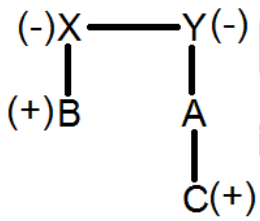
REASONING

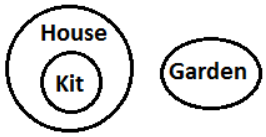
1	b	19	c
2	c	20	d
3	d	21	a
4	a	22	a
5	d	23	d
6	c	24	c
7	b	25	c
8	d	26	a
9	c	27	a
10	d	28	d
11	c	29	d
12	c	30	a
13	b	31	c
14	d	32	c
15	a	33	a
16	c	34	c
17	c	35	d
18	b		

EXPLANATIONS

1. b;



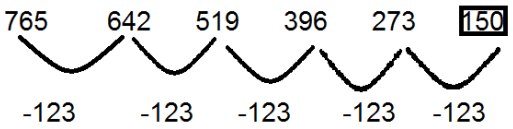
2. c;
   (26-8)+1=19
   Samuel's rank from tallest side is 19.
3. d;



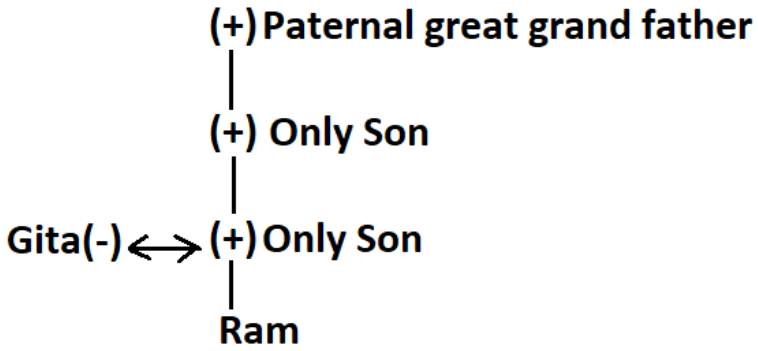
4. a;
   As all strong people are tall and Ajit is strong so he is definitely tall but there is no relation given between Ajit and player.
5. d;
   Tabla - Manoj, Harish
   Drum – Ketan, Harish
   Flute – Manoj, Jacob
   Violin – Jacob, Ketan
6. c;

1st required to play the instrument.

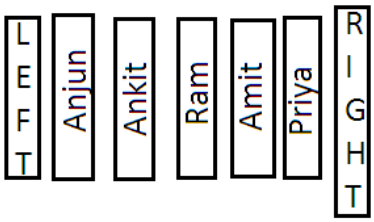
7. b;
8. d;
   34+16÷4-12=26
   ⇒34+4-12=26
   ⇒38-12=26
   ⇒26=26
9. c;



10. d;
    Band is plural of musicians.
11. c;

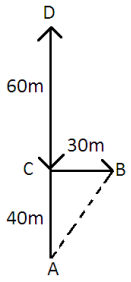


12. c;



13. b;
    Suppose the present age of son = x years
    The present age of father = y years
    $x+y=70$ ..... (i)
    According to question,
    $2(x+10)=y+10$
    $\Rightarrow 2x+20=y+10$
    $\Rightarrow 2x-y=-10$ ..... (ii)
    From questions (i) and (ii)
    $x=20$
    $\therefore y=70-20=50$
14. d;

15. a;



In a Δ ABC

$$AB = \sqrt{(AC)^2 + (CB)^2}$$

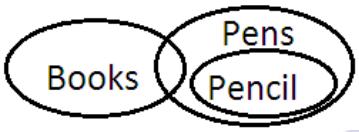
$$AB = \sqrt{(40)^2 + (30)^2}$$

$$= \sqrt{1600 + 900}$$

$$= \sqrt{2500} = 50\,\text{km}$$

B is in North-East direction from point A.

16. c;



17. c;

Brother of Uncle's daughter uncle's son cousin. So the man is Manoj's cousin.

18. b;

BLAST = 2 + 12 + 1 + 19 + 20 = 54

NASA = 14 + 1 + 19 + 1 = 35

NUCLEAR = 14 + 21 + 3 + 12 + 5 + 1 + 18 = 74

19. c;

First Figure

4 + 4+ 6 + 2= 16

Second figure

5 + 7 + 6 + 1 = 19

Third Figure

8 + 3 + 7 + 4=**22**

20. d;

3 x 2 + 4 = 10

10 x 2 + 4 = 24

24 x 2 + 4= 52

52 x 2 + 4 = 108

108 x 2 + 4 = **220**

21. a;

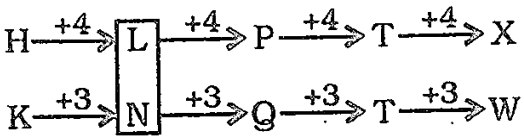
There is no 'A' letter in the given word. Therefore, the word SOAP cannot be formed.

G O S S **P I N G** ⇒ PING

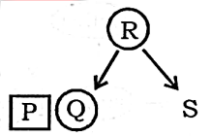
G O S S I P **I N G** ⇒ GOING

G O S S I P I N G ⇒ GOSSIP

22. a;



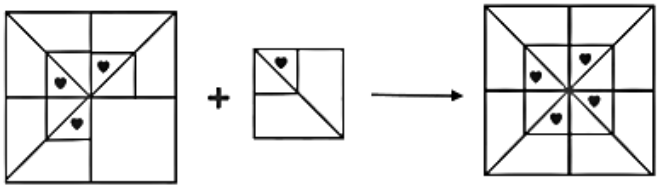
23. d;
29th February comes in a Leap Year. Therefore, his birthday will come once in four years or may be in 400 years.
24. c;
From figures (i), (ii), (iv) and (iv) we conclude that 6, 4, 3 and 1 lie adjacent to 2. Hence, 5 must he opposite 2.
25. c;
Except Hanky: Hand pair, in all other pairs first is worn on the second. Hanky is used to wipe face, hands etc.
26. a;
Except the number-pair 27-118, in all other number-pairs the second number is four times of the first number.
33 x 4 = 132;
41 x 4 = 164;
73 x 4 = 292
But,
27 x 4 = 108
27. a;
bc[a]/bca/[b]ca/b[c]a/b[c]a/[b]ca
28. d;
The age of a person is not criteria for judging his mental capabilities and administrative qualities. So, none of the arguments holds strong.
29. d;



30. a;

T	A	B	L	E
20	1	2	12	5

31. c;
The given pattern can be completed as shown below:



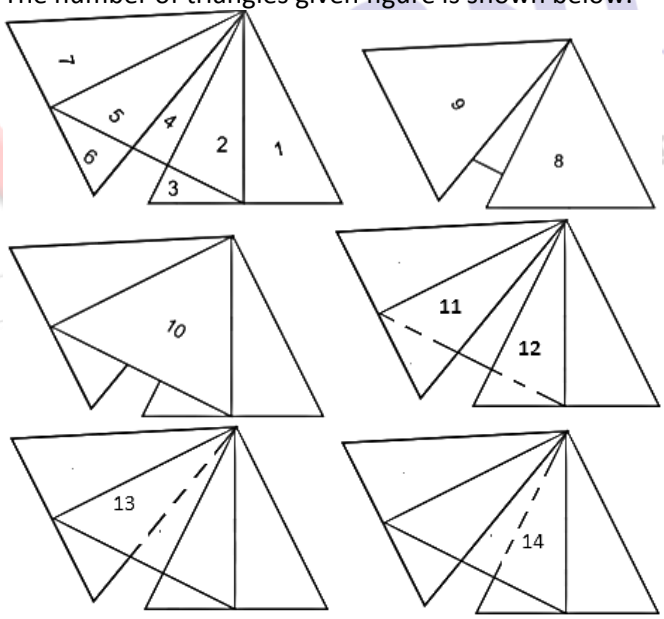
Hence, figure given in option c) will complete the pattern.
32. c;
As we know;
From Noon to 10 minutes past 5 = 5 hrs 10 minutes = 310 minutes

Hour hand moves
1 minute → 1/2˚
310 minutes → 155˚
Hence correct answer will be 155˚.

33. a;
'Friend' is the antonym of the 'Enemy'.
Similarly,
'Giant' is the antonym of the 'Dwarf'.
Hence, 'Dwarf' is correct answer.

34. c;
Let the age of daughter of ram = x
age of the ram = 4x
before 5 years
⇒ (4x - 5) = 9(x - 5)
⇒ 4x - 5 = 9x - 45
⇒ -5 + 45 = 9x - 4x
⇒ 40 = 5x
⇒ x = 8
∴ The age Ram's daughter = 8 years
∴ The age of Ram = 32 years

35. d;
The number of triangles given figure is shown below:



Hence, '14' is the correct answer.

APTITUDE

36	(c)
37	(c)
38	(a)
39	(d)
40	(b)

41	(c)
42	(b)
43	(d)
44	(c)
45	(c)
46	(c)
47	(d)
48	(b)
49	(b)
50	(b)
51	(b)
52	(a)
53	(c)
54	(a)
55	(d)
56	(d)
57	(b)
58	(b)
59	(d)
60	(b)
61	(d)
62	(c)
63	(d)
64	(a)
65	(d)
66	(b)
67	(a)
68	(b)
69	(b)
70	(b)

EXPLANATIONS

36. (c)

$3 - (-6)\{-2-9-3\} \div 7\{1+(-2)(-1)\}$

$\Rightarrow 3-(-6)\{-14\} \div 7\{3\}$

$\Rightarrow 3 - 84 \div 21 \Rightarrow 3 - 4 = -1$

37. (c)

$[76 - \{90 \div 5 \times (24 - 36 \div 3) \div 3\}]$

$= [76 - \{18 \times (12) \div 3\}]$

$= [76 - 72] = 4$

38. (a)

HCF (x, y) = 15

$\Rightarrow x = 15a, y = 156$

$36x^2 - 81y^2 = (6x)^2 - (9y)^2$

$= (6 \times 15a)^2 - (9 \times 15b)^2$

$= (45)^2 [4a^2 - 9a^2]$

$= (45)^2 (-5a^2)$
$81x^2 - 9y^2 = 9 [9x^2 - y^2]$
$= (45)^2 [9a^2 - a^2]$
$= (45)^2 (8a^2)$

39. (d)

HCF = $(45)^2$, which is divisible by 135
N1 × N2 = 1500 = HCF × LCM
$\Rightarrow$ LCM = 150
10a × 106 = 1500
$\Rightarrow$ ab = 15
3 × 5 = 15
1 × 15 = 15
$\Rightarrow$ 2 possible values.

40. (b)

Let total votes be 100
then A, B ,C =50, 30, 20,
ATQ, 10 $\rightarrow$ 37000
50 $\rightarrow$ 185000

41. (c)

2019 $\rightarrow$ 2020 $\rightarrow$ Net decrease $\rightarrow$ %Decrease
A $\rightarrow$12500 $\rightarrow$ 10625 $\rightarrow$ 1875 $\rightarrow$ (1875/12500)× 100 = 15%
B $\rightarrow$34000 $\rightarrow$ 30600 $\rightarrow$ 3400 $\rightarrow$ 10%
$\therefore$ 15/10 Required ratio = 3:2

42. (b)

2,4,6..... = (2 + 4 + 6 + 8 + ... + 50)
= 2 (1 + 2 + 3 + ... + 25)
2×(25×26)/2 = Divisible by 13 and 5

43. (d)

LCM (7, 9, 11) = 693
99999 = 693 × 144 + 207
Required no. = 99999 – 207 + 3 = 99795

44. (c)

S.P in hydrabad = Rs. M
S.P in Madras = ¾ M
ATQ, 7M/4 =11000
= M = 44000/7= 6258.7

45. (c)

Relative speed = 48 – 36 = 12 km/hr
$\Rightarrow$ Length of faster train/Relative speed = time
$\Rightarrow$ Length = 33 × 12 × 5/18 = 55 × 2 = 110 metre.

46. (c)

Eff. Discount 12+5-(12× 5)/100 = 17 – 0.6 = 16.4%
$\Rightarrow$ Amount paid = 83.6/100 × 3000 = 1254 × 2 = 2508

47. (d)

3 kg. Rice = Rs. 180
1 kg. Rice = Rs. 60
$\Rightarrow$ 5 kg. pulse = 8 × 60 = Rs. 480

15 kg. Pulse = Rs.1440
2 kg. Tea = Rs.1440
3 kg. Tea = Rs.2160 = 6 kg. walnuts
$\Rightarrow$ 10 kg. walnuts (2160)×10 /6 = 3600

48. (b)

H – L = 157
A.T.Q.$(x + H + L)/27 = 47$...(1) and$x/25 = 42$
$x = 1050$ ...(2)
put (2) in (1) $\Rightarrow H + L = 47 \times 27 - 1050$
$H + L = 219$ ...(3)
$\therefore H - L = 157$
$H + L = 219$
$\Rightarrow H = 376/2 = 188$

49. (b)

Total Amount paid in installments = $20 \times 250000 = 50,00,000$
Also, Rate = 10%
$\Rightarrow$ Amount on which interest is liveied
$(500000 \times 10)/11 = 4,54,545.455$
$\therefore$ Down payment = 6,50,000 – 454545.455 $\approx$ 1,95,455

50. (b)

60 Men $\rightarrow$ 20 days
80 Men $\rightarrow$ 60 days
$\Rightarrow (60 \times 20) + (80 \times 60)$ = Total work
$\Rightarrow$ Required days = 6000/60 = 100 days $\Rightarrow$ 20 Additional days

51. (b)

Let there be 'x' men initial with efficiency '1' of each man.
$\Rightarrow$ First day $\rightarrow x \times 1$ units
II day $\rightarrow (x - 18)$ units
VIII day $\rightarrow (x - 126)$ units
also, total work = 6x
$\Rightarrow x + (x - 18) + ...+ (x - 126) = 6x$
$\Rightarrow 8x - 18 - 36$-------$126 = 6x$
$\Rightarrow 8x - 18(1 + 2 + ...+ 7) = 6x$
$\Rightarrow 8x - 18 \times 7 \times 4 = 6x$
$\Rightarrow 2x = 18 \times 28$
$\Rightarrow x = 252.$

Directions (52-56)

State	Total number of candidates who registered for the NEET exam	Total number of candidates who appeared the NEET exam	Total number of candidates who do not appear for the NEET exam
Odisha	1440	840	600
Gujarat	1200	800	400

Assam	1800	1200	600
Kerala	1400	440	960
Bihar	1600	1000	600

52. (a);
Number of boys who registered for the NEET exam in Assam = 1800 × 7/12 = 1050
Number of girls who registered for the NEET exam in Assam = 1800 – 1050 = 750
Number of boys who appeared for the NEET exam in Assam = 1200 × 8/15 = 640
Number of girls who appeared for the NEET exam in Assam = 1200 – 640 = 560
Required difference = (1050 – 640) – (750 – 560) = 410 – 190 = 220
53. (c);
The average number of candidates who appeared for the NEET exam in Gujarat and Assam = (800 + 1200) /2 = 2000/2 = 1000
The average number of candidates who do not appear for the NEET exam in Odisha and Bihar = (600 + 600)/2 = 600
Required difference = 1000 – 600 = 400 more
54. (a);
Total number of candidates who appeared for the NEET exam in Delhi = 125% of 800 = 800 × 5/4 = 1000
Total number of candidates who registered for the NEET exam in Delhi = 600 + 900 = 1500
Total number of candidates who did not appear for the NEET exam in Delhi = 1500 – 1000 = 500
55. (d);
Total number of candidates who appeared for the NEET exam in Bihar did not qualified = 36% of 1000 = 10 × 36 = 360
Total number of candidates who appeared for the NEET exam in Gujarat did not qualified = 62.5% of 800 = 800 × 5/8 = 500
Required sum = 360 + 500 = 860
56. (d);
The number of candidates who appeared for the NEET exam in Kerala and Bihar = 440 + 1000 = 1440
Total number of candidates who do not appear for the NEET exam in Gujarat and Assam = 400 + 600 = 1000
Required percentage = (1440 – 1000) /1000 × 100 = 440/10 = 44%
57. (b);
Anu : Varun : Ravi = (x × 12) : (3x × 10) : (2x × 8) = 6x : 15x : 8x
Ravi's share = 8/29 × 58000 = Rs 16000
58. (b);
A + B = ½
C + D = 1/4
Ratio of the efficiency of C and D = 100 : 75 = 4 : 3
Time ratio of C and D = 3 : 4
1/3x + 1/4x = ¼
7/12x = ¼
x =7/3
C alone complete the work = 3× 7/3 = 7 days
Efficiency of A and C = 300 : 100 = 3 : 1
A alone complete work =7/3 days
In one day B alone complete the work = 1/2 - 3/7 =1/14parts
59. (d);
Total quantity of vessel A = 9x

Total quantity of vessel B = 5y
5x + 3y = 32 (1)
4x + 2y = 24
2x + y = 12 (2)
From (1) and (2)
x = 4
Quantity of vessel A = 4 × 9 = 36 liters
60. (b); Total number of students = x
Total weight of the class = 40 × x
Total weight of 40 students = 40 × 36 = 1440
Total weight of remaining students = (x – 40) × 48
= 48x – 1920
40x = 1440 + 48x – 1920
x = 60
61. (d); Speed of the boat =x
Speed of the stream = y
Distance = D
Speed of upstream = 8 kmph
D/(x + y) + D/8 = 57
We cannot find the answer.
Directions (62–66)
For convenience, convert given data in percentage
For TCL = 147.6/360 × 100 = 41%
For Polaroid = 36/360 × 100 = 10%
For Toshiba = 64.8 /360 × 100 = 18%
For LG = 43.2/360 × 100 = 12%
For Vizo = 68.4 /360 × 100 = 19%
(Vizo – LG) = 1176
(19 – 12)% = 1176
7% = 1176
100% = x
x = 16800

Company	Number of LCD Sold
LG	2016 (12)%
TCL	6888 (41)%
Vizio	3192 (19)%
Polaroid	1680 (10)%
Toshiba	3024 (18)%

62. (c); According to the question,
Total number of LCD sold by all companies together = 16800
Hence answer is option c.
63. (d); Total number of LCD sold by (TCL + Vizio) = (6888 + 3192) = 10080
Number of high range price LCD sold by (TCL + Vizo) = 40% of 10080 = 4032
Hence answer is option d.
64. (a); For LG
Total number of LCD sold by Company = 2016
Required number of recycled LCD = 1/8 × 1/3 × 2016 = 84

Hence answer is option a

65. (d); The sum of LCD sold by Polaroid and LG together = 2016 + 1680 = 3696

Hence answer is option e.

66. (b); According to the question,

80% 200%

130%

70% 50%

Required Number of LCD = [7/ (7 + 5)] × 3024 = 1764

Hence answer is option b

67. (a); Number of Comic books available at store A and store B together = 600 + 420 = 1020

Number of Fiction books available at store A and store B together = 500 + 450 = 950

Required ratio = 1020 : 950 = 102 : 95

68. (b); Number of Comic Books available at Store D = 400

Number of Comic Books available at Store E = 520

Required average $= \frac{400+520}{2}$ = 460

69. (b); Number of Comic books available at store C = 360

Number of Fiction books available at store E = 540

Required percentage $= \frac{540-360}{540} \times 100 = 33\frac{1}{3}\%$ less

70. (b); Total number of Fiction books available at store B and C together = 450 + 600 = 1050

Total number of Comic books available at store A and D together = 600 + 400 = 1000

Required difference = 1050 – 1000 = 50

ENGLISH

71	b	86	b
72	a	87	d
73	d	88	b
74	b	89	c
75	a	90	b
76	d	91	c
77	b	92	b
78	a	93	c
79	d	94	a
80	c	95	d
81	c	96	b
82	a	97	b
83	b	98	a
84	d	99	d
85	a	100	b