CLAT 2024
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Quantitative Techniques 3

Directions (1-5): Read the following information and answer the questions that follow.

There are 4 institutes in a city which has a certain number of enrolled students each year. The institutes were named as Vidit, Vidushi, Vidya and Vidyut. The no. of students in Vidit in the year 2020 were 700. The no. of students enrolled in the institute Vidushi in 2020 was 14.28% more than the no. of students in Vidit in the same year while the no. of students in Vidya in 2020 was 12.5% less than the no. of students in Vidushi in the same year. The no. of students in Vidyut in 2020 is 7.14% more than the no. of students in Vidya in the year 2020. In the following year, the no. of students in Vidyut got increased by 10% from the previous year count while the no. of students in 2021 in Vidya were 20% more than the no. of students in the institute Vidyut in 2021. The no. of students in Vidushi in 2021 were 11.11% less than the no. of students in Vidya in the same year while the no. of students in the institute Vidit were 10% less than the no. of students in Vidushi in 2021. In the year 2022, the no. of students in Vidit were 28 more than the no. of students it had in the previous year. The no. of students in Vidushi in 2022 were 2/41 times more than the no. of students in Vidit in the same year and the no. of students in Vidya in 2022 were 140 more than the no. of students in the institute Vidushi in the year 2022. The no. of enrolled students in 2022 in the institute Vidyut were 35% less than the no. of students in the institute Vidya in 2022.

1. What is the total no. of students enrolled in all four institutes in the year 2022?
(a) 2950   (b) 3330   (c) 2690   (d) 3487

2. What is the difference between the no. of students enrolled in the institute Vidit in the year 2020, 2021 and 2022 to the total no. of students in the institute Vidushi across all the years?
(a) 378   (b) 150   (c) 315   (d) 228

3. The no. of students in the institute Vidyut in the year 2022 is what percent of the no. of students in the institute Vidushi in the year 2020?
(a) 81.25%   (b) 75.55%   (c) 93.75%   (d) 87.20%

4. What is the total no. of students across all the years in the institute Vidit?
(a) 2540   (b) 2225   (c) 2690   (d) 2312

5. Find the ratio of total enrolled students in the institute Vidit in 2020 to the total no. of students in the institute Vidyut in the same year.
(a) 1:1   (b) 7:8   (c) 14:15   (d) 35:44

1.Ans. b
Sol. COMMON EXPLANATION

	VIDIT	VIDUSHI	VIDYA	VIDYUT	TOTAL
2020	700	800	700	750	2950
2021	792	880	990	825	3487
2022	820	860	1000	650	3330
TOTAL	2312	2540	2690	2225	9767

Thus, the total no. of students enrolled across all the four institutes in 2022 was 3330.
Hence, option (b) is correct.

2.Ans. d
Sol. Following the COMMON EXPLANATION
No. of students enrolled in the institute Vidit in the year 2020, 2021 and 2022 = 700+792+820 = 2312
Total no. of students in the institute Vidushi across all the years = 800+880+860 = 2540
Difference = 2540 – 2312 = 228
Hence, option (d) is correct.

3.Ans. a
Sol. Following the COMMON EXPLANATION
The no. of students in the institute Vidyut in the year 2022 = 650
The no. of students in the institute Vidushi in the year 2020 = 800
Required % = 650/800 = 81.25%
Hence, option (a) is correct.

4.Ans. d

Sol. Following the COMMON EXPLANATION

Total students in Vidit = 700+792+820 = 2312

Hence, option (d) is correct.

5.Ans. c

Sol. Following the COMMON EXPLANATION

Total enrolled students in the institute Vidit in 2020 = 700

Total no. of students in the institute Vidyut in the same year = 750

Required ratio = 700:750 = 14:15

Hence, option (c) is correct.