WBCS (Main) Exam Paper – VI Practice Set

Answers with Explanation

1. (b) Here, first divisor (729) is a multiple of second divisor (27).
∴ Required remainder = Remainder got on dividing 56 by 27 = 2.

2. (b) Let the value of estate be ₹x According to the question

$\frac{4}{5}$ of x = 16800

$\therefore x = \frac{16800 \times 5}{4} = ₹\ 21000$ অ্যাচিভার্স

$\therefore \frac{3}{7}$ of the value $= 21000 \times \frac{3}{7}$

= 3000 × 3 = ₹9000

3. (c) The original property with Ram = ₹x (let)

∴ Wife's share = ₹ $\frac{x}{3}$

Remaining property $= x - \frac{x}{3} = ₹\frac{2x}{3}$

Daughter's share $= \frac{2x}{3} \times \frac{3}{5} = ₹\frac{2x}{5}$

Son's share $= \frac{2x}{3} - \frac{2x}{5} = \frac{10x - 6x}{15} = ₹\frac{4x}{15}$

$\therefore \frac{4x}{15} = 6400$

$\Rightarrow$ 4x = 6400 × 15 অ্যাচিভার্স

$\Rightarrow x = \frac{6400 \times 15}{4} = ₹24000$

4. (b) Let LCM be L and HCF be H, then
L = 4H
∴ H + 4H = 125
$\Rightarrow$ 5H = 125

$\Rightarrow H = \frac{125}{5} = 25$

∴ L = 4 × 25 = 100
∴ Second number

$= \frac{L \times H}{\text{First number}}$

$= \frac{100 \times 25}{100} = 25$ অ্যাচিভার্স

5. (b) LCM of 4, 6, 8, 9

2	4, 6, 8, 9
2	2, 3, 4, 9
3	1, 3, 2, 9
	1, 1, 2, 3

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∴ LCM = 2 × 2 × 3 × 2 × 3 = 72
∴ Required number = 72, because it is exactly divisible by 4, 6, 8 and 9 and it leaves remainder 7 when divided by 13.

6. (d) $1\frac{1}{2}$ hours = 90 minutes
1 hour and 45 minutes = 105 minutes
1 hour = 60 minutes
∴ LCM of 30 minutes, 60 minutes, 90 minutes and 105 minutes

3	30, 60, 90, 105
5	10, 20, 30, 35
2	2, 4, 6, 7
	1, 2, 3, 7

∴ LCM = 3 × 5 × 2 × 2 × 3 × 7 অ্যাচিভার্স
= 1260 minutes

1260 minutes $= \frac{1260}{60} = 21$ hours
∴ The bell will again ring simultaneously after 21 hours.
∴ Time will be
= 12 noon + 21 hours = 9 a.m.

7. (a) Expression

$$= 4 - \cfrac{5}{1 + \cfrac{1}{3 + \cfrac{1}{\cfrac{8+1}{4}}}}$$

$$= 4 - \cfrac{5}{1 + \cfrac{1}{3 + \cfrac{4}{9}}} = 4 - \cfrac{5}{1 + \cfrac{1}{\cfrac{27+4}{9}}}$$

$$= 4 - \cfrac{5}{1 + \cfrac{9}{31}} = 4 - \cfrac{5}{\cfrac{31+9}{31}}$$

$= 4 - \frac{5 \times 31}{40} = \frac{160 - 155}{40}$ অ্যাচিভার্স

$= \frac{5}{40} = \frac{1}{8}$

8. (a) $? = \left(\frac{1}{2}-\frac{1}{4}+\frac{1}{5}-\frac{1}{6}\right)\div\left(\frac{2}{5}-\frac{5}{9}+\frac{3}{5}-\frac{7}{18}\right)$

$= \left(\frac{30-15+12-10}{60}\right)\div\left(\frac{36-50+54-35}{90}\right)$

$= \left(\frac{17}{60}\right)\div\left(\frac{5}{90}\right) = \frac{17}{60}\times 18 = \frac{51}{10} = 5\frac{1}{10}$

9. (a) Using (x) of Basic Formula
Let 0.9 = x, 0.2 = y and 0.3 = z
Then, the given expression

$= \frac{x\times x\times x+y\times y\times y+z\times z\times z-3\times x\times y\times z}{x\times x+y\times y+z\times z-x\times y-y\times z-z\times x}$

$= \frac{x^3+y^3+z^3-3xyz}{x^2+y^2+z^2-xy-yz-zx}$ অ্যাচিভার্স

$= \frac{(x+y+z)(x^2+y^2+z^2-xy-yz-zx)}{x^2+y^2+z^2-xy-yz-zx}$

= x + y + z
= 0.9 + 0.2 + 0.3 = 1.4

10. (d) Number of boys in the class = x (let)
∴ Number of girls = 50 – x
According to the question,
x × 70 + (50 – x) × 75 = 50 × 72
⇒ 70x + 3750 – 75x = 3600
⇒ 3750 – 5x = 3600
⇒ 5x = 3750 – 3600 = 150

$\Rightarrow x = \frac{150}{5} = 30$ অ্যাচিভার্স

11. (b) Sum of new numbers
= na + (2 + 4 + 8 + 16 ..... to n terms)
Now, S = 2 + 4 + 8 + 16 + ... to n terms
Here, a = first term = 2

r = common ratio $= \frac{4}{2} = 2$

It is a geometric series.

$\therefore S = \frac{a(r^n-1)}{r-1} = \frac{2(2^n-1)}{2-1}$

= 2 $(2^n - 1)$
∴ Required average

$= \frac{na+2(2^n-1)}{n}$

$= a+\frac{2(2^n-1)}{n}$ অ্যাচিভার্স

12. (c) Average of first five odd multiples of 3

$= \frac{3(1+3+5+7+9)}{5} = \frac{3\times 25}{5} = 15$

13. (a) $\frac{W_1}{W_2} = \frac{2}{3}$

$\Rightarrow \frac{W_2}{W_1} = \frac{3}{2}$ and $\frac{W_1}{W_3} = \frac{1}{2}$ অ্যাচিভার্স

$\therefore \frac{W_2}{W_1}\times\frac{W_1}{W_3} = \frac{W_2}{W_3} = \frac{3}{2}\times\frac{1}{2} = \frac{3}{4} = 3:4$

14. (d) According to the question,

$A\times\frac{2}{3} = B\times\frac{75}{100} = C\times\frac{6}{10}$

$\Rightarrow A\times\frac{2}{3} = B\times\frac{3}{4} = C\times\frac{3}{5}$

Now, $A\times\frac{2}{3} = B\times\frac{3}{4}$

$\Rightarrow \frac{A}{B} = \frac{3}{4}\times\frac{3}{2} = \frac{9}{8} \Rightarrow A:B = 9:8$

and $B\times\frac{3}{4} = C\times\frac{3}{5}$

$\Rightarrow \frac{B}{C} = \frac{3}{5}\times\frac{4}{3} = \frac{4}{5} = \frac{8}{10}$

= B : C = 8 : 10
∴ A : B : C = 9 : 8 : 10

15. (c) Let the present age of brothers be x and 2x years.
Then, 5 years ago, অ্যাচিভার্স

$\frac{x-5}{2x-5} = \frac{1}{3}$

⇒ 3x – 15 = 2x – 5
⇒ x = 15 – 5 = 10
∴ Age of elder brother = 10 × 2 = 20
∴ Required ratio

$= \frac{10+5}{20+5} = \frac{15}{25} = 3:5$

16. (c) $1\% = \frac{1}{100}$

$\therefore \frac{1}{100}\times\frac{1}{2} = \frac{1}{200} = 0.005$

17. (d) Required number

$= \frac{240\times 25}{100} - \frac{160\times 15}{100}$ অ্যাচিভার্স

= 60 – 24 = 36

18. (d) Let income be ₹100
∴ Sum given to elder son
= 20% of ₹100 = ₹20

Remaining Sum = ₹80
Sum given to younger son
= 30% of ₹80 = ₹24
Remaining sum = ₹(80 – 24) = ₹56
Sum given to the trust
= 10% of ₹56 = ₹5.6
∴ Remaining sum = ₹(56 – 5.6) = ₹50.4
∴ When ₹50.4 remains, total income = ₹100
∴ When ₹10080 remains, total income

$$= \frac{100 \times 10080}{50.4} = ₹20000$$

19. (b) C.P of article

$$= \frac{100}{100-20} \times 450$$

$$= \frac{100 \times 450}{80} = ₹562.5$$

∴ To gain 20%

$$\text{S.P.} = \frac{562.5 \times 120}{100} = ₹675$$

20. (c) Gain per cent $= \frac{400-320}{320} \times 100$

$$= \frac{80}{320} \times 100 = 25\%$$

21. (c) S.P. of 7 pens $= \frac{10 \times 140}{100} = ₹14$

∴ S.P. of 1 pen $= \frac{14}{7} = ₹2$

Clearly, 5 pens were sold for ₹10

22. (c) Single equivalent discount

$$= \left(15 + 10 - \frac{15 \times 10}{100}\right) = 23.5\%$$

∴ Cost price $= \frac{800 \times 76.5}{100} = ₹612$

Actual C.P. = ₹(612 + 28) = ₹640

∴ Gain % $= \frac{800-640}{640} \times 100$

$$= \frac{160 \times 100}{640} = 25\%$$

23. (c) C.P. for A $= 3000 \times \frac{90}{100} \times \frac{85}{100} = ₹2295$

Actual C.P. = 2295 + 105 = ₹2400

∴ Gain per cent $= \frac{800}{2400} \times 100 = \frac{100}{3} = 33\frac{1}{3}\%$

24. (a) Price of article = Rs. x (let) According to the question,

$$P = \frac{x(100-20)}{100} \times \frac{100-25}{100}$$

$$\Rightarrow P = x \times \frac{80}{100} \times \frac{75}{100}$$

$$\Rightarrow P = x \times \frac{4}{5} \times \frac{3}{4} = \frac{3x}{5}$$

$$\Rightarrow x = ₹\frac{5}{3}P$$

25. (a) Equal instalment

$$= \frac{6450 \times 200}{4\left[200 + (4-1) \times 5\right]}$$

$$= \frac{6450 \times 200}{4(215)}$$

$$= \frac{6450 \times 50}{215} = ₹1500$$

26. (c) Annual interest = 365 × 2 = ₹730

$$\text{Principal} = \frac{\text{S.I.} \times 100}{\text{Time} \times \text{Rate}}$$

$$= \frac{730 \times 100}{1 \times 5} = ₹14600$$

27. (c) Case I,
Interest = Principal

$$\text{Rate} = \frac{\text{Interest} \times 100}{\text{Principal} \times \text{Time}}$$

$$= \frac{100}{7}\% \text{ per annum}$$

Case II,
Interest = 3 × Principal

$$\text{Time} = \frac{\text{Interest} \times 100}{\text{Principal} \times \text{Time}}$$

$$= \frac{3 \times 100}{\frac{100}{7}} = 3 \times 7 = 21 \text{ years}$$

28. (c) $A = P\left(1 + \frac{R}{100}\right)^T$

$\Rightarrow$ 30000 + 4347

$= 30000\left(1+\frac{7}{100}\right)^{T}$

$\Rightarrow \frac{34347}{30000} = \left(\frac{107}{100}\right)^{T}$

$\Rightarrow \frac{11449}{10000} = \left(\frac{107}{100}\right)^{2} = \left(\frac{107}{100}\right)^{T}$ অ্যাচিভার্স

$\Rightarrow$ Time = 2 years

29. (d) Rate = 10% Per annum = 5% per half year
Time = T years = 2T half years

$\therefore A = P\left(1+\frac{R}{100}\right)^{T}$

$\Rightarrow 926.10 = 800\left(1+\frac{5}{100}\right)^{2T}$

$\Rightarrow \frac{9261}{8000} = \left(\frac{21}{20}\right)^{2T}$

$\Rightarrow \left(\frac{21}{20}\right)^{3} = \left(\frac{21}{20}\right)^{2T}$

$\Rightarrow 2T = 3 \Rightarrow T = \frac{3}{2}$ years অ্যাচিভার্স

30. (d) Let S.I. = ₹100, & Principal = ₹100

$\therefore$ Rate $= \frac{\text{S.I.} \times 100}{\text{Principal} \times \text{Time}}$

$= \frac{100 \times 100}{100 \times 8} = \frac{25}{2}\%$

$\therefore$ C.I. $= P\left[\left(1+\frac{r}{100}\right)^{T} - 1\right]$

$= 8000\left[\left(1+\frac{25}{200}\right)^{2} - 1\right]$

$= 8000\left(\frac{81}{64} - 1\right) = \frac{8000 \times 17}{64} = ₹\ 2125$

31. (b) (x and y)'s 1 hour work

$= \frac{1}{4} + \frac{1}{8} = \frac{2+1}{8} = \frac{3}{8}$ অ্যাচিভার্স

$\therefore$ Required time $= \frac{8}{3}$ hours

$= \left(\frac{8}{3} \times 60\right)$ minutes = 160 minutes.

32. (b) Work done by (A + B) in 5 days

$= 5\left(\frac{1}{12} + \frac{1}{20}\right) = 5\left(\frac{5+3}{60}\right) = \frac{40}{60} = \frac{2}{3}$

Remaining work $= 1 - \frac{2}{3} = \frac{1}{3}$ অ্যাচিভার্স

$\because$ Time taken by C in doing $\frac{1}{3}$ work

= 3 days

$\therefore$ Required time = 3 × 3 = 9 days

33. (c) Work done by (A + B) in 1 day

$= \frac{1}{15} + \frac{1}{10} = \frac{2+3}{30} = \frac{5}{30} = \frac{1}{6}$

$\therefore$ (A + B)'s 2 days' work $= \frac{2}{6} = \frac{1}{3}$

Remaining work $= 1 - \frac{1}{3} = \frac{2}{3}$ অ্যাচিভার্স

This part is done by A alone.

$\because$ one work is done by A in 15 days.

$\therefore$ $\frac{2}{3}$ work is done in $15 \times \frac{2}{3}$ = 10 days.

$\therefore$ Total number of days = 10 + 2 = 12 days

34. (d) Part of cistern filled by three pipes in an hour

$= \frac{1}{3} + \frac{1}{5} - \frac{1}{2} = \frac{10+6-15}{30} = \frac{1}{30}$

Hence, the cistern will be filled in 30 hours.

35. (c) Part of the tank filled in first two minutes

$= \frac{1}{20} - \frac{1}{30} = \frac{3-2}{60} = \frac{1}{60}$

$\therefore$ Part of tank fillled in 114 minutes

$= \frac{57}{60} = \frac{19}{20}$

$\therefore$ Remaining part of cistern will be filled in 115th minute

36. (b) Part of the tank filled by (A + B + C) in 1 hour $= \frac{1}{6}$

Part of tank filled by these in 2 hours

$= \frac{2}{6} = \frac{1}{3}$

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Remaining part = $1 - \frac{1}{3} = \frac{2}{3}$

Time taken by A and B in filling $\frac{2}{3}$rd part

= 8 hours

∴ Time taken by A and B in filling the whole tank $= \frac{8\times 3}{2} = 12$ hours

∴ Part of tank filled by C in an hour

$= \frac{1}{6} - \frac{1}{12} = \frac{1}{12}$ অ্যাচিভার্স

Hence, required time = 12 hours

37. (a) Time $= 10\frac{1}{2}$ hours $= \frac{21}{2}$ hours

Speed = 40 kmph

Distance = Speed × Time

$= 40 \times \frac{21}{2} = 420$ km

38. (d) ∵ 1 m/sec $= \frac{18}{5}$ kmph অ্যাচিভার্স

$\therefore \frac{10}{3}$ m / sec

$= \frac{18}{5} \times \frac{10}{3} = 12$ kmph

39. (b) When a train crosses a railway platform, it travels a distance equal to sum of length of platform and its own length.

Speed = 132 kmph

$= 132 \times \frac{5}{18} = \frac{110}{3}$ m / sec.

∴ Required time $= \frac{110+165}{\frac{110}{3}}$ seconds

$= \frac{275\times 3}{110} = 7.5$ seconds

40. (a) Speed in still water = x km/h

Speed of current = y km/h

$\therefore x + y = \frac{1}{\frac{4}{60}} = 15$

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$x - y = \frac{1}{\frac{10}{60}} = 6$

∴ Speed of current

$= \frac{1}{2}[(x+y)-(x-y)]$ অ্যাচিভার্স

$= \frac{1}{2}(15-6) = \frac{9}{2} = 4.5$ km / h

41. (d) Speed of boat in still water = x kmph (let)

Speed of current = y kmph

Rate downstream = (x + y) kmph

Rate upstream = (x – y) kmph

Distance = Speed × Time

∴ (x – y) × 2t = (x + y) × t

⇒ 2x – 2y = x + y

⇒ 2x – x = 2y + y ⇒ x = 3y

$\Rightarrow \frac{x}{y} = \frac{3}{1} = 3:1$

42. (d) Let PQ = QR = z km.

Let speed of boat in still water be x kmph. and speed of current be y kmph.

According to the question, অ্যাচিভার্স

$\frac{z}{x+y} + \frac{z}{x-y} = 12$ (i)

and $\frac{2z}{x-y} = 16\frac{40}{60}$

$\Rightarrow \frac{2z}{x-y} = 16\frac{2}{3} = \frac{50}{3}$ (ii)

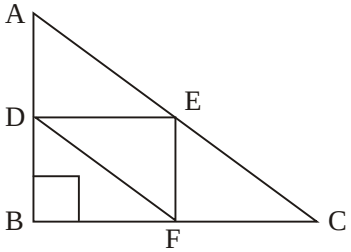
By equation (i) × 2 – (ii),

$\frac{2z}{x+y} + \frac{2z}{x-y} - \frac{2z}{x-y} = 24 - \frac{50}{3}$

$\Rightarrow \frac{2z}{x+y} = \frac{72-50}{3}$

$= \frac{22}{3} = 7\frac{1}{3}$ hours

43. (c)



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$3^2 + 4^2 = 5^2$

ΔABC is a right angled triangle.

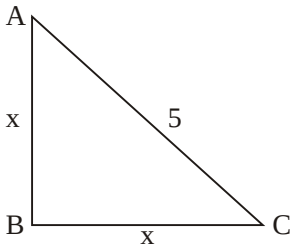
∴ area ABC $= \frac{1}{2}$ × AB × BC

$= \frac{1}{2} \times 3 \times 4 = 6\text{cm}^2$

$\therefore$ Required Area of ΔDEF

$= \frac{1}{4} \times 6 = \frac{3}{2}$ cm^2

44. (b)



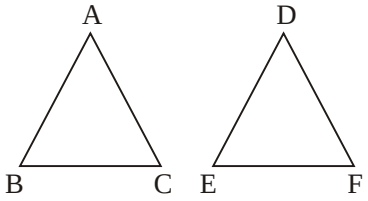
$x^2 + x^2 = (5)^2 \Rightarrow 2x^2 = 25$

$\Rightarrow x^2 = \frac{25}{2} \Rightarrow x = \frac{5}{\sqrt{2}}$

Area $= \frac{1}{2} \times \frac{5}{\sqrt{2}} \times \frac{5}{\sqrt{2}}$

$= \frac{25}{4} = 6.25$ sq.cm.

45. (c)



$\frac{\text{ar}(\Delta ABC)}{\text{ar}(\Delta DEF)} = \frac{AB^2}{DE^2}$

$\Rightarrow \frac{360}{250} = \frac{8 \times 8}{DE^2}$

$\Rightarrow DE^2 = \frac{8 \times 8 \times 250}{360} = \frac{8^2 \times 5^2}{6^2}$

$\Rightarrow DE \frac{8 \times 5}{6} = \frac{20}{3} = 6\frac{2}{3}$ cm

46. (d) Area of equilateral triangle $= \frac{\sqrt{3}}{4} \times (\text{side})^2$

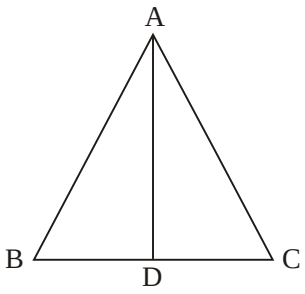
$\Rightarrow \frac{\sqrt{3}}{4} \times (\text{side})^2 = 48$

$(\text{side})^2 = \frac{48 \times 4}{\sqrt{3}}$

$= \frac{16 \times \sqrt{3} \times \sqrt{3} \times 4}{\sqrt{3}} = 64\sqrt{3}$

$\therefore$ Side $= \sqrt{64\sqrt{3}} = 8\sqrt[4]{3}$ cm

47. (c)



If AB = x cm, then

BD $= \frac{x}{2}$ cm

$\therefore$ From ΔABD

$AB^2 = BD^2 + AD^2$

$\Rightarrow x^2 = \frac{x^2}{4} + \left(6\sqrt{3}\right)^2$

$\Rightarrow x^2 = \frac{x^2}{4} = 36 \times 3$

$\Rightarrow \frac{3x^2}{4} = 36 \times 3$

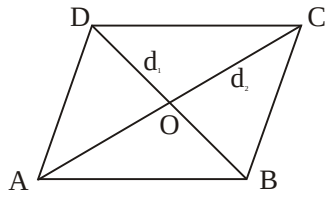
$\Rightarrow x2 = 36 \times 4$

$\Rightarrow x = 6 \times 2 = 12$ cm

$\therefore$ Perimeter of equilateral triangle

$= 3 \times 12 = 36$ cm

48. (a)



AC = 24 cm = d_2

BD = 32 cm = d_1

$\therefore$ OD = 16 cm

OC = 12 cm

$\angle COD = 90^\circ$

$\therefore CD = \sqrt{OC^2 + OD^2}$

$= \sqrt{12^2 + 16^2}$

$= \sqrt{144 + 256} = \sqrt{400} = 20$ cm

$\therefore$ Perimeter of rhombus

$= 4 \times CD = 4 \times 20 = 80$ cm

49. (b) Let the radii of two cylinders are r_1, r_2 and length of the cylinders are h_1, h_2 respectively. According to the question

$\frac{r_1}{r_2} = \frac{2}{3}$ and $\frac{h_1}{h_2} = \frac{5}{3}$

∴ Ratio of their volume

$= \pi r_1^2 h_1 : \pi r_2^2 h_2$

$= r_1^2 h_1 : r_2^2 h_2$

$= (2)^2 \times 5 : (3)^2 \times 3$

$= 4 \times 5 : 9 \times 3 = 20 : 27$

50. (b) Let 0.41 = x and 0.69 = y

$$\therefore \text{Expression} = \frac{(x^3 + y^3)}{(x^2 - xy + y^2)}$$

$$= \frac{(x+y)(x^2 - xy + y^2)}{(x^2 - xy + y^2)}$$

= x + y = 0.41 + 0.69 = 1.10

51. (a) The water in river flows. The water in pool remains stagnant.

52. (c) January is the first month of a year and November is the second last month of a year. Similarly, Sunday is the first day of a week and Friday is the second last day of a week.

53. (a) The pair of synonyms is given.

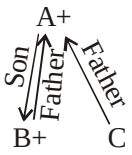
54. (b) Yesterday → Today → Tommorrow
March → April → May

55. (b) $\sqrt{169} = 13$
Therefore,
$\sqrt{289} = 17$

56. (a) $(5)^3 - 1 = 124$
Similarly, $(7)^3 - 1 = 342$

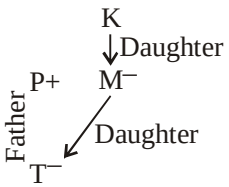
57. (a) 371 – 150 = 221
468 – 221 = 247

58. (c)



C's father is A but C is not son of A. Hence, C is daughter of A.

59. (d)



Obviously P and M are parents (father and mother respectively) of T. Hence P and M are husband-wife. Hence P is son-in-law of M's mother/father 'K'.

60. (c) Grandson of Arun's mother means either son or nephew of Arun. Therefore, Arun is the father-in-law of that girl.

61. (a)

× → +	÷ → –
– → ×	+ → ÷

Given expression
54 ÷ 16 – 3 × 6 + 2 = ?
After conversion
? = 54 – 16 × 3 + 6 ÷ 2
or, ? = 54 – 48 + 3 = 9

62. (c)

T ⇒ ×	U ⇒ –
V ⇒ ÷	W ⇒ +

(50 V 2) W (28 T 4)
⇒ (50 ÷ 2) + (28 × 4)
⇒ 25 + 112 = 137

63. (d) 25 + 5 ÷ 2 = 40
⇒ (25 × 2) – (5 × 2) = 40
⇒ 50 – 10 = 40
⇒ 35 + 5 ÷ 2 = 60
⇒ (35 × 2) – (5 × 2) = 60
⇒ 70 – 10 = 60
45 + 5 ÷ 2
⇒ (45 × 2) – (5 × 2)
⇒ 90 – 10 = 80

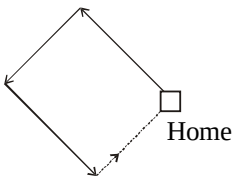
64. (a) Black, Laterite and Alluvial represent different types of soils. Therefore, green (a colour) is different from the other three.

65. (b) Except Psychology, all others are related to medical science. Psychology is related with study of mind.

66. (d) Except Come : Arrive, all other pairs have such words which are antonymous to each other. Come and Arrive are relative synonyms.

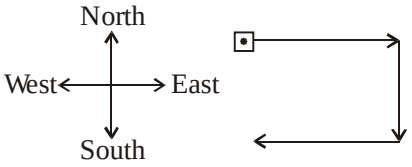
67. (b) The second number is three times the first number except in the case of option (b).
81 × 3 = 243
64 × 3 = 192
25 × 3 = 75
But, 16 × 4 = 64

68. (d)



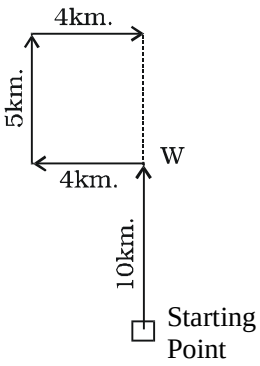
Now, she was going towards North–East.

69. (b) During the time of sunset, walking towards the opposite side of sun means, Shama was walking towards east.



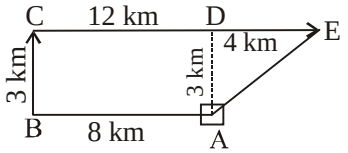
Now, Shama is facing west.

70. (c)



Required distance = 10 + 5 = 15 km.

71. (d)



$AE = \sqrt{(AD)^2 + (DE)^2} = \sqrt{(3)^2 + (4)^2}$

$= \sqrt{9+16} = \sqrt{25} = 5$ km

72. (c) Last Monday was December 29, 1975.
. . . . . → December 30,1975
Wednesday → December 31, 1975
Thursday → January 1, 1976
Friday → January 2, 1976

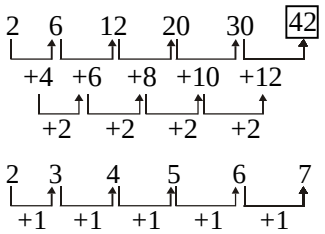
73. (c) Mondays ⇒ 8, 15, 22 and 29
Therefore, 30th ⇒ Tuesday

74. (c) Time at present
= 4 : 45 + 0 : 50 = 5 : 35
6 : 00 – 5 : 35 = 0:25 = 25 minutes

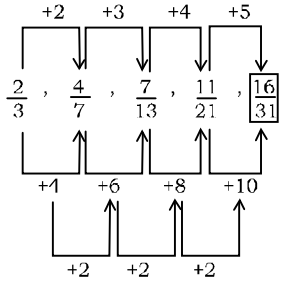
75. (c) The given number series is based on the following pattern :
98 – (13 × 2) = 72
72 – (11 × 2) = 50
50 – (9 × 2) = 32
32 – (7 × 2) = 18
18 – (5 × 2) = 8

76. (b) 196 16 144 36 100 64
$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$
$(14)^2$ $(4)^2$ $(12)^2$ $(6)^2$ $(10)^2$ $(8)^2$

77. (c) Each term consists of two numbers. Each number of one term is based on particular rule.



78. (d)



79. (d) R A P D C N
$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$
3 6 2 8 5 7

80. (a) 9 1 5 2 4 7
$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$
L Y C P J N

81. (b) E = 5 i.e. Position Number in the English alphabet.
H E N
$\downarrow$ $\downarrow$ $\downarrow$
8 + 5 + 14 = 27
Therefore,
P E N
$\downarrow$ $\downarrow$ $\downarrow$
16 + 5 + 14 = 35

82. (d) There is no 'C' letter in the given word. Therefore, the word PORTICO cannot be formed.

P O [R T F] O L [I] O ⇒ RIFT
P [O R] T [F O] L I O ⇒ ROOF
P O [R T F O] L I O ⇒ FORT

83. (d) There is no 'G' letter in the given word. Therefore, the word CHANGE cannot be formed.

[M E] R C [H] A N D I [S] E ⇒ MESH
M E R [C] H A N [D I] S [E] ⇒ DICE
[M] E [R C H A] N D I S E ⇒ CHARM

84. (c) There are only one 'A' and one 'G' in the given word. Therefore, the word GARBAGE cannot be formed.

H [A R B I N G] E [R] ⇒ BARRING
H [A R] B I [N G E R] ⇒ GARNER
H [A R] B I [N G E R] ⇒ RANGER

85. (b) First Premise is Particular Affirmative (I-type) Second Premise is Universal Affirmative (A-type).

Some shoes are white.
All white are blue.
I + A ⇒ I-type of Conclusion
"Some shoes are blue."
This is Conclusion II.

86. (c) First Premise is Universal Affirmative (A-type). Second Premise is Universal Negative (E-type).

All frogs are tortoises.
No tortoise is a crocodile.
A + E ⇒ E-type of Conclusion
"No frog is a crocodile".
This is Conclusion II.
Conclusion I is Converse of this Conclusion.

87. (b) First Premise is Particular Affirmative (I-type). Second Premise is Universal Negative (E-type).

Some skirts are benches.
No bench is a table.
I + E ⇒ O–type of Conclusion
"Some skirts are not tables."
Conclusion II is Converse of the first Premise.

88. (c) Rank of Neha from the last
= 45 – 15 + 1 + 31st

89. (d) Total number of students in the line
= 17 + 22 – 1 = 38

90. (c) According to question,

I	II	III	IV	V
↓	↓	↓	↓	↓
B	C	E	A	D

The gap of two readers

Therefore, D read the newspaper in the last.

91. (c) In each figure the lower left number is the square of the upper right number.
Again, First figure 3 + 9 = 7 + 5
Second figure 2 + 8 = 4 + 6
Third figure 4 + 7 = 5 + ?
⇒ ? = 11 – 5 = 6

92. (c) The sum of cross products of the numbers gives the central number.
First Figure
(4 × 6) + (6 × 7) = 24 + 42 = 66
Second Figure
(8 × 9) + (5 × 14)
= 72 + 70 = 142
Third Figure
(11 × 7) + (9 × 6) = 77 + 54 = 131

93. (c) First figure
9 × 9 = 81
81 × 9 = 729
Second figure
8 × 8 = 64
64 × 8 = 512
Third figure
7 × 7 = 49
49 × 7 = [343]

94. (b) First Figure
25 + 17 = 6 × 7 = 42 = 42
Second Figure
38 + 18 = 8 × 7 = 56 = 56
Third Figure
89 + 16 = 105

$\Rightarrow \frac{105}{7} = 15$

95. (c) First Figure
$(20 - 9)^2 = 121$
$\Rightarrow (11)^2 = 121$
Second Figure
$(24 - 11)^2 = 169$
$\Rightarrow (13)^2 = 169$
Third Figure
$(32 - 17)^2$
$\Rightarrow (15)^2 = 225$

96. (a) The sequential order of colours in Rainbow is Violet, Indigo, Blue, Green, Yellow, Orange and Red.

c. Violet
↓
b Green
↓
d. Yellow
↓
e. Orange
↓
a. Red

97. (c) Chronological order of Presidents of India :
b. Rajendra Prasad (1950–1962)
↓
a. S Radhakrishnan (1962–1967)

↓

d. V V Giri (1969–1974)

↓

c. Giani Zail Singh (1982–1987)

↓

e. APJ Abdul Kalam (2002–2007)

98. (c) Meaningful order of words in ascending order :

d. Infant

↓

a. Child

↓

e. Education

↓

b. Profession

↓

c. Marriage

99. (c) The numbers 3, 4, 5 and 6 are on the faces adjacent to the number 1. So, 2 lies opposite 1.

100. (d) The numbers 1, 2, 5 and 6 are on the faces adjacent to the number 3. Therefore, 4 lies opposite 3.

The numbers 2, 3, 4 and 5 are on the faces adjacent to the number 1. Therefore, 6 lies opposite 1.

Now, the number 5 lies opposite 2.

★★★