Quantitative Techniques 2

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

An exam was conducted across five schools A, B, C, D and E. Out of all the students who appeared in the exam from School A only 25% were able to clear the exam and the rest of the students failed the exam. 20% of the total students who appeared in the exam from school B were able to clear the exam and rest of the students were not able to clear the exam. Out of all the students who appeared in the exam from school C, 55% were not able to clear the exam while from the school D 30% were able to clear the exam. The no. of students who failed in the exam from school E were 65% of the total students appeared from the same centre.

1. The difference of number of students who cleared the exam from school A and the no. of students who failed the exam from school A is 1500. If the total number of students in school E is double of total students of school A then, find the no. of students who cleared the exam from school E.
(a) 1400 (b) 2100 (c) 2800 (d) 3500

2. The total number of students in all the five schools is 10500. The distribution of these students in these five schools is A: B: C: D: E = 1:2:3:4:5. Find the number of students who cleared the exam from school C.
(a) 845 (b) 925 (c) 945 (d) 965

3. The no. of students who cleared the exam from school E is 875. The no. of total students in the school B is same as the no. of students in school 'E'. Find the no. of students who failed the exam from school B.
(a) 1500 (b) 1800 (c) 2000 (d) 2500

4. If difference between failed students from 'B' and passed students from 'A' is 90 (consider failed students from B > passed students from A) and the difference between failed students from 'A' and passed students from 'B' is 115 (consider failed students from A > passed students from B). Find the total no. of students in 'A'.
(a) 200 (b) 175 (c) 150 (d) 125

5. If difference between failed students from 'B' and passed students from 'A' is 90 (consider failed students from B > passed students from A) and the difference between failed students from 'A' and passed students from 'B' is 115 (consider failed students from A > passed students from B). Find the total no. of students in 'B'.
(a) 200 (b) 175 (c) 150 (d) 125

1.Ans. b
Sol. Difference of clear and fail in 'A' = 75-25=50%
Given, 50% = 1500
Thus, total in A = 100% = 3000
Total in 'E' = double of A = 6000
Clear% in E = 35% of 6000 = 2100
Hence, option (b) is correct.

2.Ans. c
Sol. Total students = 10500 and the ratio is 1:2:3:4:5.
Students in 'C' = 3/15 = 1/5 of 10500 = 2100
Now, out of the total students 2100, 45% cleared the exam.
Thus, 45% of 2100 = 945
Hence, option (c) is correct.

3.Ans. c
Sol. Clear % from E = 35% = 875
100% = 2500
Thus, total students in 'B' = 2500
Failed % in 'B' = 80% of 2500 = 2000
Hence, option (c) is correct.

4.Ans. a
Sol. COMMON EXPLANATION
Let the total no. of students in school 'A' = 100x
Cleared in 'A' = 25x and failed in 'A' = 75x
Let the total no. of students in school 'B' = 100y

Cleared in 'B' = 20y and failed in 'B' = 80y
Given, Difference between failed students from 'B' and cleared students from 'A' is 90
So, 80y - 25x = 90 ⇒16y-5x = 18 …… (1)
Difference between failed students from 'A' and cleared students from 'B' is 115
So, 75x – 20y = 115 ⇒15x-4y = 23 …….. (2)
Multiplying the equation (2) by 4. We get,
60x – 16y = 92 …….. (3)
Adding equation (1) and (3) we get
55x=110. So, x=2 and y=7/4
Thus, total in 'A' = 100x = 200
Hence, option (a) is correct.

5.Ans. b

Sol. Following the COMMON EXPLANATION
Total in 'B' = 100y = 100*(7/4) = 175
Hence, option (b) is correct.