Direction (16-20): In each of the questions below are given some statements followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.
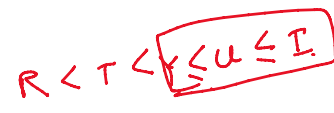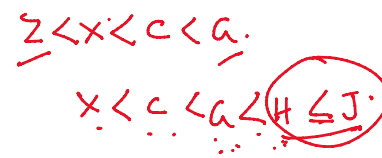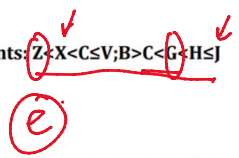(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

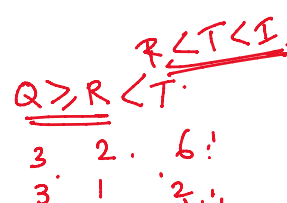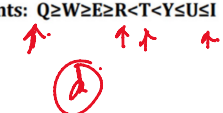**Q17. Statements:** Z<X<C≤V;B>C<G≤H≤J
Conclusion:
I: Z<G
II: X<J

$Z < X < C < G.$

$X < C < G < H ≤ J.$

Q18. Statements: Q≥W≥E≥R<T<Y≤U≤I
Conclusion:
I: Q≥T
II: R≤I

$Q ≥ W ≥ E ≥ R < T$

$R < T < Y ≤ U ≤ I.$

$R < T < I.$

$Q ≥ R < T.$

3. 2. 6!
3 1 2.

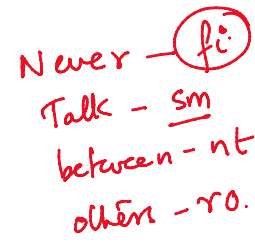**Direction (21-25):** Study the following information carefully and answer the questions given below
In a certain code language:
"Never talk between others" is coded as "sm nt ro fi"
"Others should be helpful" is coded as "ro el ac jq"
"Never be time specific" is coded as "fi dg el pa"
"Focus between specific hours" is coded as "hy dg nt ks"

Never — fi
Talk — sm
between - nt.
others - ro.

Q21.What is the code for "Never together" in the given code language?
(a)nt ro
(b)ro fi
(c)fi uy
(d)jq nt
(e) None of these

Q22. What is the code for "specific" in the given code language?
(a)dg
(b)ac
(c)jq
(d)fi
(e)None of these

Q23. What is the code for "Others" in the given code language?
(a) sm
(b) ro
(c) el
(d) pa
(e) None of these

Q24. The code "el" is coded as which of the following word?
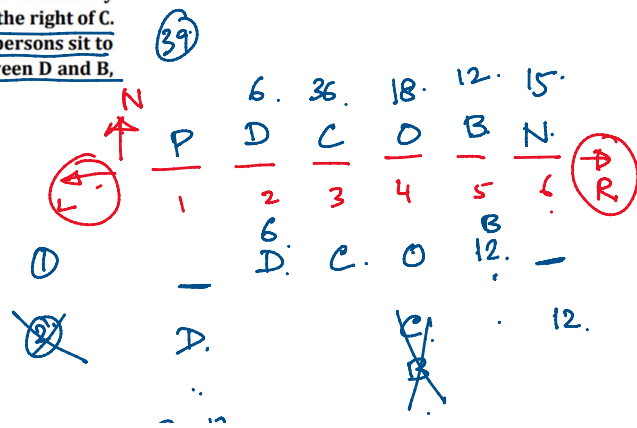(a) never
(b) time
(c) focus
(d) be
(e) None of these

Direction (26-29): Study the following information carefully and answer the questions given below:
Six persons are sitting in a row facing to the north and they have different ages but not necessarily in the same order. C sits 3rd from one of the end. The one who is 12 year old sits 2nd to the right of C. The number of persons sit right of the one who 12 year old is same as the number of persons sit to the left of D. O sits 2nd to the right of the one who is 6 year old. Two persons sit between D and B, whose age is twice than of P. N sits to the right of P. The one who 36 year old sits 3rd to the left of the one who 15 year old. The age of O is 18 year.

	6.	36.	18.	12.	15.
	P	D	C	O	B	N.
	1	2	3	4	5	6
		6.			B	
		D.	C.	O	12.	—

Q26. If P is 3 year older than C, then which of the following is the age of P?
(a) 39 Years
(b) 33 Years
(c) 21 Years
(d) 9 Years
(e) None of these

(b) 33 Years
(c) 21 Years
(d) 9 Years
(e) None of these

Q27. What is the total age of C and B?
(a) 44
(b) 48
(c) 18
(d) 42
(e) 27

Q28. How many persons sit between P and D?
(a) More than three
(b) None
(c) Two
(d) One
(e) None of these

Q29. Who among the following sits at the extreme end of the row?
(a) C
(b) B
(c) N
(d) O
(e) D

Q35. In the given word 'SPLENDOR ', in which consonant changed into its previous letter and the vowel into its next letter (according to the alphabetical order) and then all letters are arranged in alphabetical order from left to right then which of the following letter is fifth from the left end?

(a) R
(b) O
(c) K
(d) M
(e) C

Handwritten: C F K M O P Q R

Handwritten: SPLENDOR
R O K F M C P Q

Handwritten (top): B = 2D   B = 12

Directions (36-40):- Given table shows the data of population in 5 different parks. Study the data carefully and answer the questions.

Parks	Total Population	Female population
A	400	150
B	500	200
C	700	350
D	800	450
E	900	500

(Total population = Male population + Female population)

Handwritten: Male — 250, 300, 350, 350, 400.   Male + Female = Total

Q36. If 20% of total population did not visit on a particular day in park A of which male population was 60% then what percent of total population in park B is male population who visited in park A?
(a) 45%
(b) 40.4%
(c) 39.2%
(d) 48.6%
(e) None of these

Handwritten: Visited – 320 → Male = 192
$\frac{192 \times 100}{500} = 192 - 38.4$ Female = 128
$\frac{3}{8} \times 320 = 192$ (64)

Q38. By what percent female population in park D is more or less than the male population in park E?
(a) 15%
(b) 9.09%
(c) 11.11%
(d) 14.28%
(e) 12.5%

Handwritten: 450   400   450 – 400 = 50 $\frac{50}{400} \times 100 =$

Q39. What is ratio of male population in park A & D together to female population in park B & E together?
(a) 6 : 7
(b) 1 : 1
(c) 7 : 6
(d) 5 : 6
(e) 5 : 7

Handwritten: 250 + 350 = 600   200 + 500 = 700

Q40. If 30 females from each park are above 80 years age then find the average of no. of females who are below or equal to the age of 80 years from all the parks.
(a) 295
(b) 285
(c) 300
(d) 280
(e) 290

Handwritten table:

	Female population	>80	≤80
A	150	30	120
B	200	30	170
C	350	30	320
D	450	30	420
E	500	30	470
			1500

Handwritten: $\frac{1500}{5}$

Q41. The ratio of ages of A and B 4 years ago was 5 : 3. The sum of present ages of A, B and C is 80 years. If present age of C is equal to sum of present ages of A and B, find the present age of A.

Handwritten: A   B   C.

(e) 290

Q41. The ratio of ages of A and B 4 years ago was 5 : 3. The sum of present ages of A, B and C is 80 years. If present age of C is equal to sum of present ages of A and B. find the present age of A.
(a) 17 years
(b) 24 years
(c) 20 years
(d) 22 years
(e) 18 years

Handwritten:
$C = 80 - (5x+4+3x+4)$
$72 - 8x$

A   B   C.
$5x$ $3x$.
$5x+4$ $3x+4$. $72-8x$.
$72-8x = 5x+4+3x+4$
$x = 4$

4 yrs ago.
Present age.

Q42. The ratio of speed of boat in still water to speed of stream is 8 : 1. It takes 4 hours by boat to cover 54 km in downstream & 42 km in upstream. Find the downstream speed of boat.

(a) 25 kmph
(b) 24 kmph
(c) 21 kmph
(d) 27 kmph
(e) 23 kmph

Handwritten:
$\dfrac{54}{9x} + \dfrac{42}{7x} = 4$
$\dfrac{6}{x} + \dfrac{6}{x} = 4$
$\dfrac{12}{x} = 4$ $x = 3$

Time $= \dfrac{\text{distance}}{\text{speed}}$

downstream.
$8x + x = $ net speed $= 9x$
$8x - x = $ net speed $= 7x$

Q44. the length & breadth of a rectangle is in ratio 4 : 7. If perimeter is 88 cm. find area of rectangle.
(a) 414 cm^2
(b) 336 cm^2
(c) 448 cm^2
(d) 524 cm^2
(e) 396 cm^2

Handwritten:
$L = 4x$ $B = 7x$
$2(L+B) = 88$
$22x = 88$ $x = 4$
$LB = 16 \times 28$

Q45. the radius of a circle is 14 cm. what is area of another circle having radius 1.5 times the actual circle?
(a) 1296 cm^2
(b) 1386 cm^2
(c) 1352 cm^2
(d) 1485 cm^2
(e) 1276 cm^2

Handwritten:
$r = 14$.
$R = 1.5 \times 14 = 21$
Area $= \dfrac{22}{7} \times 21 \times 21$

Directions (46-50): In the following two equations questions numbered (I) and (II) are given. You have to solve both equations and Give answer
(a) If x > y
(b) If x ≥ y
(c) If y > x
(d) If y ≥ x
(e) If x = y or no relation can be established

Q46.
I. $x^2 - 7x + 12 = 0$
II. $y^2 - 8y + 12 = 0$

Handwritten: (e)

$y^2 - 8y + 12 = 0$
$y^2 - 6y - 2y + 12 = 0$.
$y(y-6) - 2(y-6) = 0$.
$(y-6)(y-2) = 0$.
$y = 2, 6$.

$x^2 - 7x + 12 = 0$
$x^2 - 4x - 3x + 12 = 0$.
$x(x-4) - 3(x-4) = 0$.
$(x-4)(x-3) = 0$.
$x = 4, 3$.

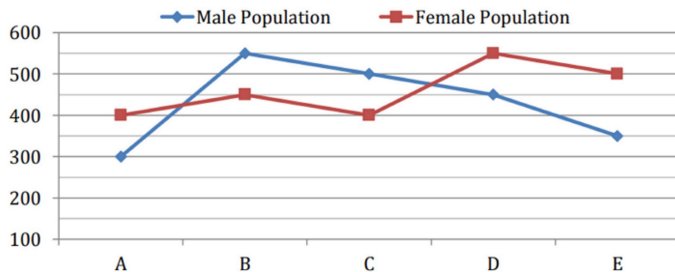if $y = 2$ $y < x$.
$y = 6$ $y > x$

Q47.
I. $2x^2 + x - 28 = 0$
II. $2y^2 - 23y + 56 = 0$

Handwritten: (d)

$2x^2 + 8x - 7x - 28 = 0$.
$2x(x+4) - 7(x+4) = 0$
$(x+4)(2x-7) = 0$
$x = -4, \frac{7}{2}$

$y \geq x$

$2y^2 - 23y + 56 = 0$.
$2y^2 - 7y - 16y + 56 = 0$
$y(2y-7) - 8(2y-7) = 0$
$(2y-7)(y-8) = 0$
$y = 8, \frac{7}{2}$

$56 \times 2 = 112$
16   7.

Directions (51-55):- Given line graph shows the data of male & female population in 5 different cities. Read the data carefully and answer the questions.

Male Population   Female Population

(Total population = Male population + Female population)

Q51. By what percent total population of city A is more or less than that of city D?
(a) 45%
(b) 35%
(c) 70%
(d) 30%
(e) 60%

Q52. If in city A, the ratio of male graduates to female graduates is 3 : 4 and total graduates in the city are 70% of total population. Find population of females who are not graduate.
(a) 120
(b) 50
(c) 90

city are 70% of total population. Find population of females who are not graduate.
(a) 120
(b) 50
(c) 90
(d) 70
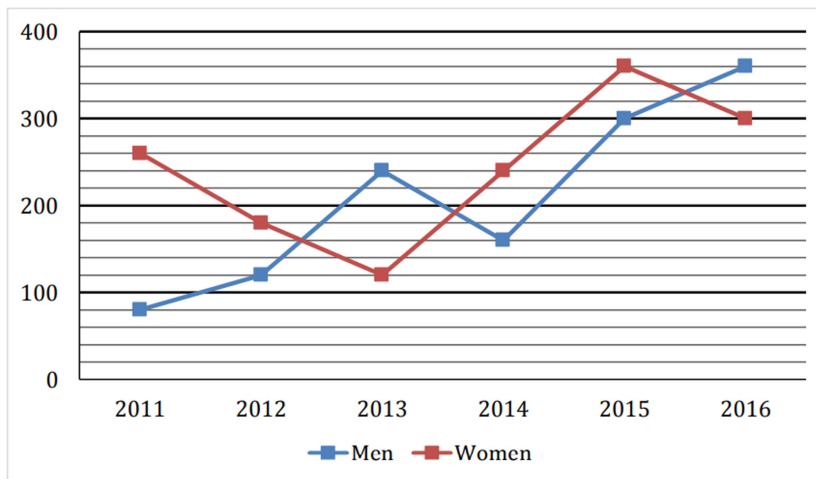(e) 135

Q53. What is average of male population in all cities?
(a) 465
(b) 455
(c) 440
(d) 460
(e) 430

Q56. X liters of milk is taken out and replaced with water from a container having 240 liters milk. Now, 20% of the mixture is taken out and replaced with water. In final mixture, the difference in quantity of milk & water is 128 liters. Find X.
(a) 12
(b) 10
(c) 9
(d) 11
(e) 8

Direction (66-70): Line chart given below shows number of labors (men and women) working in six different years. Study the data carefully and answer the following questions.

Q68. Number of Men working in 2017 is 15% more than that of 2015 while number of Women working in 2017 is 40% less than that of 2014. Find total number of labors (Men + Women) working in 2017?
(a) 561
(b) 456
(c) 489
(d) 594
(e) 630

Q69. Find the ratio between total number of Labors working in 2012 and 2013 together to total number of labors working in 2015 and 2016 together?
(a) 2 : 1
(b) 1 : 2
(c) 35 : 66
(d) 11 : 10
(e) None of the given options

Q70. Total number of Men working in all six years is how much more/less than total number of Women working in all six years together?
(a) None of the given options
(b) 140
(c) 160
(d) 180
(e) 200

Directions (71-76): Find the wrong number in the following number series:

Q73. 251, 252, 254, 227, 243, 118, 154
(a) 251
(b) 252
(c) 227
(d) 243
(e) 154

Q74. 141, 156, 147, 162, 153, 165, 159
(a) 156
(b) 153
(c) 147
(d) 165
(e) 159

Q75. 2, 6, 10, 19, 36, 69, 134
(a) 134
(b) 69
(c) 6
(d) 2
(e) 10

Q76. 0.5, 2, 1, 4, 32, 512, 16384
(a) 1
(b) 2
(c) 4
(d) 32
(e) 512

Q79. In a class there are 30 girls and 15 boys and total average weight of class is $47\frac{7}{15}$ kg. Total average weight of boys is 58 kg. Find the approximate average weight of girls ?
(a) 32 kg
(b) 42 kg
(c) 52 kg
(d) 35 kg
(e) 50 kg

Direction (81-85): There are 450 coupons which can be used in Pedicure and Hair cutting. Ratio between Males to Females who use their coupons in Hair cutting is 13 : 7 Number of males who use their coupons in Pedicure is 72 more than number of females who use their coupon in Hair cutting. Total number of males who use their coupon in Pedicure and Haircutting together is 174 more than total number of females who use their coupon in Pedicure and Haircutting together.

Q83. Females who use their coupon in Haircutting is how much more than Females who use their coupon in Pedicure?
(a) 15
(b) 45
(c) 30
(d) None of the given options
(e) 60

Q84. Out of males who use their coupons in Haircutting, 25% belongs to city A, then find number of males who use their coupons in Haircutting which doesn't belongs to city A?
(a) None of the give options
(b) 108
(c) 126
(d) 117
(e) 135

Q85. Ratio between Males who use their coupon in Pedicure to that of in Spa is 4 : 5, while ratio between Females who use their coupon in Haircutting to that of in Spa is 6 : 11. Find total number of people who use their coupons in Spa?

(a) 349

(b) 481

(c) 300

(d) 440

(e) None of the given options