

DATA INTERPRETATION Solutions Part-I

(1-5) :

- 1; Average marks of Q in first periodical

$$= \frac{30+25+33+42+30}{5} = \frac{160}{5} = 32$$
- 3; Total marks of T in Science = 44 + 36 + 40 + 30 + 40 = 190
- 2; Average percentage of marks obtained by P in Maths = $\frac{80+60+90+40+70}{5} = 68\%$
 = Percentage of marks obtained by student by student R in Geography.
- 3; Our observation finds two options which are close to each other. These are History and Geography. When we find at actual value, we find that, our answer is History.
- 2; Vishul inspection is sufficient.

(6-10) :

- 2; Average number of candidates appeared for State B = $\frac{6400+7800+7000+8800+9500}{5} = \frac{39500}{5} = 7900$
- 1; Total number of candidates selected for all the states together in the year 1996 = 80 + 70 + 48 + 85 + 78 = 361
 Total number of candidates qualified for all the states together in the year 1996 = 950 + 650 + 400 + 620 + 720 = 3340
 \therefore Required percentage = $\frac{361}{3340} \times 100 = 10.8\% \approx 11\%$
- 4; Percentage of candidates selected for State C can be seen in the following table:
 Percentage of candidates selected over the number of candidates qualified for different states in different years can be tabulated as shown below:

Years	Percentage of candidates selected to the qualified in State C.
1994	$\left(\frac{55}{350} \times 100\right) = 15.7$
1995	$\left(\frac{65}{525} \times 100\right) = 12.3$
1996	$\left(\frac{48}{400} \times 100\right) = 12$
1997	$\left(\frac{70}{560} \times 100\right) = 12.5$
1998	$\left(\frac{82}{640} \times 100\right) = 12.8$

Clearly, the required percentage is the highest for the year 1994.

Quicker Approach:

We have to find the year for which $\frac{\text{Selected}}{\text{Qualified}}$ is the highest; ie $\frac{\text{Qualified}}{\text{Selected}}$ is the least.

Clearly, only for the year 1994 it is below 7. In others cases it is more than 7. Hence our answer is options (4).

- 2; Average number of candidates selected over the years in different states can be tabulated as shown below:

States	Average number of candidates selected over the years
A	$\frac{75+60+80+75+70}{5} = 72$
B	$\frac{60+84+70+86+90}{5} = 78$
C	$\frac{55+65+48+70+82}{5} = 64$
D	$\frac{75+70+85+65+48}{5} = 68.6$
E	$\frac{75+85+78+82+94}{5} = 82.8$

Clearly, the required state is E.

- 1; Percentage of candidates qualified to appeared in the year 1997 for different states can be tabulated as shown below:

States	Percentage of candidates qualified in the year 1997
A	$\left(\frac{8500}{7200} \times 100\right) = 11.8$
B	$\left(\frac{920}{8800} \times 100\right) = 10.4$
C	$\left(\frac{560}{7400} \times 100\right) = 7.5$
D	$\left(\frac{800}{7500} \times 100\right) = 10.6$
E	$\left(\frac{810}{7800} \times 100\right) = 10.3$

Quicker Approach:

Follow the same as in solution of Q. No. 128.

We have to find the highest value of $\frac{\text{Qualified}}{\text{Appeared}}$, i.e. the

least value of $\frac{\text{Appeared}}{\text{Qualified}}$. It is for State A, which is

less than 9. In other cases it is more than 9. So, our answer is option (1).

(11-15)

11. 5; Marks obtained by 69% of 150 + 72% of 75 + 71% of 200 + 78% of 100 + 69% of 50 + 66% of 75 = 103.50 + 54 + 142 + 78 + 34.5 + 49.50 = 461.5

12. 1; Total marks obtained by six students in Chemistry = 60% of 75 + 72% of 75 + 78% of 75 + 81% of 75 + 69% of 75 + 57% of 75

$$= \frac{75}{100}(63+72+78+81+69+57)$$

$$= \frac{75 \times 420}{100} = 315$$

$$\therefore \text{Required average} = \frac{315}{6} = 52.5$$

13. 3; Total marks obtained by C in Physics and Chemistry

$$= 82\% \text{ of } 150 + 78\% \text{ of } 75 = 123 + 58.5 = 181.5$$

Total marks obtained by E in Physics and Chemistry

$$= 58\% \text{ of } 150 + 69\% \text{ of } 75 = 87 + 51.75 = 138.75$$

$$\therefore \text{required difference} = 181.5 - 138.75 = 42.75$$

14. 2; Marks obtained by A in Maths = 89% of 200 = 178

Marks obtained by A History = 55% of 100 = 55

Total marks obtained by A in both the subjects

$$= 178 + 55 = 233$$

$$\therefore \text{Required percent} = \frac{233}{300} \times 100 = 77.67$$

15. 4; Average percent of marks

$$= \frac{64+69+75+58+66+71}{6} = \frac{403}{6} = 67.16\%$$

\therefore Required average marks

$$67.16 \text{ of } 50 = 33.58$$

16. 4; Number of specialist officers in Kolkata = 1200

Number of officers in Kolkata = 14900

$$\text{Required \%} = \frac{1200}{14900} \times 100 \approx 8\%$$

17. 3; Total number of officers = 2000 + 15000 + 17000 + 3500 + 14900 + 11360 + 9000 = 7276

Total number of clerks = 5000 + 17000 + 19500 + 20000 + 17650 + 15300 + 11000 = 105450

Required difference = 105450 - 72760 = 32690

18. 2; Number of clerks in Chennai = 11000

Number of officers in Chennai = 9000

$$\text{Required more \%} = \frac{11000-9000}{9000} \times 100 \approx 22\%$$

19. 3; 300% more means $\left(\frac{300+100}{100}\right)$ four times the

number of clerks in Bengaluru, which is in Hyderabad.

20. 4; Number of candidates in different centres:

Bengaluru = 9850; Mumbai = 44470; Delhi

= 43910; Hyderabad = 33950; Kolkata = 35120

(21-25-):

21. 4; Percentage of qualified candidates from state D is as given below:

Years	Percentage of qualified
1991	11.78
1992	11.06
1993	9.85
1994	12.85
1995	11.61
1996	11.04

	candidates
1991	$\frac{745}{6325} \times 100 = 11.78$
1992	$\frac{795}{7185} \times 100 = 11.06$
1993	$\frac{842}{8545} \times 100 = 9.85$
1994	$\frac{898}{6987} \times 100 = 12.85$
1995	$\frac{685}{5896} \times 100 = 11.61$
1996	$\frac{746}{6754} \times 100 = 11.04$

Clearly, state D has the maximum percentage of qualified candidates.

22. 3; Required difference

$$(5600 + 7200 + 4850 + 6325 + 5200 + 6500) - (7250 + 8100 + 6450 + 7185 + 6225 + 7380) = 466737 - 35675 = 10962$$

23. 5; Percentage of qualified candidates of state B in

$$1991 = \frac{864}{7200} \times 100 = 12\%$$

Percentage of qualified candidates of state B in

$$1992 = \frac{840}{8100} \times 100 = 10.37\%$$

\therefore Required percentage decrease

$$= 12 - 10.37 \approx 1.50\%$$

24. 2; Required difference

$$= (853 + 940 + 827 + 746 + 812 + 911) - (876 + 792 + 685 + 842 + 934 + 788) = 5089 - 4917 = 172$$

25. 2; Required

$$= \frac{5089}{7964+8107+7058+6754+7766+8934} = \frac{5089}{46583} \times 100 \approx 11\%$$

(26-30) :

26. 5; By visual inspection we can say that the difference between the white-coloured cars sold is the minimum in B type model.

27. 1; The total number of blue-coloured cars of models E and D sold in Metro H = (37 + 43 =) 80 thousand. Now, by visual inspection we can say that the number of white-coloured cars of Model B in Metro M is 80 thousand. Hence, Model B is the correct answer.

28. 5; The total number of blue-coloured cars of Model C sold in Metro M = (50 × 1000 =) 50,000

The total number of red-coloured cars of Model F

sold in Metro H = (34 × 1000 =) 34,000

$$\therefore \text{required difference} = (50,000 - 34,000) = 16,000$$

29. 3; The total number of silver-coloured cars sold in Metro M = (15 + 20 + 35 + 40 + 30 + 52 =) 192 thousand.

The total number of silver-coloured cars sold in Metro H = (20 + 35 + 37 + 42 + 22 + 17 =) 173 thousand.

$$\therefore \text{required percentage} = \frac{173 \times 1000}{192 \times 1000} \times 100$$

$$= \frac{173}{192} \times 100 = 90.1 \approx 90\%$$

30. 1; Coloured-model combinations of car in Metro M

White -C	Blue-B	Silver-B	White-D
90	60	20	85