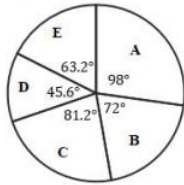


Section : Numerical Aptitude

**Q.1** Study the given pie chart and answer the question that follows:  
The pie chart shows the break-up of the total number of employees of a company in 2019, in five departments A, B, C, D and E.



Total number of employees = 4500

If 30% of the employees in department B are transferred to department D, then the difference between the number of employees in department C and D is  $x$ , which lies between:

- Ans**
- 1. 176 and 180
  - 2. 168 and 172
  - 3. 172 and 176
  - 4. 164 and 168

Question ID : 65497814464  
Chosen Option : 3

**Q.2** A rectangular plot is 420 m long and 84 m wide. It is surrounded by semi-circular flower beds along all its sides. The area of the entire plot (in hectares) is  $x$ . The value of  $x$  (correct to one decimal place) is (take  $\pi = \frac{22}{7}$ ):

- Ans**
- 1. 19.1
  - 2. 18.7
  - 3. 17.9
  - 4. 19.4

Question ID : 65497814460  
Chosen Option : --

**Q.3** If  $(a + b) : (b + c) : (c + a) = 7 : 4 : 5$ , and  $a + b + c = 16$ , then  $(a^2 + b^2 + c^2) : (ab + bc + ca)$  is equal to:

- Ans**
- 1. 24 : 17
  - 2. 26 : 19
  - 3. 27 : 20
  - 4. 23 : 15

Question ID : 65497814453

Chosen Option : 2

**Q.4** A can do a piece of work in 8 days. The efficiency of B is half the efficiency of A, and the efficiency of C is 50% more than the efficiency of B. If all the three work together, what part of the work will they finish in 2 days?

- Ans**
- 1.  $\frac{3}{4}$
  - 2.  $\frac{9}{16}$
  - 3.  $\frac{3}{8}$
  - 4.  $\frac{9}{32}$

Question ID : 65497814457

Chosen Option : 2

**Q.5** A and B can do a certain work in 25 days and 40 days, respectively. They work together for 8 days. C alone completes the remaining work in 24 days. A and C together will complete 60% of the same work in:

- Ans**
- 1. 8 days
  - 2. 9 days
  - 3. 10 days
  - 4. 12 days

Question ID : 65497814456

Chosen Option : 3

**Q.6** A sum of ₹7,560 is divided between A, B, C and D such that the ratio of the shares of A and B is 4 : 5, that of B and C is 3 : 4 and that of C and D is 5 : 7. What is the difference (in ₹) between the shares of B and D?

- Ans**
- 1. 1,612.80
  - 2. 1,310.40
  - 3. 806.40
  - 4. 1,209.60

Question ID : 65497814452

Chosen Option : 2

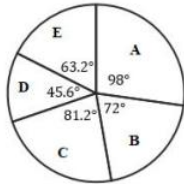
Q.7 The value of  $145 - [125 - \{64 \div 8 \text{ of } 4 - (4 \times 8 \div 2)\}]$  is:

- Ans  1. 6  
 2. 5  
 3. 7  
 4. 8

Question ID : 65497814442  
 Chosen Option : 1

Q.8 Study the given pie chart and answer the question that follows:

The pie chart shows the break-up of the total number of employees of a company in 2019, in five departments A, B, C, D and E.



Total number of employees = 4500

If the ratio of male employees to female employees in department A is 3 : 4, then the number of employees in department C is what percentage more than the number of female employees in department A (nearest to an integer)?

- Ans  1. 45  
 2. 42  
 3. 40  
 4. 31

Question ID : 65497814465  
 Chosen Option : --

Q.9 A sum was invested at simple interest at  $x\%$  p.a. for 2 years. Had it been invested at  $(x + 4)\%$ , for the same time, it would have fetched ₹1,800 more. What is the simple interest on the same sum for  $5\frac{2}{3}$  years at 8% p.a.?

- Ans  1. ₹10,200  
 2. ₹10,336  
 3. ₹9,520  
 4. ₹10,064

Question ID : 65497814454  
 Chosen Option : 1

**Q.10** A train of length 240 m crosses a pole in 16 seconds and crosses a platform in 42 seconds. What is the length (in m) of the platform?

- Ans**
- 1. 400
  - 2. 360
  - 3. 420
  - 4. 390

Question ID : 65497814458  
Chosen Option : 4

**Q.11** Let  $x$  be the smallest 4-digit number such that when it is divided by 5, 6 and 7, it leaves the remainders 2, 3 and 4, respectively. The sum of the digits of  $x$  is:

- Ans**
- 1. 9
  - 2. 11
  - 3. 12
  - 4. 14

Question ID : 65497814441  
Chosen Option : --

**Q.12** Study the given data and answer the question that follows.

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	3	18	5	7	16

If  $x$  is the lower limit of the median class and  $y$  is the upper limit of the modal class, then the value of  $(3x + 2y)$  is:

- Ans**
- 1. 80
  - 2. 90
  - 3. 70
  - 4. 100

Question ID : 65497814447  
Chosen Option : --

**Q.13** The radius of a metallic solid sphere is 21.6 cm. It is melted and drawn into a wire of uniform cross section. If the length of the wire is 259.2 m, then the radius of the wire is:

- Ans**
- 1. 0.9 cm
  - 2. 0.8 cm
  - 3. 0.54 cm
  - 4. 0.72 cm

Question ID : 65497814360  
Chosen Option : --

**Q.14** The marked price of an article is ₹4,450. A shopkeeper allows a discount of 10% on it and gets a profit of 20%. The cost price (in ₹) of the article is:

- Ans**
- 1. 3,240.50
  - 2. 3,180.00
  - 3. 3,337.50
  - 4. 3,260.00

Question ID : 65497814446  
Chosen Option : 3

**Q.15** A sum of ₹3,364 is divided in two parts such that the amounts received on them after 3 years and 5 years, respectively, is the same when the rate of interest is 5% p.a., compounded yearly. The difference between the two parts is:

- Ans**
- 1. ₹180
  - 2. ₹166
  - 3. ₹164
  - 4. ₹160

Question ID : 65497814455  
Chosen Option : --

**Q.16** When an article is sold for ₹1,188, the percentage profit earned is  $x\%$ . When it is sold for ₹1,435.50, then the percentage profit is  $(x + 25)\%$ . What is the value of  $x$ ?

- Ans**
- 1. 18
  - 2. 15
  - 3. 20
  - 4. 10

Question ID : 65497814450  
Chosen Option : --

**Q.17** The ratio of two numbers A and B is 5 : 6. If 8 is subtracted from each of them, then the ratio becomes 4 : 5. What is the sum of A and B?

- Ans**
- 1. 121
  - 2. 110
  - 3. 88
  - 4. 99

Question ID : 65497814451  
Chosen Option : 3

**Q.18** Kapil rows  $2\frac{1}{2}$  km against the current in 15 minutes and the same distance along the current in 8 minutes. What is the speed (in km/h) of the current?

- Ans**
- 1.  $\frac{9}{2}$
  - 2. 4
  - 3.  $\frac{35}{8}$
  - 4. 5

Question ID : 65497814459  
Chosen Option : 3

**Q.19** By selling an article for ₹882, a person loses 10%. If he sells it for ₹991.76, then the percentage loss/profit is:

- Ans**
- 1. profit, 1.2%
  - 2. loss, 5%
  - 3. profit, 12%
  - 4. loss, 1.5%

Question ID : 65497814449  
Chosen Option : 1

**Q.20** सुरेखा, अपनी मासिक आय का 24% किराने के सामान पर, 16% किराए पर और शेष आय का 55% बच्चों की शिक्षा और अन्य पर खर्च करती है। यदि वह महीने में ₹5,940 बचाती है, तो वह किराए पर कितना (₹ में) खर्च करती है?

- Ans**
- 1. 3,960
  - 2. 3,740
  - 3. 3,300
  - 4. 3,520

Question ID : 65497814448  
Chosen Option : 4

Q.21

The value of  $\frac{\frac{1}{4} \div \frac{3}{4} \left( \frac{2}{5} - \frac{1}{3} \right)}{1\frac{2}{3} \text{ of } \frac{3}{4} - \frac{1}{4} \text{ of } \frac{2}{3}}$  is:

- Ans
- 1.  $\frac{8}{195}$
  - 2.  $\frac{7}{195}$
  - 3.  $\frac{4}{195}$
  - 4.  $\frac{2}{195}$

Question ID : 65497816482  
Chosen Option : 3

Q.22

The value of  $\frac{5}{16} + \frac{3}{5} \times 1\frac{7}{8} \div \frac{2}{3} - 6\frac{1}{8} \div \left( 5\frac{1}{4} \div \frac{3}{7} \text{ of } \frac{1}{2} \right)$  of  $\frac{6}{7}$  is:

- Ans
- 1.  $\frac{31}{18}$
  - 2.  $\frac{19}{6}$
  - 3.  $\frac{41}{24}$
  - 4.  $\frac{17}{12}$

Question ID : 65497814443  
Chosen Option : 3

Q.23 The ratio of the number of boys and girls in a class is 5 : 7. The average weight of boys is 56 kg and that of girls is 50 kg. What is the average weight (in kg) of all the boys and girls in the class?

- Ans
- 1. 52.5
  - 2. 51.8
  - 3. 54.1
  - 4. 53.2

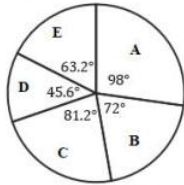
Question ID : 65497814444  
Chosen Option : 1

**Q.24** The average of 12 numbers is 25.5. The average of the first six numbers is 22.4 and that of the last three numbers is 28.2. The 7<sup>th</sup> number is 5 less than the 8<sup>th</sup> number but 10 less than the 9<sup>th</sup> number. What is the average of the 8<sup>th</sup> and 9<sup>th</sup> numbers?

- Ans**
- 1. 32.6
  - 2. 29.4
  - 3. 29.8
  - 4. 31.5

Question ID : 65497814445  
Chosen Option : 4

**Q.25** Study the given pie chart and answer the question that follows:  
The pie chart shows the break-up of the total number of employees of a company in 2019, in five departments A, B, C, D and E.



Total number of employees = 4500  
The average number of employees of the company in departments D and E is what percentage of the number of employees in department A (correct to one decimal place)?

- Ans**
- 1. 56.2%
  - 2. 54.4%
  - 3. 55.8%
  - 4. 55.5%

Question ID : 65497814463  
Chosen Option : 4