

Quiz Date: 14th April 2020

Directions (1 – 5): Data given below about total number of students doing MBA in four specialization (MBA in Marketing, MBA in HRM, MBA in management & MBA in Information Technology) from four different IIM's (IIM Bangalore, IIM Ahmedabad, IIM Calcutta & IIM Lucknow). Read the data carefully and answer the questions:

IIM Bangalore -

Ratio between total students doing MBA in HRM and Management is 6 : 8, while ratio between total students doing MBA in Management and Marketing is 8 : 9. Total student doing MBA in IT is 96 and total number of Students doing in MBA in IIM Bangalore is 648.

IIM Ahmedabad -

Total number of students doing MBA in IT is 25% less than total students doing MBA in HRM in IIM Bangalore and total students doing MBA in Marketing is 72 more than that of total number of students doing MBA in IT in IIM Ahmedabad. Ratio between total students doing MBA in Management and HRM 5 : 3. Total number of Students doing in MBA in Ahmedabad is 528.

IIM Calcutta -

Total students doing MBA in Management is 40% more than that of total students doing MBA in Marketing in IIM Ahmedabad, while number of students doing MBA in IT is equal to average number of students doing MBA in Management and Marketing in IIM Bangalore. Total number of students doing MBA in IIM Calcutta is 725, while students doing MBA in HRM is 25 % less than that of students doing MBA in Management.

IIM Lucknow -

Ratio between students doing MBA in HRM, Management and Marketing is 4 : 6 : 9 and total number of students doing MBA in IT is 24 less than total number of students doing MBA in HRM in IIM Bangalore. Total number of students doing MBA in IIM Lucknow is 73 less than total number of students doing MBA in IIM Calcutta.

Q1. Total student doing MBA in IT in IIM Bangalore & IIM Calcutta together is what percent less than students doing MBA in management in IIM Bangalore & IIM Lucknow together?

- (a) $8\frac{2}{3}\%$
- (b) $12\frac{2}{3}\%$
- (c) $14\frac{2}{3}\%$
- (d) $16\frac{2}{3}\%$
- (e) $10\frac{2}{3}\%$

Q2. Find difference between average students doing MBA in HRM in IIM Bangalore & IIM Lucknow and average number of students doing MBA in Marketing in IIM Ahmedabad & IIM Calcutta?

- (a) 8
- (b) 6

- (c) 4
- (d) 2
- (e) 10

Q3. Find total number of students doing MBA in IT in all four IIM's?

- (a) 528
- (b) 520
- (c) 536
- (d) 548
- (e) 552

Q4. Total students doing MBA in Management in IIM Ahmedabad is what percent less than total students doing MBA in Marketing in IIM Bangalore?

- (a) $9\frac{1}{11}\%$
- (b) $30\frac{5}{9}\%$
- (c) $12\frac{1}{2}\%$
- (d) $16\frac{2}{3}\%$
- (e) $37\frac{1}{2}\%$

Q5. Find the ratio between total number of students doing MBA in IT & HRM in IIM Bangalore to total student doing MBA in Marketing & Management in IIT Lucknow?

- (a) 3 : 7
- (b) 3 : 5
- (c) 2 : 7
- (d) 2 : 5
- (e) 4 : 7



Directions (6 - 10): Read the data carefully and answer the questions.

A survey conducted on 6400 people in a town about which mobile network gives high speed data. 25% of the total town population selected only Airtel network. 15% of the total town population selected only Vodafone network. 7% of the total town population selected only Idea network. 12% of the total population of town selected only Aircel network. 16% of the total town population selected only Jio network. 6% of the total population of town selected Airtel & Vodafone only. 8% of the total town population selected Airtel, Vodafone & Jio only.

5% of the total population of town selected Vodafone, Aircel & Jio only and 6% of the total population of town selected all the five networks.

Q6. Total population of town who selected only Idea, only Aircel & only Jio network together are what percent less than total population of town who selected only Airtel & only Vodafone together?

- (a) 10.5%
- (b) 12.5 %
- (c) 11.5%
- (d) 15.5%
- (e) 16.5%

Q7. Find total population of town who selected at most two mobile networks?

- (a) 5164
- (b) 5162
- (c) 5184
- (d) 5158
- (e) 5188

Q8. Find total population of town who selected at least two mobile networks?

- (a) 1200
- (b) 1400
- (c) 1800
- (d) 1600
- (e) 2000

Q9. Find ratio between total population of town who selected all Vodafone, Aircel & Jio only to total population of town selected all the five networks?

- (a) 6 : 5
- (b) 5 : 4
- (c) 5 : 7
- (d) 5 : 9
- (e) 5 : 6

Q10. Total population who selected Jio network only is what percent more than total population who selected all Airtel, Vodafone & Jio only?

- (a) 120%
- (b) 140%
- (c) 160%
- (d) 100%
- (e) 96%

Directions (11-15): What value will come in place of the question mark (?) in the following question?

Q11. $3\frac{2}{7} + 4\frac{1}{14} - \frac{9}{14} = \frac{188}{?}$

- (a) 14
- (b) 28
- (c) 35
- (d) 7
- (e) 24

Q12. $\sqrt{15 \times 22^2 - 40\% \text{ of } 60^2 + 19 \times 39} = ?^2$

- (a) 81
- (b) 21
- (c) 19
- (d) 11
- (e) 9

Q13. $40\% \text{ of } ? + 55\% \text{ of } 360 = 36\% \text{ of } 450 + 10^2$

- (a) 64
- (b) 320
- (c) 160
- (d) 80
- (e) 200

Q14. $\sqrt{144} \times \sqrt{324} \div 4 \left(\frac{1}{3} \div 24 \right) = \frac{(54)^2}{?}$

- (a) 432
- (b) 0.75
- (c) 243
- (d) $\frac{3}{64}$
- (e) 1.5



Q15. $3^4 \div 36^2 \times 24^3 = \frac{?^3}{2}$

- (a) 16
- (b) 14
- (c) 6
- (d) 18
- (e) 12

Solutions

S (1-5)

IIM Bangalore —

Ratio of students doing MBA in HRM, Management and Marketing be $6x$, $8x$ and $9x$ respectively

$$6x + 8x + 9x + 96 = 648$$

$$23x = 648 - 96$$

$$x = \frac{552}{23}$$

$$x = 24$$

$$\text{Students doing MBA in HRM} = 24 \times 6 = 144$$

$$\text{Students doing MBA in Management} = 24 \times 8 = 192$$

$$\text{Students doing MBA in marketing} = 216$$

IIM Ahmedabad —

$$\text{Total students doing MBA in IT} = 144 \times \frac{3}{4} = 108$$

$$\text{Total students doing MBA in Marketing} = 108 + 72 = 180$$

$$\text{Total students doing MBA in Management and HRM} = 528 - (108 + 180) = 240$$

Student doing MBA in management

$$= 240 \times \frac{5}{8}$$

$$= 150$$

$$\text{Student doing MBA in HRM} = 240 \times \frac{3}{8} = 90$$

IIM Calcutta —

$$\text{Total students doing MBA in Management} = 180 \times \frac{140}{100} = 252$$

$$\text{Total students doing MBA in IT} = \frac{192+216}{2} = 204$$

$$\text{Students doing MBA in HRM} = 252 \times \frac{75}{100} = 189$$

$$\text{Total students doing MBA in Marketing} = 725 - (252 + 204 + 189) = 80$$

IIM Lucknow —

$$\text{Total students doing MBA in IT} = 144 - 24 = 120$$

Let total students doing MBA in HRM, Management and Marketing be $4x$, $6x$ and $9x$ respectively

$$4x + 6x + 9x + 120 = 725 - 73$$

$$19x = 652 - 120$$

$$19x = 532$$

$$x = 28$$

$$\text{Total students doing MBA in HRM} = 28 \times 4 = 112$$

$$\text{Total students doing MBA in Management} = 168$$

$$\text{Total students doing MBA in Marketing} = 252$$

IIM's	Total students in different specialization			
	Marketing	Management	IT	HRM

IIM Bangalore	216	192	96	144
IIM Ahmedabad	180	150	108	90
IIM Calcutta	80	252	204	189
IIM Lucknow	252	168	120	112

S1. Ans. (d)

Sol.

Total students doing MBA in IT in IIM Bangalore & IIM Calcutta = $96 + 204 = 300$

Total students doing MBA in Management in IIM Bangalore & IIM Lucknow = $192 + 168 = 360$

$$\begin{aligned} \text{Required \%} &= \frac{360 - 300}{360} \times 100 \\ &= \frac{60}{360} \times 100 \\ &= 16\frac{2}{3}\% \end{aligned}$$

S2. Ans.(d)

Sol.

Average number of students doing MBA in HRM in IIM Bangalore & IIM Lucknow

$$\begin{aligned} &= \frac{144 + 112}{2} \\ &= 128 \end{aligned}$$

Average number of students doing MBA in Marketing in IIM Ahmedabad & IIM Calcutta

$$\begin{aligned} &= \frac{180 + 80}{2} \\ &= \frac{260}{2} \\ &= 130 \end{aligned}$$

Required difference = $130 - 128 = 2$

S3. Ans.(a)

Sol.

Total number of students doing MBA in IT in all four IIM's

$$\begin{aligned} &= 96 + 108 + 204 + 120 \\ &= 528 \end{aligned}$$

S4. Ans.(b)

Sol.

$$\begin{aligned} \text{Required \%} &= \frac{216 - 150}{216} \times 100 \\ &= \frac{66}{216} \times 100 \\ &= 30\frac{5}{9}\% \end{aligned}$$

S5. Ans.(e)

Sol.

Total students doing MBA in IT HRM in IIM Bangalore = $96 + 144 = 240$

Total students in doing MBA in Marketing and management in IIM Lucknow

$$= 252 + 168$$

$$= 420$$

$$\text{Required ratio} = \frac{240}{420} = 4 : 7$$

S(6 - 10) :

$$\text{Total town population selected only Airtel network} = 6400 \times \frac{25}{100} = 1600$$

$$\text{Total town population selected only Vodafone network} = 6400 \times \frac{15}{100} = 960$$

$$\text{Total town population selected Idea network only} = 6400 \times \frac{7}{100} = 448$$

$$\text{Total population of town selected Aircel network only} = 6400 \times \frac{12}{100} = 768$$

$$\text{Total town population selected Jio network only} = 6400 \times \frac{16}{100} = 1024$$

$$\text{Total population of town selected Airtel \& Vodafone only} = 6400 \times \frac{6}{100} = 384$$

$$\text{Total town population selected Airtel, Vodafone \& Jio only} = 6400 \times \frac{8}{100} = 512$$

$$\text{Total population of town selected Vodafone, Aircel \& Jio only} = 6400 \times \frac{5}{100} = 320$$

$$\text{Total population of town selected all the five networks} = 6400 \times \frac{6}{100} = 384$$

Total town population selected only Airtel network	1600
Total town population selected only Vodafone network	960
Total town population selected Idea network only	448
Total population of town selected Aircel network only	768
Total town population selected Jio network only	1024
Total population of town selected both Airtel \& Vodafone only	384
Total town population selected all Airtel, Vodafone \& Jio only	512
Total population of town selected all Vodafone, Aircel \& Jio only	320
Total population of town selected all the five networks	384

S6. Ans (b)

Sol.

Total population of town who selected only Idea, only Aircel \& only Jio network together

$$= 448 + 768 + 1024$$

$$= 2240$$

Total population of town who selected only Airtel & only Vodafone together

$$= 1600 + 960$$

$$= 2560$$

$$\text{Required percentage} = \frac{2560 - 2240}{2560} \times 100$$

$$= 12.5\%$$

S7. Ans (c)

Sol.

Total population of town selected at most two mobile networks

$$= 1600 + 960 + 448 + 768 + 1024 + 384$$

$$= 5184$$

S8. Ans(d)

Sol.

Total population of town selected at least two mobile networks

$$= 384 + 512 + 320 + 384$$

$$= 1600$$



KERS

a247

S9. Ans(e)

Sol.

$$\text{Required ratio} = \frac{320}{384}$$

$$= 5 : 6$$

S10. Ans (d)

Sol.

$$\text{Required percentage} = \frac{1024 - 512}{512} \times 100$$

$$= 100\%$$

S11. Ans.(b)

Sol.

$$3\frac{2}{7} + 4\frac{1}{14} - \frac{9}{14} = \frac{188}{?}$$

$$\frac{23}{7} + \frac{57}{14} - \frac{9}{14} = \frac{188}{?}$$

$$\frac{46+57-9}{14} = \frac{188}{?}$$

$$\frac{46+57-9}{14} = \frac{188}{?}$$

$$\frac{94}{14} = \frac{188}{?}$$

$$? = \frac{188}{94} \times 14 = 28$$

S12. Ans.(e)

Sol.

$$\sqrt{15 \times 22^2 - 40\% \text{ of } 60^2 + 19 \times 39} = ?^2$$

$$\sqrt{15 \times 484 - 40\% \text{ of } 3600 + 19 \times 39} = ?^2$$

$$\sqrt{7260 - 1440 + 741} = ?^2$$

$$\sqrt{6561} = ?^2$$

$$81 = ?^2$$

$$? = 9$$

S13. Ans.(c)

Sol.

$$40\% \text{ of } ? + 55\% \text{ of } 360 = 36\% \text{ of } 450 + 10^2$$

$$\frac{2}{5} \times ? + \frac{11}{20} \times 360 = \frac{36}{100} \times 450 + 100$$

$$\frac{2}{5} \times ? + 198 = 162 + 100$$

$$\frac{2}{5} \times ? = 262 - 198$$

$$\frac{2}{5} \times ? = 64$$

$$? = 160$$

S14. Ans.(b)

Sol.

$$\sqrt{144} \times \sqrt{324} \div 4 \left(\frac{1}{3} \div 24 \right) = \frac{(54)^2}{?}$$

$$12 \times 18 \div (4 \div 72) = \frac{(54)^2}{?}$$

$$? = \frac{54 \times 54 \times 4}{12 \times 18 \times 72} = \frac{3}{4} = 0.75$$

S15. Ans.(e)

Sol.

$$3^4 \div 36^2 \times 24^3 = \frac{?^3}{2}$$

$$\frac{3^4}{36^2} \times 24^3 \times 2 = ?^3$$

$$?^3 = 1728$$

$$? = 12$$

