Quantitative Techniques

XXVIII. As per a survey conducted in a college out of total students enrolled i.e., 3,000 in 2020-21, 1,700 were girls and 1,300 were boys. Data regarding students opting for various streams viz., Non-Medical, Medical, Commerce, Arts and Fine Arts showed that 25% of the enrolled students opted non-medical and the percentage of girls in Non-Medical was 30% of the total number of girls; 15% of the total students opted for Medical and the percentage of girls who opted Medical was 18% of the total number of girls; 25% of the total students opted Arts but the percentage of girls who opted for Arts was 15% of the total number of girls; 16% of the total students opted Commerce and the percentage of girls who opted Commerce was 17% of the total number of girls, and; 19% of the total students opted Fine Arts and the percentage of girls who opted Fine Arts was 20% of the total number of girls.

136. How many girls have opted Non-Medical?
(A) 440 (B) 365 (C) 530 (D) 510

137. Girls have outnumbered boys in Fine Arts. How many girls in Fine Arts are more than the boys, as a percentage of total number of boys in Fine Arts?
(A) 49.62% (B) 47.82% (C) 51.23% (D) 50.89%

138. Which of the following courses have been opted by maximum number of boys?
(A) Non-Medical (B) Arts
(C) Fine Arts (D) Commerce

139. Which of the following courses have been opted by minimum number of boys?
(A) Medical (B) Fine Arts
(C) Commerce (D) Non-Medical

140. What is the ratio among boys and girls for Non-Medical?
(A) 3 : 17 (B) 17 : 8 (C) 8 : 17 (D) 17 : 3

XXIX. An Indian company, having its registered office at Gurugram, is engaged in manufacturing of consumer goods at Noida. The goods manufactured by the company are sold in Indian market and exported to Europe. Company produces five products namely 'P','Q','R','S' and 'T'. Total production of the company for the financial year 2021-22 is 3,000 tonnes and the turnover of the company is ₹ 50 million. An analysis of the production and net revenue generation shows that production of product 'P' is 21% of the total production and 18% of the turnover is attributable to product 'P'; production of 'Q' is 16% of the total production and 17% of the turnover is attributable to 'Q'; 'R' accounts for 18% of the total production and 20% of the turnover; 'S' accounts for 20% of the total production and 25% of the turnover, and; 'T' accounts for 25% of total production and 20% of turnover.

141. What is the percentage of profit earned from sale of 'R', if the expenditure incurred on production of 'R' is ₹ 15,000/- per tonne?
(A) 20% (B) 23.46%
(C) 26.55% (D) 25%

142. Which product has the highest selling price per tonne?
    (A) Q   (B) R   (C) S   (D) T

143. How much loss is incurred to company, if the expenditure on production of 'T' was ₹ 20,000 per tonne?
    (A) 5 million   (B) 10 million   (C) 4 million   (D) 7 million

144. What percentage of turnover of 'R' has to turnover of 'T'?
    (A) 100%   (B) 75%   (C) 50%   (D) 60%

145. What is the average selling price per tonne of all products taken together?
    (A) ₹ 17,488   (B) ₹ 17,667   (C) ₹ 18,667   (D) ₹ 16,667

XXX. In an organization, the total number of employees working in various Departments viz. IT, Marketing, Purchase, HR, Accounts and Production are 4,500. The information regarding department wise percentage of employees was collected and also record about gender ratio of employees was prepared. 18 percent of total number of employees work in IT department and ratio of males to females in IT department is 2 : 1. In Marketing, ratio of males to females is 2 : 3 and number of employees engaged in marketing is 20% of the total employment. 12% of the total numbers of workers are running the HR department and the ratio of males to females in this department is 5 : 1. The fraction of male to females in production department is 3 : 2 and total number of persons employed in this department is 15% of the total workforce. The number of persons occupied in purchase and accounts department is 24% and 11% respectively of the total number of workers. Gender Ratio (Ratio of males to females) in Purchase department is 1 : 1 and in Accounts is 1 : 2.

146. How many females are employed in Purchase department?
    (A) 450   (B) 540   (C) 495   (D) 595

147. How many employees are working in IT and Accounts departments together?
    (A) 1,702   (B) 1,646   (C) 1,766   (D) 1,305

148. What is the ratio of total number of males to total number of females working in all the departments put together?
    (A) 63 : 41   (B) 19 : 27   (C) 41 : 34   (D) 34 : 41

149. Number of females in Marketing Department forms what percentage of the total number of employees in the organization?
    (A) 8%   (B) 7%   (C) 12%   (D) 10%

150. What is the ratio of number of males in Marketing Department to the number of males in HR department?
    (A) 4 : 5   (B) 5 : 4   (C) 7 : 3   (D) 6 : 7

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