

Mixed Graph

Solution

1. **Answer: (B)**

Successful surgeries done by A

$$= 9600 \times \frac{80}{100} = 7680$$

Successful surgeries done by B

$$= 7200 \times \frac{70}{100} = 5040$$

Successful surgeries done by D

$$= 8400 \times \frac{85}{100} = 7140$$

Successful surgeries done by E

$$= 4000 \times \frac{75}{100} = 3000$$

Required average

$$= \frac{7680+5040+7140+3000}{4}$$

$$= \frac{22860}{4}$$

$$= 5715$$

2. **Answer: (D)**

Total failed surgeries done by D & E

$$= 8400 \times \frac{15}{100} + 4000 \times \frac{25}{100}$$

$$= 2260$$

Total failed surgeries done by B

$$= 7200 \times \frac{30}{100} = 2160$$

$$\text{Required percentage} = \frac{2260-2160}{2160} \times 100$$

$$= 4\frac{17}{27}\%$$

3. **Answer: (E)**

Successful surgeries done by E

$$= 4000 \times \frac{75}{100} = 3000$$

Total failed surgeries done by B & D

$$= 7200 \times \frac{30}{100} = 8400 \times \frac{15}{100}$$

$$= 1260 + 2160$$

$$= 3420$$

$$\text{Required difference} = 3420 - 3000$$

$$= 420$$

4. **Answer: (D)**

Total failed surgery done by A

$$= 9600 \times \frac{20}{100} = 1920$$

Total failed surgery done by B

$$= 7200 \times \frac{30}{100} = 2160$$

Total failed surgery done by C

$$= 4800 \times \frac{10}{100} = 480$$

Total failed surgery done by D

$$= 8400 \times \frac{15}{100} = 1260$$

Total failed surgery done by E

$$= 4000 \times \frac{25}{100} = 1000$$

Required sum

$$= 1920 + 2160 + 480 + 1260 + 1000 = 6820$$

5. **Answer: (A)**

Total failed done by A & D

$$= 9600 \times \frac{20}{100} + 8400 \times \frac{15}{100}$$

$$= 1920 + 1260$$

$$= 3180$$

Total successful surgeries done by C

$$= 4800 \times \frac{90}{100} = 4320$$

$$\text{Required difference} = 4320 - 3180 = 1140$$

6. **Answer: (C)**

No. of people who visited on

$$\text{Wednesday} = 1200 \times \frac{20}{100} = 240$$

$$\text{Required percentage} = \frac{240-96}{240} \times 100 = 60\%$$

7. **Answer: (A)**

No. of male visited on Monday

$$= 1200 \times \frac{30}{100} - 144 = 216$$

Required ratio = 126 : 128

$$= 27 : 16$$

8. **Answer: (B)**

Total no. of female who visited park

$$= 144 + 314 + 96 + 128 = 82$$

Total no. of males who visited park

$$= 1200 - 682 = 518$$

$$\text{Required difference} = 682 - 518 = 164$$

9. **Answer: (D)**

Total no. of male visited on Wednesday

$$= 1200 \times \frac{20}{100} - 96 = 144$$

Total no. of people who visited on Monday

$$= 1200 \times \frac{30}{100} = 360$$

$$\text{Required percentage} = \frac{144}{360} \times 100 = 40\%$$

10. **Answer: (E)**

No. of male who visited on Tuesday

$$= 1200 \times \frac{35}{100} - 314 = 106$$

No. of female who visited on Friday

$$= \frac{25}{100} \left[1200 \times \frac{30}{100} - 144 \right] = 54$$

Required ratio = 106 : 54

$$= 53 : 27$$

11. **Answer: (B)**

$$\text{Total sale of Jute in India} = \frac{3}{5} \times 312500$$

$$= 187500 \text{ Rs.}$$

Amount of Jute consumed in India

$$= \frac{1}{2} \times \frac{6.25}{100} \times 200000$$

$$= 6250$$

$$\text{Price per unite of Jute in India} = \frac{187500}{6250}$$

$$= 30 \text{ Rs/tonnes}$$

Price per tonne of Barey export

$$= 15 \text{ rs/tonnes}$$

$$\text{Total barley exported} = \frac{4}{5} \times \frac{12.5}{100} \times 200000$$

$$= 200000 \text{ tonnes}$$

Total sale barley in India

$$= 500000 - 20000 \times 15$$

$$= 200000 \text{ Rs.}$$

12. **Answer: (B)**

Rice exported

$$= \frac{25}{100} \times 200000 \times \frac{2}{5}$$

$$= 200000 \text{ tonne}$$

Total sale of rice exported

$$= \frac{45}{100} \times 600000$$

$$= 270000$$

Selling price of one tonne of exported rice

$$= \frac{270000}{20.000}$$

$$= 13.5 \text{ Rs/tonnes}$$

Jute consumed in India

$$= \frac{1}{2} \times \frac{6.25}{100} \times 200000$$

$$= 6250$$

$$\text{Total sale of /jute in India} = \frac{60}{100} \times 312500$$

$$= 187500$$

Per tonne price of Jute consumed in India

$$= \frac{187500}{6250} = 30 \text{ Rs/tonne}$$

$$\text{Required\%} = \frac{30-13.5}{30} \times 100$$

$$= 55\%$$

13. **Answer: (C)**

Let amount of maize consumed in India = x

$$x + \frac{25}{100}x = \frac{12.5}{100} \times 200000$$

$$= 25000$$

$$\frac{125x}{100} = 25000$$

$$\text{Total sale of maize in India} = \frac{65}{100} \times 400000$$

$$= 260,000$$

Per tonne price of maize in consumed in India

$$= \frac{2,60,000}{20,000} = 13 \text{ Rs/tonne}$$

Price per tonne of Jute consumed in India

$$= 30 \text{ Rs/ tonne}$$

Required percentage

$$= \frac{13}{30} \times 100$$

$$= 43 \frac{1}{3} \%$$

14. **Answer: (E)**

Quantity of barley which is exported

$$= \frac{4}{5} \times \frac{12.5}{100} \times 200000$$

$$= 20000 \text{ tonne}$$

Quantity of sugar consumed in India

$$= 30 \times 200 = 6000$$

Let total wheat produced

$$= \left(100\% - \frac{250}{3}\% \right) \text{ of } x$$

$$= \frac{50}{3}\% \text{ of } x$$

$$= \frac{x}{6}$$

So,

$$200000 = x + \frac{x}{6} + \frac{56.25}{100} \times 200000$$

$$x + \frac{x}{6} = 87500$$

$$x = 75000$$

$$\text{Total sugar produced} = \frac{75000}{6}$$

$$= 12500$$

Total sugar exported

$$= 12500 - 6000 = 6500$$

15. **Answer: (A)**

Let total sugar produced is x
So total wheat produced will be $6x$
Percentage distribution of production of
sugar and wheat = $100\% - 56.25\% =$
 43.75%

Percentage distribution of production of
wheat = $\frac{43.75}{7} \times 6 = 37.5\%$

Amount of wheat exported
 $= \frac{7}{15} \times \frac{3}{8} \times 200000 = 35000$

Amount of wheat consumed
 $= \frac{8}{15} \times \frac{3}{8} \times 200000 = 40000$

Let, selling price of one tonne of wheat
exported be Rs. $2x$ and that consumed be Rs.
 $3x$

Then, $35000 \times 2x + 40000 \times 3x = 5719000$

Or, $190000x = 5719000$

Or, $x = 30.1$

Selling price of one tonne of wheat

Exported from India = Rs. $2x =$ Rs.

$2 \times 30.1 =$ Rs. 60.2

16. **Answer: (A)**

No. of students who paid fees through credit
card in 2103 and 2014 together

$$= 12,00,000 \times \left[\frac{16}{100} \times \frac{62.5}{100} + \frac{24}{100} \times \frac{75}{100} \right]$$

$$= 120 \times [1000 + 1800]$$

$$= 3,36,000$$

No. of students who paid fees through debit
card in 2015 and 2016 together.

$$= 12,00,000 \times \left[\frac{20}{100} \times \frac{62.5}{100} + \frac{15}{100} \times \frac{42.5}{100} \right]$$

$$= 120 \times [1250 + 637.5]$$

$$= 2,26,500$$

$$\text{Required difference} = 3,36,000 - 2,26,500$$

$$= 1,09,500$$

17. **Answer: (C)**

No. of student who paid through debit card
in 2012

$$= \frac{1}{2} \times 12,00,000 \times \left[\frac{15}{100} \times \frac{42.5}{100} + \frac{25}{100} \times \frac{20}{100} \right]$$

$$= 60 \times [637.5 + 500]$$

$$= 68250$$

\therefore Total number of student in 2012

$$= 68250 \times 3/2 = 1,02,375$$

18. **Answer: (D)**

$$\text{Required}\% = \frac{12,00,000 \times \frac{25}{100} \times \frac{80}{100}}{12,00,000 \times \frac{25}{100} \times \frac{25}{100}} \times 100$$

$$= 160\%$$

19. **Answer: (B)**

$$\text{Required Avg.} = \frac{1}{3} \times 12,00,000 \left[\frac{16}{100} \times \right.$$

$$\left. \frac{37.5}{100} + \frac{25}{100} + \frac{15}{100} \times \frac{42.5}{100} \right]$$

$$= 73500$$

20. **Answer: (E)**

Required amount = $12,00,000 \times$

$$\left[\frac{20}{100} \times \frac{37.5}{100} + \frac{25}{100} \times \frac{80}{100} \right] \times 20$$

$$= 120 \times 2750 \times 20$$

$$= \text{Rs. } 66,00,000$$