of A $= \frac{13}{4} \times 4000$ = Rs 13000

Savings of A $= 13000 - 10000 = Rs\ 3000$

∴Savings of C = Rs 4500

Income of C = Rs 14500

Total income of A and C = 13000 + 14500 = Rs 27500

S9. Ans.(e)

Sol. Expenditure of B on Education $= \frac{20}{100} \times 12500 = Rs\ 2500$

Expenditure of F on Education $= \frac{1}{3} \times 15000 = Rs\ 5000$

Expenditure of D on Clothing $= \frac{30000}{75} \times 15 = Rs\ 6000$

Required % $= \frac{6000}{7500} \times 100 = 80\%$

S10. Ans.(e)

Sol. Let saving of B $= Rs\ x$

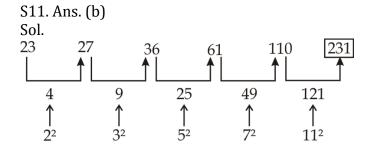Then saving of C $= Rs\ \frac{125}{100}x$

Income of B = Income of C
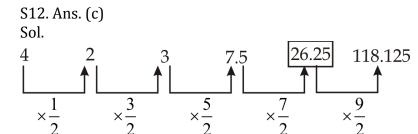
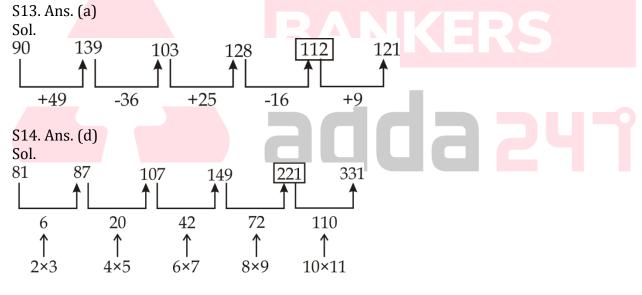$12500 + x = 10000 + \frac{125}{100}x$
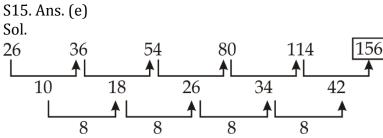
$\Rightarrow \frac{25}{100}x = 2500$

$x = 10,000$

Also, Savings of D = $30000 \times \frac{25}{75}$ = Rs. 10,000.

Required % = $\frac{10,000}{10,000} \times 100 = 100\%$

S11. Ans. (b)
Sol.

23	27	36	61	110	[231]

4	9	25	49	121

2^2	3^2	5^2	7^2	11^2

S12. Ans. (c)
Sol.

4	2	3	7.5	[26.25]	118.125

$\times\frac{1}{2}$	$\times\frac{3}{2}$	$\times\frac{5}{2}$	$\times\frac{7}{2}$	$\times\frac{9}{2}$

S13. Ans. (a)
Sol.

90	139	103	128	[112]	121

+49	-36	+25	-16	+9

S14. Ans. (d)
Sol.

81	87	107	149	[221]	331

6	20	42	72	110

2×3	4×5	6×7	8×9	10×11

S15. Ans. (e)
Sol.

26	36	54	80	114	[156]

10	18	26	34	42

8	8	8	8

For any Banking/Insurance exam Assistance, Give a Missed call @ 01141183264