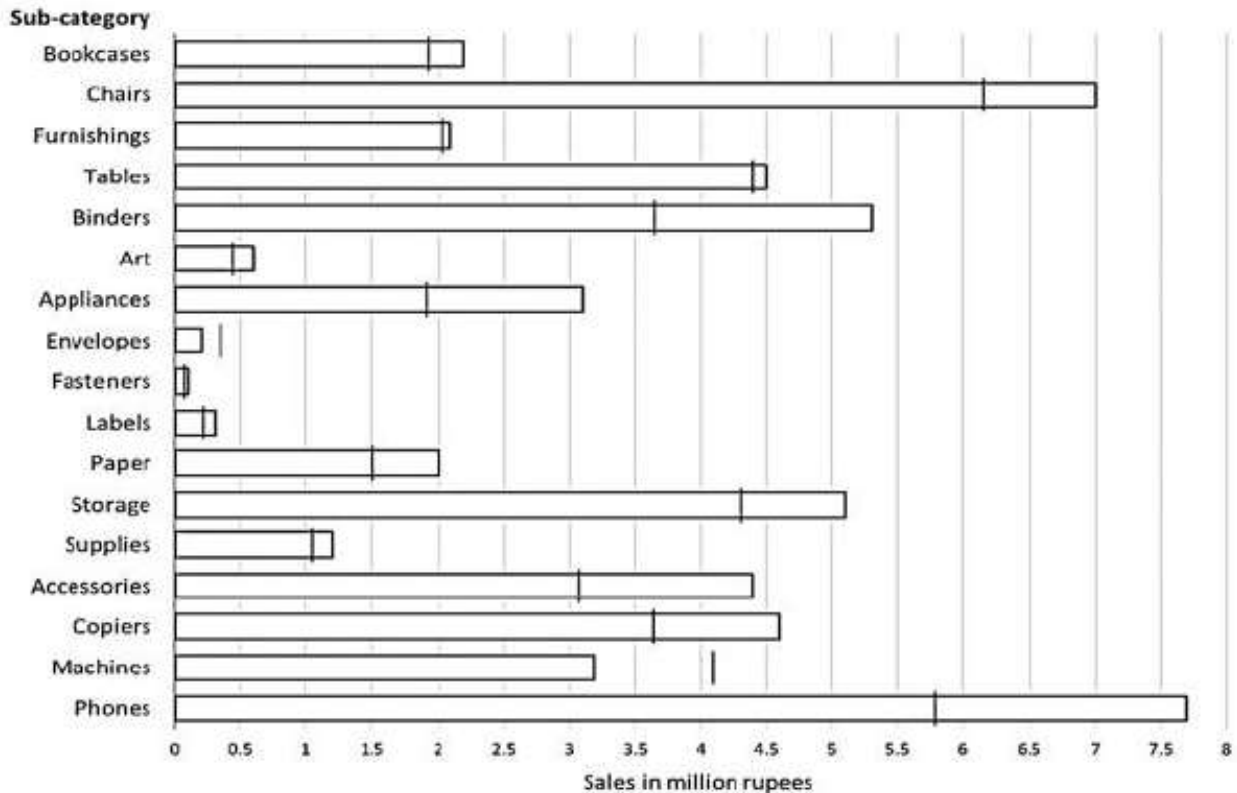


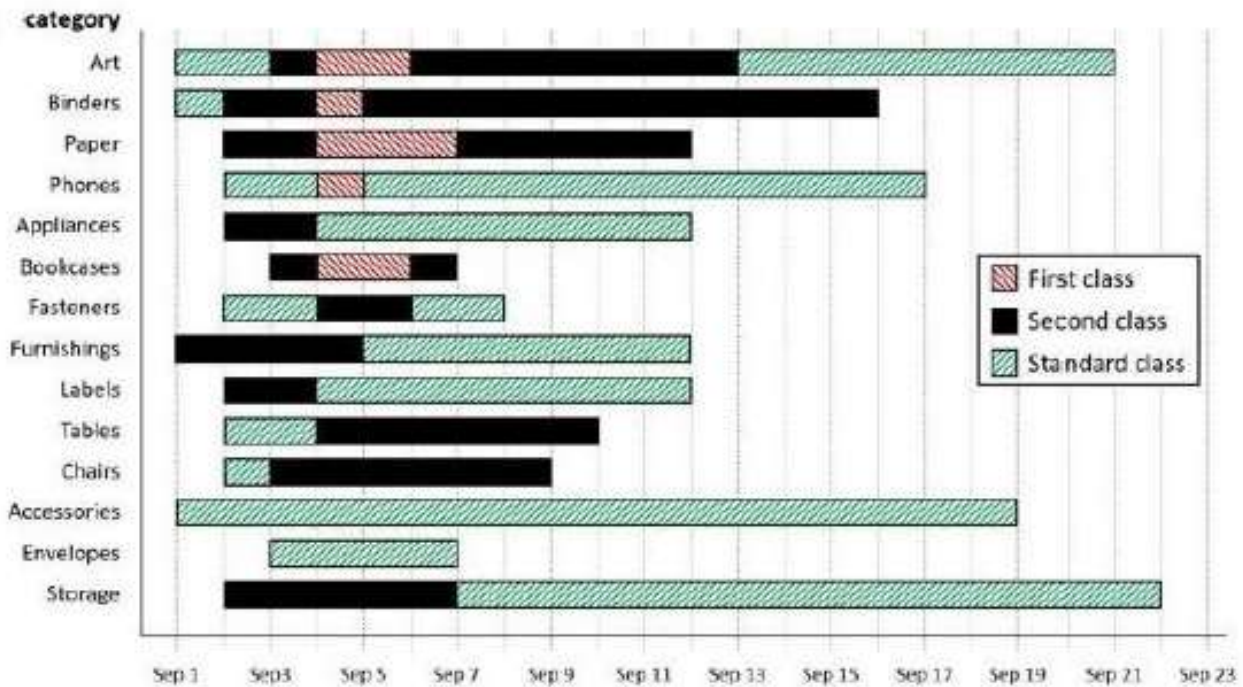
DI MIXED – III

Direction: The horizontal bars in the above diagram represent 2020 aggregate sales (in ₹ million) of a company for the different subcategories of its products. The top four product subcategories (Bookcases, Chairs, Furnishings, Tables) belong to furniture product category; the bottom four product subcategories (Accessories, Copiers, Machines, Phones) belong to the technology product category while all other product subcategories belong to the office supply product category. For each of the product subcategories, there is a vertical line indicating the sales of the corresponding subcategory in 2019.



- The total sales (in ₹ million) in 2019 from products in office supplies category is closest to
a) 18.0 b) 13.5 c) 16.5 d) 12.5
- The percentage increase in sales in Furniture category from 2019 to 2020 is closest to
a) 25% b) 1% c) 8% d) 20%
- How many subcategories had sales of ₹ 4 million or more in 2019 and registered an increase in sales in excess of 25% in 2020?
- The improvement index for a category is the maximum percentage increase in sales from 2019 to 2020 among any of its subcategories. The correct order of categories in increasing order of this improvement index is
a) furniture, technology, office supply
b) technology, furniture, office supply
c) office supply, furniture, technology
d) office supply, technology, furniture

Direction:

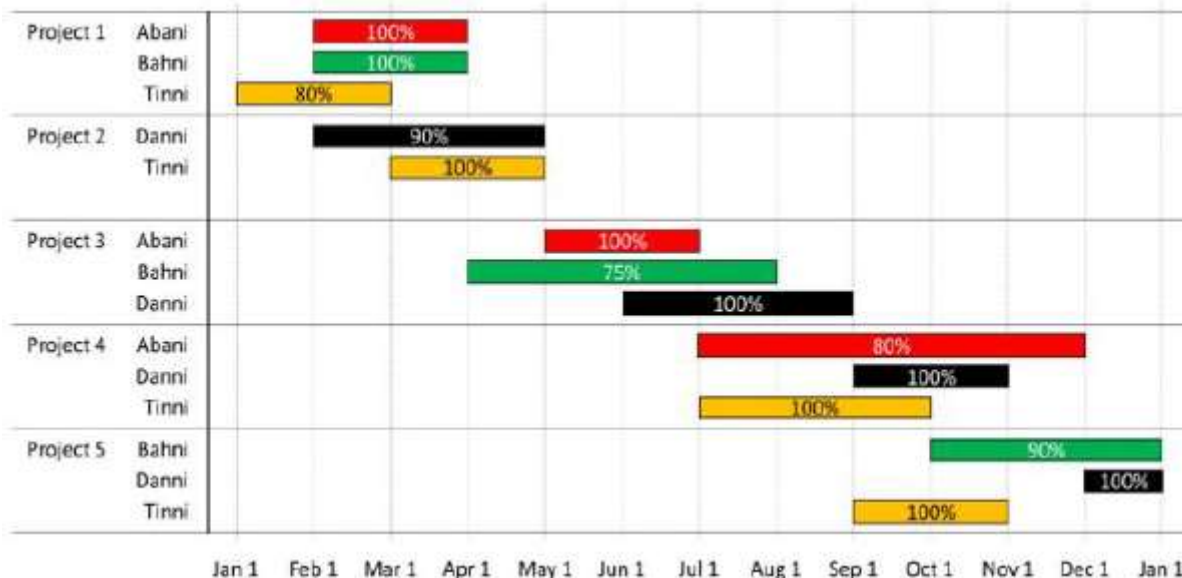


The different bars in the diagram above provide information about different orders in various categories (Art, Binders,) that were booked in the first two weeks of September of a store for one client. The colour and pattern of a bar denotes the ship mode (First Class / Second Class / Standard Class). The left end point of a bar indicates the booking day of the order, while the right end point indicates the dispatch day of the order. The difference between the dispatch day and the booking day (measured in terms of the number of days) is called the processing time of the order. For the same category, an order is considered for booking only after the previous order of the same category is dispatched. No two consecutive orders of the same category had identical ship mode during this period.

For example, there were only two orders in the furnishing category during this period. The first one was shipped in the Second Class. It was booked on Sep 1 and dispatched on Sep 5. The second order was shipped in the Standard class. It was booked on Sep 5 (although the order might have been placed before that) and dispatched on Sep 12. So the processing times were 4 and 7 days respectively for these orders.

5. How many days between Sep 1 and Sep 14 (both inclusive) had no booking from this client considering all the above categories?
6. What was the average processing time of all orders in the categories which had only one type of ship mode?
7. The sequence of categories -- Art, Binders, Paper and Phones -- in decreasing order of average processing time of their orders in this period is:
 - a) Phones, Art, Binders, Paper
 - b) Phones, Binders, Art, Paper
 - c) Art, Binders, Paper, Phones
 - d) Paper, Binders, Art, Phones
8. Approximately what percentage of orders had a processing time of one day during the period Sep 1 to Sep 22 (both dates inclusive)?
 - a) 25%
 - b) 20%
 - c) 16%
 - d) 22%

Comprehension:



The figure above shows the schedule of four employees – Abani, Bahni, Danni and Tinni – whom Dhoni supervised in 2020. Altogether there were five projects which started and concluded in 2020 in which they were involved. For each of these projects and for each employee, the starting day was at the beginning of a month and the concluding day was the end of a month, and these are indicated by the left and right end points of the corresponding horizontal bars. The number within each bar indicates the percentage of assigned work completed by the employee for that project, as assessed by Dhoni.

For each employee, his/her total project-month (in 2020) is the sum of the number of months (s)he worked across the five project, while his/her annual completion index is the weightage average of the completion percentage assigned from the different projects, with the weights being the corresponding number of months (s)he worked in these projects. For each project, the total employee-month is the sum of the number of months four employees worked in this project, while its completion index is the weightage average of the completion percentage assigned for the employees who worked in this project, with the weights being the corresponding number of months they worked in this project.

9. Which of the following statements is/are true?
 - I: The total project-month was the same for the four employees.
 - II: The total employee-month was the same for the five projects.
 - a) Only I
 - b) Only II
 - c) Both I and II
 - d) Neither I nor II
10. Which employees did not work in multiple projects for any of the months in 2020?
 - a) Only Abani, Bahni and Danni
 - b) Only Abani and Bahni
 - c) Only Tinni
 - d) All four of them
11. The project duration, measured in terms of the number of months, is the time during which at least one employee worked in the project. Which of the following pairs of the projects had the same duration?
 - a) Project 1, Project 5
 - b) Project 3, Project 5
 - c) Project 3, Project 4
 - d) Project 4, Project 5
12. The list of employees in decreasing order of annual completion index is:
 - a) Danni, Tinni, Abani, Bahni
 - b) Bahni, Abani, Tinni, Danni
 - c) Danni, Tinni, Bahni, Abani
 - d) Tinni, Danni, Abani, Bahni

him with the following data on the country of origin of the visitors and the university they belong to:

Number of visitors

	DAY		
COUNTRY	1	2	3
Canada	2	0	0
Netherlands	1	1	0
India	1	2	0
UK	2	0	2
USA	1	0	1

Number of visitors

	DAY		
UNIVERSITY	1	2	3
University 1	1	0	0
University 2	2	0	0
University 3	0	1	0
University 4	0	0	2
University 5	1	0	0
University 6	1	0	1
University 7	2	0	0
University 8	0	2	0

13. University 1 can belong to _____.
 a) UK b) Canada c) Netherlands d) USA
14. To which country does University 5 belong?
 a) India or Netherlands but not USA
 b) India or USA but not Netherlands
 c) Netherlands or USA but not India
 d) India or USA but not UK
15. Visitors from how many universities from UK visited Prof. Singh's homepage in the three days?
 a) 1 b) 2 c) 3 d) 4
16. Which among the listed countries can possibly host three of the eight listed universities?
 a) None b) Only UK c) Only India d) Both India and UK