Vidhigya Challenger Series
Daily Practice Sheet 6
Quantitative Techniques

Directions (1-5): Read the following information carefully and answer the questions that follow.
There are five persons who invested money in two Banks 'B1' and 'B2' owned by 'Saksham Agrawal'. 'Vidhi' invested his money in 'B1' for 36 months and in 'B2' for 60 months. For the person 'Vidhi', 'B1' was offering a rate of 5% and 'B2' was offering a rate of 8%. 'Vidya' invested his money for 72 months and 48 months in 'B1' and 'B2' respectively. Person 'Vidushi' received an interest of 10% from his investment in 'B1' and 12% interest from his investment in 'B2'. Also 'Vidushi' invested his money for 24 months and 48 months in 'B1' and 'B2' respectively. Person 'Vidit' invested his money for 48 months and 36 months in 'B1' and 'B2' respectively and the rate of interest for him was 18% in 'B1' and 5% in 'B2'. Person 'Vidhan' invested his money in both the banks for 2 years each. He received 12% interest from 'B1' while he received 10% interest from 'B2'.

1. The final amount obtained by 'Vidya' by investing same sum of money in 'B1' and 'B2' at Compound Interest is in the ratio 25:16. Find the rate of interest for him, if the rate is same for both the banks.
(a) 15% (b) 20% (c) 25% (d) 30%

2. Find the difference in Compound Interest and Simple Interest of the person 'Vidit' in 'B2' if he invested Rs.12000 in 'B2'.
(a) 60 (b) 61.5 (c) 90 (d) 91.5

3. Person 'Vidit' invested an amount 'x' in 'B1' at Simple Interest and person 'Vidushi' invested an amount 'y' in 'B2' at Simple Interest and earns and interest in the ratio of 5:4. The difference of 'x' and 'y' is what percent of 'x'?
(a) 10% (b) 15% (c) 20% (d) 25%

4. Person 'Vidhan' invested a total of 12000 in both the banks out of which he invested $3/5^{th}$ in 'B1' at Simple Interest and rest of the amount in 'B2' at Simple Interest. Find the difference in the interest earned from both the banks.
(a) 832 (b) 800 (c) 792 (d) 768

5. Person 'Vidushi' invested a sum of money in 'B1' at SI while 'Vidhan' invested $3/7^{th}$ of that money in 'B2' at Compound Interest. Total interest earned by 'Vidushi' and 'Vidhan' is what percent of amount invested by person 'Vidushi' in 'B1'?
(a) 29% (b) 30% (c) 31% (d) 32%

Answers & Explanations

1. Ans. c
Sol. COMMON EXPLANATION

	TIME ('B1')	TIME ('B2')	RATE%('B1')	RATE%('B2')
'Vidhi'	36 Months	60 Months	5%	8%
'Vidya'	72 Months	48 Months	-	-
'Vidushi'	24 Months	48 Months	10%	12%
'Vidit'	48 Months	36 Months	18%	5%
'Vidhan'	24 Months	24 Months	12%	10%

'Vidya' invested same money in both the banks = (P)
Time in 'B1' = 72 months = 6 years
Time in 'B2' = 48 months = 4 years
So, the amount obtained by 'Vidya' after 4 years = 16 units
The amount obtained by 'Vidya' after 6 years = 25 units
Ratio = 16:25 in 2 years

In 1 year it will be 4:5
Rate = 1/4 = 25%
Hence, option (c) is correct.

2. Ans. d
Sol. Following the COMMON EXPLANATION
Principal = 12000
Rate = 5%, Time = 36 months = 3 years
CI for 3 years = 1891.5
SI for 3 years = 1800
Difference = 91.5
Hence, option (d) is correct.

3. Ans. c
Sol. Following the COMMON EXPLANATION
According to question
$\frac{x * 4 * 18}{y * 4 * 12} = \frac{5}{4}$
So, $\frac{x}{y} = \frac{10}{12} = \frac{5}{6}$
Required % = 1/5 = 20%
Hence, option (c) is correct.

4. Ans. d
Sol. Following the COMMON EXPLANATION
Interest earned from B1 = 12000 * (3/5) * 2 * 12%
Interest earned from B2 = 12000 * (2/5) * 2 * 10%
Difference = $\frac{12000}{5}$ $(72\% - 40\%) = \frac{12000}{5} * 32\% = 768$
Hence, option (d) is correct.

5. Ans. a
Sol. Following the COMMON EXPLANATION
Let the amount invested by 'Vidushi' in 'B1' = 700
Rate = 10% SI and time = 2 years
The amount invested by 'Vidhan' = 300
Rate = 10% CI and time = 2 years
Interest from 'Vidushi' = 20% of 700 = 140
Interest from 'Vidhan' = 21% of 300 = 63
Thus, total interest = 140+63 = 203
Required % = 203/700 = 29%
Hence, option (a) is correct.