

WBCS (Main) Exam Paper – VI Practice Set

Answers with Explanation

1. (a) $1000 = (45 \times 22) + 10$
 $\therefore 45 - 10 = 35$ to be added.
 So, the smallest number to be added to 1000 to make the sum exactly divisible by 45 is 35.

2. (b) Let the number be x .

$$\therefore \frac{x+12}{6} = 112$$

$$\Rightarrow x + 12 = 672$$

$$\Rightarrow x = 672 - 12 = 660$$

$$\therefore \text{Correct answer} = \frac{660}{6} + 12$$

$$= 110 + 12 = 122$$

3. (b) Let the fractions be x and y , where $x > y$

$$\therefore xy = \frac{14}{15} \text{ and } \frac{x}{y} = \frac{35}{24}$$

$$\therefore xy \times \frac{x}{y} = \frac{14}{15} \times \frac{35}{24}$$

$$\Rightarrow x^2 = \frac{49}{36}$$

$$\Rightarrow x = \frac{7}{6}$$

4. (a) HCF of two-prime numbers = 1

\therefore Product of numbers = their LCM = 117

$117 = 13 \times 9$ where 13 & 9 are co-prime.
 L.C.M (13,9) = 117.

5. (b) Using Rule 5,

Here, $12 - 5 = 7$,

$16 - 9 = 7$

\therefore Required number

= (L.C.M. of 12 and 16) - 7

= $48 - 7 = 41$

6. (d) First of all we find HCF of 391 and 323.

323) 391 (1

$\frac{323}{68}$ 323 (4

$\frac{272}{51}$ 68 (1

$\frac{51}{17}$ 51 (3

$\frac{51}{\times}$

\therefore Number of classes = 17

$$7. (a) \frac{4\frac{1}{7} - 2\frac{1}{4}}{3\frac{1}{2} + 1\frac{1}{7}} = \frac{\frac{29}{7} - \frac{9}{4}}{\frac{7}{2} + \frac{8}{7}}$$

$$= \frac{\frac{116-63}{28}}{\frac{49+16}{14}} = \frac{53}{28} \times \frac{14}{65} = \frac{53}{130}$$

Again,

$$\frac{1}{2 + \frac{1}{2 + \frac{1}{25-1}}} = \frac{1}{2 + \frac{1}{2 + \frac{5}{24}}}$$

$$= \frac{1}{2 + \frac{1}{\frac{48+5}{24}}} = \frac{1}{2 + \frac{24}{53}}$$

$$= \frac{1}{\frac{106+24}{53}} = \frac{53}{130}$$

$$\therefore \text{Expression} = \sqrt{\frac{53}{130} \div \frac{53}{130}} = 1$$

8. (d) We have

$$\frac{5}{3} \div \frac{2}{7} \times \frac{*}{7} = \frac{5}{4} \times \frac{2}{3} \times 6$$

$$\Rightarrow \frac{5}{3} \times \frac{7}{2} \times \frac{*}{7} = \frac{5 \times 2 \times 6}{4 \times 3}$$

$$\therefore * = \frac{5 \times 2 \times 6 \times 3 \times 2 \times 7}{5 \times 7 \times 4 \times 3} = 6$$

9. (b) Expression

$$= \sqrt{\frac{5}{4} \times \frac{64}{125}} \times 1.44$$

$$= \sqrt{\frac{16}{25} \times \frac{144}{100}} = \frac{4}{5} \times \frac{12}{10} = \frac{24}{25}$$

10. (b) Difference

$$= 83 - 53 = 30$$

শ্রীচিভর্ষ

শ্রীচিভর্ষ

শ্রীচিভর্ষ

শ্রীচিভর্ষ

শ্রীচিভর্ষ

শ্রীচিভর্ষ

Incorrect observation > Correct observation
 \therefore Required average

$$= 35 - \frac{30}{100} = 35 - 0.3 = 34.7 \quad \text{প্র্যাচিভর্স}$$

11. (b) Person's income in the eighth month
 $= ₹(3160 \times 8 + 5 \times 4120 - 12 \times 3400)$
 $= ₹(25280 + 20600 - 40800) = ₹5080$

12. (b) Sum of new numbers
 $= na + (2 + 4 + 8 + 16 \dots \text{ to } n \text{ terms})$
 Now, $S = 2 + 4 + 8 + 16 + \dots \text{ to } n \text{ terms}$
 Here, $a = \text{first term} = 2$

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

It is a geometric series.

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

\therefore Required average

$$= \frac{na + 2(2^n - 1)}{n} = a + \frac{2(2^n - 1)}{n} \quad \text{প্র্যাচিভর্স}$$

13. (b) $\frac{A}{B} = \frac{4}{5}; \frac{B}{C} = \frac{5}{2}$

$$\therefore \frac{A}{C} = \frac{A}{B} \times \frac{B}{C} = \frac{4}{5} \times \frac{5}{2} = 2:1$$

14. (d) $A : B = 1 : 2 = 3 : 6$
 $B : C = 3 : 4 = 6 : 8$
 $C : D = 6 : 9 = 2 : 3 = 8 : 12$
 $D : E = 12 : 16$
 $\therefore A : B : C : D : E$
 $= 3 : 6 : 8 : 12 : 16$

15. (c) Let the present age of two brothers be x and $2x$ years.

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

$$\Rightarrow 3x - 15 = 2x - 5$$

$$\Rightarrow 3x - 2x = 15 - 5$$

$$\Rightarrow x = 10$$

\therefore Their present age

= 10 and 20 years

After 5 years their required ratio

$$= \frac{15}{25} = \frac{3}{5} = 3:5 \quad \text{প্র্যাচিভর্স}$$

16. (b) $A \times \frac{90}{100} = \frac{B \times 30}{100}$

$$\Rightarrow A \times 3 = B$$

$$\Rightarrow A \times x\% = A \times 3$$

$$\Rightarrow \frac{x}{100} = 3 \Rightarrow x = 300$$

17. (b) Males = $25000 \times \frac{4}{5} = 20000$

Females = 5000

$$\text{Educated males} = 20000 \times \frac{95}{100} = 19000 \quad \text{প্র্যাচিভর্স}$$

$$\text{Educated females} = \frac{5000 \times 60}{100} = 3000$$

Total educated persons = 22000

$$\therefore \text{Required per cent} = \frac{22000}{25000} \times 100 = 88\%$$

18. (a) X is 20% less than Y.

If Y = 100, X = 80

$$\therefore \frac{Y - X}{Y} = \frac{100 - 80}{100} = \frac{20}{100} = \frac{1}{5}$$

$$\frac{X}{X - Y} = \frac{80}{80 - 100} = \frac{80}{-20} = -4$$

19. (a) Required profit per cent = $\frac{10 - 9}{9} \times 100$

$$= \frac{1}{9} \times 100 = 11\frac{1}{9}\% \quad \text{প্র্যাচিভর্স}$$

20. (c) Here, selling prices are same,
 Profit-loss percent are same.
 In such transactions, there is always loss.

$$\text{Loss percent} = \frac{10 \times 10}{100} = 1\%$$

21. (d) Total actual C.P.

$$= ₹(500 \times 10 + 2000) = ₹7000$$

And total S.P.

$$= ₹(5 \times 750 + 5 \times 550)$$

$$= ₹(3750 + 2750) = ₹6500$$

$$\text{Loss} = 7000 - 6500 = ₹500$$

$$\text{Loss percent} = \frac{500}{7000} \times 100 = \frac{50}{7} = 7\frac{1}{7}\%$$

22. (b) Case I : A single discount of 30%

Case II : Two successive discounts of 20% and 10%

Single equivalent discount

$$= (20 + 10 - \frac{20 \times 10}{100})\% = 28\% \quad \text{প্র্যাচিভর্স}$$

Difference = $(30 - 28)\% = 2\%$

\therefore Required difference = 2% of 550

$$= ₹ \frac{2 \times 550}{100} = ₹11.$$

23. (b) Single equivalent discount for successive discounts of 10% and 20%.

$$= \left(10 + 20 - \frac{20 \times 10}{100}\right)\% = 28\%$$

Single equivalent discount for 28% and 30%.

$$= \left(28 + 30 - \frac{28 \times 30}{100}\right)\% = 49.6\%$$

24. (c) Single equivalent discount for 8% and 5%

$$= \left(8 + 5 - \frac{8 \times 5}{100} \right) \%$$

$$= (13 - 0.4) = 12.6 \% \quad \text{অ্যাচিভার্স}$$

Single equivalent discount for 12.6% and 2%

$$= \left(12.6 + 2 - \frac{12.6 \times 2}{100} \right) \%$$

$$= 14.6 - 0.252 = 14.348 \%$$

$$\therefore \text{Net S.P.} = (100 - 14.348)\% \text{ of } 7500$$

$$= \frac{7500 \times 85.652}{100} = ₹ 6423.90$$

25. (a) Equal instalment = $\frac{6450 \times 200}{4[200 + (4-1) \times 5]}$

$$= \frac{6450 \times 200}{4(215)} = \frac{6450 \times 50}{215} = ₹ 1500$$

26. (d) If principal = x and rate = r% per annum, then

$$1380 = x + \frac{x \times 3 \times r}{100} \quad \dots (i) \quad \text{অ্যাচিভার্স}$$

$$1500 = x + \frac{x \times 5 \times r}{100} \quad \dots (ii)$$

S.I. for two years = 1500 - 1380 = ₹ 120

$$\therefore \frac{x \times 2 \times r}{100} = 120$$

$$\therefore \frac{xr}{100} = 60 \quad \dots (iii)$$

\therefore From equation (i)

$$1380 = x + 60 \times 3$$

$$\Rightarrow x = 1380 - 180 = ₹ 1200$$

From equation (iii)

$$\frac{1200 \times r}{100} = 60$$

$$\Rightarrow r = \frac{6000}{1200} = 5\% \text{ per annum}$$

27. (d) Difference in rates = 8 - 5 = 3%

$$\therefore 3\% = 2320 - 2200 = 120$$

$$\therefore 5\% = \frac{120}{3} \times 5 = 200$$

$$\therefore \text{Principal} = \text{Rs. } (2200 - 200) = ₹ 2000$$

$$\therefore \text{Time} = \frac{200 \times 100}{2000 \times 5} = 2 \text{ years}$$

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

$$\Rightarrow 30000 + 4347$$

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

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

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

$$\Rightarrow \text{Time} = 2 \text{ years}$$

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

$$\Rightarrow 2420 = P \left(1 + \frac{10}{100} \right)^2$$

$$\Rightarrow 2420 = P \left(1 + \frac{1}{10} \right)^2 = P \left(\frac{11}{10} \right)^2$$

$$\Rightarrow P = \frac{2420 \times 10 \times 10}{11 \times 11} = ₹ 2000$$

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

$$\Rightarrow 2916 = x \left(1 + \frac{8}{100} \right)^2$$

$$\Rightarrow 2916 = x \left(\frac{27}{25} \right)^2$$

$$\Rightarrow x = \frac{2916 \times 25 \times 25}{27 \times 27} = ₹ 2500$$

$$\therefore \text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{2500 \times 9 \times 3}{100} = ₹ 675$$

31. (d) (A + B)'s 1 day's work

$$= \frac{1}{6} + \frac{1}{12} = \frac{2+1}{12} = \frac{1}{4}$$

\therefore A and B together will complete the work in 4 days.

32. (d) Women Length Days

$$\begin{array}{ccc} 20 \uparrow & 100 \downarrow & 10 \downarrow \\ 10 \uparrow & 50 \downarrow & x \downarrow \end{array}$$

$$\therefore \left. \begin{array}{l} 10 : 20 \\ 100 : 50 \end{array} \right\} \therefore 10 : x$$

$$\Rightarrow 10 \times 100 \times x = 20 \times 50 \times 10$$

$$\Rightarrow x = \frac{20 \times 50 \times 10}{1000} = 10 \text{ days}$$

অ্যাচিভার্স

অ্যাচিভার্স

অ্যাচিভার্স

33. (c) Koushik's 1 day's work = $\frac{1}{x}$
 Krishna's 1 day's work = $\frac{1}{y}$ অ্যাচিভার্স
 \therefore One day's work of both = $\frac{1}{x} + \frac{1}{y} = \frac{x+y}{xy}$
 \therefore Required time = $\frac{xy}{x+y}$ days

34. (b) Part of the cistern filled by pipe Q in 1 minute
 = $\frac{1}{20} - \frac{1}{30} = \frac{3-2}{60} = \frac{1}{60}$
 \therefore Required time = 60 minutes

35. (a) Time taken to fill the $\frac{3}{5}$ of the cistern = 60 seconds
 Time taken in filling $\frac{2}{5}$ part অ্যাচিভার্স
 = $\frac{60 \times 5}{3} \times \frac{2}{5} = 40$ seconds

36. (b) $\therefore P < q$,
 \therefore On opening pipe and sink together, Part of the tub filled in 1 hour = $\frac{1}{P} - \frac{1}{q}$

Clearly, $\frac{1}{P} - \frac{1}{q} = \frac{1}{r}$

37. (a) Time = $10 \frac{1}{2} = \frac{21}{2}$ অ্যাচিভার্স
 Speed = 40 kmph
 Distance = Speed \times Time
 = $40 \times \frac{21}{2} = 420$ km.

38. (b) Men's speed = $\frac{\text{Distance}}{\text{Time}} = \frac{a}{b}$ kmph
 = $\frac{1000a}{b}$ m/hour
 \therefore Time taken in walking 200 metre
 = $\frac{200}{\frac{1000a}{b}} = \frac{b}{5a}$ hours

39. (a) Average speed of journey অ্যাচিভার্স
 = $\left(\frac{2xy}{x+y} \right)$ kmph
 = $\frac{2 \times 40 \times 50}{40+50} = \frac{2 \times 40 \times 50}{90}$

= $\frac{400}{9} = 44 \frac{4}{9}$ kmph

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

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

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

\therefore Speed of current = $\frac{1}{2} [(x+y) - (x-y)]$

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

41. (a) Rate downstream = 18 kmph
 Rate upstream = 12 kmph

\therefore Speed of boat in still water
 $\frac{1}{2}$ (rate downstream + rate upstream)

= $\frac{1}{2} (18 + 12) = 15$ kmph অ্যাচিভার্স

42. (b) Let the speed of boat in still water be x kmph and the distance be y km.

\therefore Rate downstream = $(x + 1.5)$ kmph
 Rate upstream = $(x - 1.5)$ kmph
 According to the question,

$\frac{y}{x+1.5} = 3$ (i)

$\frac{y}{x-1.5} = \frac{7}{2}$ (ii)

On dividing equation (i) by (ii),

$\frac{x-1.5}{x+1.5} = \frac{3 \times 2}{7} = \frac{6}{7}$

$\Rightarrow 7x - 10.5 = 6x + 9$

$\Rightarrow x = 10.5 + 9 = 19.5$ kmph.

43. (a) Area of paper = Area of square + Area of equilateral triangle অ্যাচিভার্স

$\frac{1}{2} (\text{diagonal})^2 + \frac{\sqrt{3}}{4} \times (\text{side})^2$

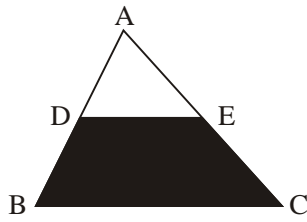
= $\frac{1}{2} \times 32 \times 32 + \frac{\sqrt{3}}{4} \times 8 \times 8$

= $512 + 16 \times 1.732$

= $512 + 27.712 = 539.712$ cm²

[Note : Diagonal of a square = $\sqrt{2}$ side]

44. (c)



প্র্যাচিভর্স

D is the mid-point of AB and E is the mid-point of AC.

∴ DE is parallel to BC.

and $DE = \frac{1}{2} BC$

ΔADE and ΔABC are similar, because

$\underline{D} = \underline{B}$ and $\underline{E} = \underline{C}$

$$\therefore \frac{\Delta ADE}{\Delta ABC} = \frac{DE^2}{BC^2} = \frac{1}{4}$$

$$\Rightarrow 4\Delta ADE = \Delta ABC$$

∴ Area of trapezium DBCE = ΔABC - ΔADE

$$4\Delta ADE - \Delta ADE = 3\Delta ADE$$

প্র্যাচিভর্স

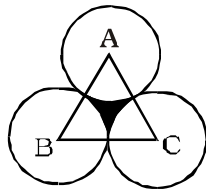
$$\therefore \text{Required percentage} = \frac{3}{4} \times 100 = 75\%$$

45. (d) Area of the trapezium = $\frac{1}{2}$ (sum of parallel sides) × altitude

$$\Rightarrow 450 = \frac{1}{2}(3x + 2x) \times 15$$

$$\Rightarrow 5x = \frac{450 \times 2}{15} = 60 \text{ cm}$$

46. (b)



প্র্যাচিভর্স

Obviously, the triangle ABC will be equilateral.

AB = BC = CA = 2 cm.

Area of ΔABC

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

Then, area 'A' of the three sectors each of angle 60° in a circle of radius 1 cm.

$$A = 3 \times \frac{60}{360} \times \pi \times 1 = \frac{\pi}{2}$$

প্র্যাচিভর্স

$$\therefore \text{Area of the shaded portion} = \left(\sqrt{3} - \frac{\pi}{2} \right) \text{ cm}^2.$$

47. (a) We know that

$$\text{Area of circle} = \pi r^2$$

According to question, $\pi r^2 = 38.5$

$$\Rightarrow r^2 = \frac{38.5}{22} \times 7 = (3.5)^2$$

$$\Rightarrow r = 3.5 \text{ cm}$$

∴ Circumference of circle

$$= 2\pi r = 2 \times \frac{22}{7} \times 3.5 = 22 \text{ cm}$$

48. (b) Length of the rubber band

$$= 3d + 2\pi r$$

$$= (30 + 10\pi) \text{ cm}$$

প্র্যাচিভর্স

49. (d) LCM of indices of surds

$$= \text{LCM of } 6, 3, 4 \text{ and } 2 = 12$$

$$\therefore \sqrt[6]{12} = \sqrt[12]{12^2} = \sqrt[12]{144}$$

$$\sqrt[3]{4} = \sqrt[12]{4^4} = \sqrt[12]{256}$$

$$\sqrt[4]{5} = \sqrt[12]{5^3} = \sqrt[12]{125}$$

$$\sqrt{3} = \sqrt[12]{3^6} = \sqrt[12]{729}$$

∴ The smallest surd = $\sqrt[4]{5}$

50. (a) $\sqrt{15} = 3.88$ (Given)

$$\text{Now, } \sqrt{\frac{5}{3}} = \sqrt{\frac{5 \times 3}{3 \times 3}} = \frac{\sqrt{15}}{3}$$

প্র্যাচিভর্স

$$= \frac{3.88}{3} = 1.29\bar{3}$$

51. (c) Pen is filled with ink. Similarly, vein is filled with blood.

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

53. (c) Tongue is used to taste something. Similarly, leg is used to walk.

54. (b) Quack is the voice of Duck. Similarly, Neigh is the voice of Horse.

$$55. (b) 580 \Rightarrow 5 + 8 + 0 = 13$$

$$265 \Rightarrow 2 + 6 + 5 = 13$$

$$373 \Rightarrow 3 + 7 + 3 = 13$$

Similarly,

$$490 \Rightarrow 4 + 9 + 0 = 13$$

$$56. (d) 536 \Rightarrow 5 + 3 + 6 = 14$$

$$428 \Rightarrow 4 + 2 + 8 = 14$$

$$365 \Rightarrow 3 + 6 + 5 = 14$$

Similarly,

$$266 \Rightarrow 2 + 6 + 6 = 14$$

প্র্যাচিভর্স

$$57. (a) \left. \begin{aligned} 210 &= (15)^2 - 15 \\ 380 &= (20)^2 - 20 \end{aligned} \right\} 15 + 5 = 20$$

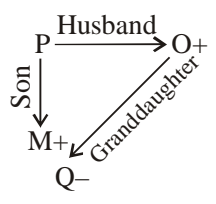
$$182 = (14)^2 - 14$$

$$14 + 5 = 19$$

$$\text{Therefore, } ? = (19)^2 - 19$$

$$= 361 - 19 = 342$$

58. (a)



প্র্যাচিভর্ন

Obviously, O is the husband of P, hence P is wife of O. Now M is son of P. So M's parents are P (mother) and O (father).

Hence M is O's son.

59. (c)

D is the father of C.
C is mother of A and B.
E is son of B.
Therefore, D is great grandfather of E.

60. (c)

Shubha is granddaughter of Sheela, who is sister of Pramod.
Rahul is son of Pramod.
Therefore, Rahul is uncle of Sheela.

61. (a)

$+\Rightarrow -$	$-\Rightarrow \times$
$\div \Rightarrow +$	$\times \Rightarrow \div$

প্র্যাচিভর্ন

$$10 \times 5 \div 3 - 2 + 3 = ?$$

$$\text{or, } ? = 10 \div 5 + 3 \times 2 - 3$$

$$\text{or, } ? = 2 + 6 - 3 = \boxed{5}$$

62. (c)

$-\Rightarrow +$	$+\Rightarrow -$
$\times \Rightarrow \div$	$\div \Rightarrow \times$

প্র্যাচিভর্ন

$$? = 7 - 10 \times 5 \div 6 + 4$$

$$\Rightarrow ? = 7 + 10 \div 5 \times 6 - 4$$

$$\Rightarrow ? = 7 + 2 \times 6 - 4$$

$$\Rightarrow ? = 7 + 12 - 4 = 15$$

63. (c)

$P \Rightarrow +$	$Q \Rightarrow -$
$R \Rightarrow \div$	$S \Rightarrow \times$

$$18 S 36 R 12 Q 6 P 7 = ?$$

$$\text{or, } ? = 18 \times 36 \div 12 - 6 + 7$$

$$\text{or, } ? = 18 \times 3 - 6 + 7$$

$$\text{or, } ? = 54 - 6 + 7$$

$$\text{or, } ? = 61 - 6 = 55$$

64. (c)

Except Late, all other words convey more or less similar meaning.

65. (a)

Except Earth-Moon, in all other pairs the first belongs to the second.

66. (d)

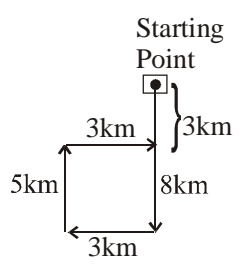
Rupee, Pound and Yen are currencies of different countries.

প্র্যাচিভর্ন

67. (b)

Colonialism is the policy of acquiring colonies and keeping them dependent. All other words refer to something that exists in thought or as an idea.

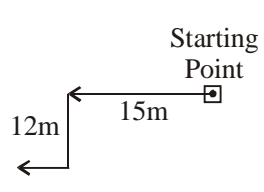
68. (d)



প্র্যাচিভর্ন

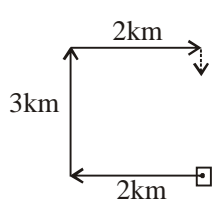
It is clear from the diagram that Ashok was in South direction from the starting point.

69. (b)



Now she is facing towards west.

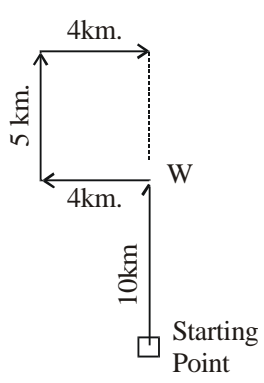
70. (d)



প্র্যাচিভর্ন

Now, Ramesh is facing South.

71. (c)



প্র্যাচিভর্ন

$$\text{Required distance} = 10 + 5 = 15 \text{ km.}$$

72. (d)

The day before yesterday was Tuesday
Today, it is Tuesday + 2 = Thursday
Tomorrow \Rightarrow Friday
The day after tomorrow \Rightarrow Saturday

73. (c)

Last Monday was December 29, 1975.
Tuesday \rightarrow December 30, 1975
Wednesday \rightarrow December 31, 1975
Thursday \rightarrow January 1, 1976
Friday \rightarrow January 2, 1976

প্র্যাচিভর্ন

74. (d)

A leap year is completely divisible by 4. In case of century years, only those divisible by 400 are leap years.

$$\frac{2000}{400} = 5; \frac{2004}{4} = 501; \frac{1996}{4} = 499$$

প্র্যাচিভর্স

But, $\frac{1966}{4} = 491.5$

75. (c) The given number series is based on the following pattern :

$$3 + 7 = 10; 10 + 10 = 20$$

$$20 + 13 = 33; 33 + 16 = 49$$

$$49 + 19 = 68; 68 + 22 = \boxed{90}$$

76. (a) $5 + 2 = 7$

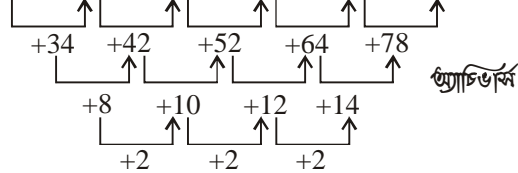
$$2 + 7 = 9$$

$$7 + 9 = 16$$

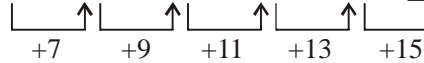
$$9 + 16 = 25$$

$$16 + 25 = \boxed{41}$$

77. (d) $56 \quad 90 \quad 132 \quad 184 \quad 248 \quad \boxed{326}$



78. (c) $14 \quad 21 \quad 30 \quad 41 \quad 54 \quad \boxed{69}$



79. (a) $A = 1 \Rightarrow$ Position Number in the English alphabet.

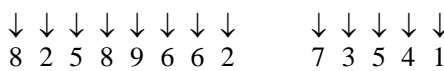
$$\begin{array}{ccc} F & A & T \\ \downarrow & \downarrow & \downarrow \\ 6 & + 1 & + 20 = 27 \end{array}$$

প্র্যাচিভর্স

Therefore,

$$\begin{array}{ccccc} F & A & I & T & H \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 6 & + 1 & + 9 & + 20 & + 8 = \boxed{44} \end{array}$$

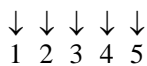
80. (c) C A L C U T T A D E L H I



Therefore,

$$\begin{array}{ccccccc} C & A & L & I & C & U & T \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 8 & 2 & 5 & 1 & 8 & 9 & 6 \end{array}$$

81. (a) E N T R Y



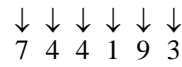
প্র্যাচিভর্স

And,

$$\begin{array}{ccccc} S & T & E & A & D & Y \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 9 & 3 & 1 & 7 & 8 & 5 \end{array}$$

Therefore,

A R R E S T



প্র্যাচিভর্স

82. (a) There is no 'R' letter in the given word. Therefore, the word ALERT cannot be formed.

LEGA L I Z **ATION**

\Rightarrow A L E G A T I O N

L E **GAL** I Z **AT** I O **N**

\Rightarrow G A L L A N T

L E G **A** L I Z **AT** I O **N**

\Rightarrow N A T A L

প্র্যাচিভর্স

83. (c) There is only one 'T' in the given word. So, the word TABLET cannot be formed.

R O **TARY** B L U E **S** \Rightarrow STARY

R **OT** A R Y B **LU** E **S** \Rightarrow LOTUS

R O **T** A R Y **BLUE** S \Rightarrow BUTLER

84. (a) There is no 'Y' letter in the given word. Therefore, the word MERCY cannot be formed.

প্র্যাচিভর্স

C **U** M B E R **SOME** \Rightarrow MOUSE

C U M **BERSO** M E \Rightarrow SOBER

C U M B E **R** S **OME** \Rightarrow ROME

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

We can align the Premises by Converting the first Premise and changing their order. Thus, All Women are Intelligent.



No Intelligent is a man.

We know that,

$A + E \Rightarrow$ E-type Conclusion

Thus our derived Conclusion would be :

"No woman is a man"

This is the Conclusion II.

Conclusion I is the Converse of this Conclusion.

Therefore, both the Conclusions

প্র্যাচিভর্স

I and II follow.

86. (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.

প্র্যাচিভর্স

87. (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.

88. (a) B = 2A
F = 2B
A = 2C
C = 2D
⇒ F = 2B = 4A = 8C = 16D
F > B > A > C > D
Hence second oldest is B.

প্র্যাচিভর্স

89. (a) According to question
D > C > A > B
Therefore, D is the fastest runner.

90. (c) Babu > Jill > Mani
z > x > y
or, y < x < z

প্র্যাচিভর্স

91. (b) **First figure**
(6 × 5) + (3 × 3) = 30 + 9 = 39
Second figure
(7 × 5) + (4 × 4) = 35 + 16 = 51
Third figure
(5 × 5) + (3 × 4) = 25 + 12 = 37

92. (b) Align 3 + 18 = 21
4 + 23 = 27
? + 27 = 33
∴ ? = 33 - 27 = 6

93. (c) **First figure** : 6 × 6 = 4 × 9
Second figure : 9 × 8 = 24 × 3
Third figure : 15 × 6 = 9 × ?

∴ ? = $\frac{90}{9}$ = 10

প্র্যাচিভর্স

94. (b) 24 + 22 = 46
27 + 42 = 69
∴ ? = 79 - 38 = 41

95. (a) The sum of upper two numbers gives the lower right number while their product is equal to the lower left number.

First arrangement
5 + 4 = 9 and 5 × 4 = 20
Second arrangement
3 + 8 = 11 and 3 × 8 = 24
Third arrangement
9 + 4 = 13 and 9 × 4 = 36

প্র্যাচিভর্স

96. (b) Suppose the age of A is x years and that of B is y years.
According to question,
x = y + 16
or, x - y = 16(i)

Again, $\frac{x}{3} = \frac{y}{2}$
or, 2x = 3y
or, 2x - 3y = 0(ii)
From equations (i) and (ii)
x = 48 years
∴ y = 48 - 16 = 32 years
Thus, A = 48 years
B = 32 years

প্র্যাচিভর্স

97. (a) Descending Order
e. Lt. General

- ↓
- d. Brigadier
- ↓
- c. Colonel
- ↓
- a. Major
- ↓
- b. Captain

প্র্যাচিভর্স

98. (b) Meaningful order :
d. Student

- ↓
- b. Books
- ↓
- a. Study
- ↓
- c. Examination
- ↓
- e. Result

প্র্যাচিভর্স

99. (d) The number 4 will lie opposite 5.

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

