

Section : **Quantitative Aptitude**

**Q.1** The income of  $A$  is 40% less than that of  $B$ . If  $A$  gets 25% rise in his income and  $B$  gets 40% rise in his income, then the percentage increase (correct to two decimal places) in the combined incomes of  $A$  and  $B$  will be:

- Ans**
- 1. 31.67
  - 2. 37.86
  - 3. 34.38
  - 4. 35.19

Question ID : **6549786177**  
Status : **Answered**  
Chosen Option : **3**

**Q.2** The average of eighteen numbers is 42. The average of the last ten numbers is 40 and that of the first five numbers is 44. The seventh number is 6 less than the sixth and 7 less than the eighth number. The average of the sixth and the eighth number is:

- Ans**
- 1. 47.5
  - 2. 46.5
  - 3. 45
  - 4. 48

Question ID : **6549786175**  
Status : **Answered**  
Chosen Option : **1**

**Q.3** If  $9a^2 + 4b^2 + 49c^2 + 18 = 2(2b + 28c - 3a)$ , then the value of  $(a + 2b - c)$  will be:

Ans

1.  $\frac{2}{21}$

2.  $\frac{5}{21}$

3.  $\frac{11}{21}$

4.  $\frac{26}{21}$

Question ID : 6549786893

Status : Answered

Chosen Option : 1

**Q.4** If  $\cos\theta = \frac{p^2-1}{p^2+1}$ ,  $0^\circ < \theta < 90^\circ$ , then  $\operatorname{cosec}\theta$  is equal to:

Ans

1.  $\frac{2P}{1-P^2}$

2.  $\frac{1+P^2}{2P}$

3.  $\frac{1-P^2}{2P}$

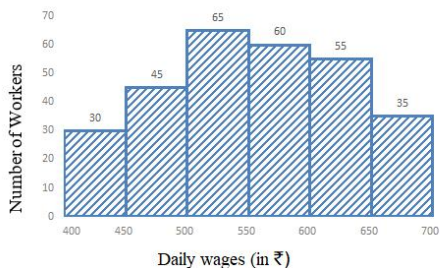
4.  $\frac{2P}{1+P^2}$

Question ID : 6549786897

Status : Answered

Chosen Option : 2

**Q.5** Study the graph which shows the daily wages (in ₹) with number of workers and answer the question that follows.



If the ratio of the total number of workers whose daily wages are less than ₹450 to the total number of workers whose daily wages are ₹600 or above is a : b, then what is the difference between b and a?

- Ans**
- 1. 0
  - 2. 2
  - 3. 1
  - 4. 3

Question ID : **6549786094**  
 Status : **Answered**  
 Chosen Option : **2**

**Q.6** If a nine-digit number  $489x6378y$  is divisible by 72, then the value of  $\sqrt{8x + 6y}$  will be:

- Ans**
- 1. 10
  - 2. 4
  - 3. 8
  - 4. 6

Question ID : **6549786188**  
 Status : **Answered**  
 Chosen Option : **3**

**Q.7** A can do 60% of a work in 18 days, while B can do 40% of the same work in 10 days. Both work together for 10 days only. C completed the remaining work in 4 days. In how many days will C complete the same work?

- Ans**
- 1. 15
  - 2. 18
  - 3. 25
  - 4. 12

Question ID : **6549786879**  
 Status : **Answered**  
 Chosen Option : **1**

**Q.8** In  $\Delta ABC$ , the length of  $BC$  is less than twice the length of  $AB$  by 2 cm. The length of  $AC$  exceeds the length of  $AB$  by 6 cm. The perimeter is 60 cm. The length (in cm) of the largest side of the triangle  $ABC$  is:

- Ans**
- 1. 30
  - 2. 20
  - 3. 28
  - 4. 26

Question ID : 6549786183  
 Status : Answered  
 Chosen Option : 4

**Q.9** If  $PA$  and  $PB$  are tangents drawn to a circle with centre  $O$  at  $A$  and  $B$  from external point  $P$  such that  $\angle APB = 78^\circ$ , then  $\angle OAB$  is equal to:

- Ans**
- 1.  $12^\circ$
  - 2.  $29^\circ$
  - 3.  $39^\circ$
  - 4.  $36^\circ$

Question ID : 6549786889  
 Status : Answered  
 Chosen Option : 3

**Q.10** In  $\Delta ABC$ ,  $\angle A = 66^\circ$ . If  $I$  is the incentre of the triangle, then the measure of  $\angle BIC$  will be:

- Ans**
- 1.  $119^\circ$
  - 2.  $112^\circ$
  - 3.  $123^\circ$
  - 4.  $109^\circ$

Question ID : 6549786891  
 Status : Answered  
 Chosen Option : 3

**Q.11** The value of  $61\frac{3}{5} \div \left[ 40 \div 2 \text{ of } 5 + 27 \div \frac{1}{3} - \left( 78 \div 3\frac{1}{3} \right) \right]$  is:

- Ans**
- 1. -5
  - 2.  $\frac{41}{25}$
  - 3.  $\frac{11}{25}$
  - 4. 1

Question ID : 6549786896  
 Status : Answered  
 Chosen Option : 4

**Q.12** A bought an article for ₹4,800 and sold it at a loss of 30%. With this amount, he bought another article and sold it at a gain of 60%. What was his overall gain/loss?

- Ans**
- 1. Loss 15%
  - 2. Loss 18%
  - 3. Gain 12%
  - 4. Gain 10%

Question ID : 6549786885  
Status : Answered  
Chosen Option : 3

**Q.13** A train travels at a speed of 66 km/h and halts at five junctions for a certain time. It covers a distance of 1485 km in one day. For how long (in minutes) does the train stop at each junction, if it halts for the same period of time at all the junctions?

- Ans**
- 1. 12
  - 2. 18
  - 3. 20
  - 4. 15

Question ID : 6549786173  
Status : Answered  
Chosen Option : 2

**Q.14** A circle is inscribed in a triangle ABC. It touches sides AB, BC and AC at points R, P and Q, respectively. If AQ = 6.5 cm, PC = 7.5 cm and BR = 9 cm, then the perimeter (in cm) of the triangle ABC will be:

- Ans**
- 1. 23
  - 2. 55
  - 3. 46
  - 4. 27.5

Question ID : 6549786181  
Status : Answered  
Chosen Option : 3

**Q.15** The ratio of the incomes of A and B is 7 : 5. A and B save ₹4,000 and ₹3,500, respectively. If the expenditure of B is half the expenditure of A, then the total income of A and B (in ₹) will be:

- Ans**
- 1. 15,000
  - 2. 10,000
  - 3. 12,000
  - 4. 13,500

Question ID : 6549786179  
Status : Answered  
Chosen Option : 3

**Q.16** If  $7 \sin^2 \theta + 3 \cos^2 \theta = 4$ ,  $0^\circ < \theta < 90^\circ$ , then the value of  $\theta$  will be:

- Ans**
- 1.  $30^\circ$
  - 2.  $60^\circ$
  - 3.  $75^\circ$
  - 4.  $45^\circ$

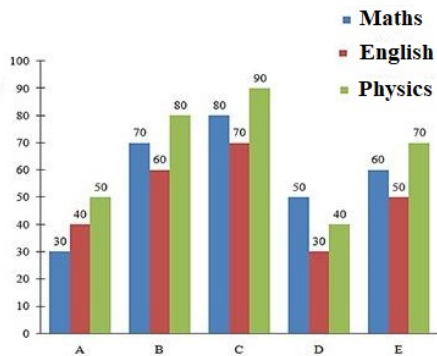
Question ID : **6549786899**  
 Status : **Answered**  
 Chosen Option : **1**

**Q.17** The value of  $\frac{3 \tan^2 60^\circ + \sec^2 30^\circ - \sin^2 45^\circ}{(\cos 15^\circ + \sin 75^\circ)(\sec 15^\circ + \operatorname{cosec} 75^\circ)}$  is:

- Ans**
- 1.  $\frac{13}{12}$
  - 2.  $\frac{59}{24}$
  - 3.  $\frac{65}{24}$
  - 4.  $\frac{5}{12}$

Question ID : **6549786191**  
 Status : **Answered**  
 Chosen Option : **2**

**Q.18** Study the following graph and answer the question that follows.  
 Marks scored by five students A, B, C, D and E in three subjects (Maths, English and Physics)



What are the approximate average marks obtained by C?

- Ans**
- 1. 65
  - 2. 75
  - 3. 70
  - 4. 80

Question ID : **6549788316**  
 Status : **Answered**  
 Chosen Option : **4**

**Q.19** What will be the compound interest (in ₹) on a sum of ₹7,200 for 18 months at a rate of 20% per annum, if the interest is compounded half-yearly (nearest to an integer)?

- Ans**
- 1. 2,833
  - 2. 2,383
  - 3. 3,238
  - 4. 2,338

Question ID : **6549786180**  
Status : **Answered**  
Chosen Option : **2**

**Q.20** From a rectangular sheet of dimensions 32 cm × 18 cm, a square of side 3 cm is cut from the four corners of the sheet and a box is made. The volume of the box is:

- Ans**
- 1. 936 cm<sup>3</sup>
  - 2. 1300 cm<sup>3</sup>
  - 3. 946 cm<sup>3</sup>
  - 4. 1305 cm<sup>3</sup>

Question ID : **6549786881**  
Status : **Answered**  
Chosen Option : **1**

**Q.21** If  $(4x - 5)^3 + (x - 2)^3 + 27(2x - 5)^3 = 9(4x - 5)(x - 2)(2x - 5)$ , then the value of  $(x + \frac{3}{2})$  will be:

- Ans**
- 1.  $\frac{1}{2}$
  - 2.  $\frac{5}{2}$
  - 3.  $\frac{3}{2}$
  - 4.  $\frac{7}{2}$

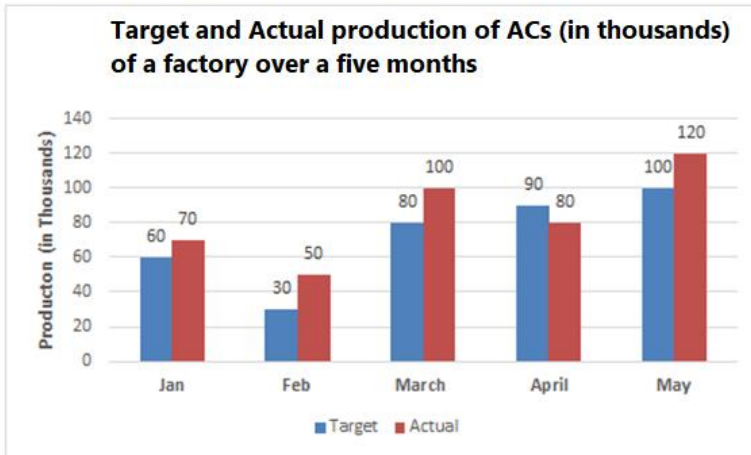
Question ID : **6549786894**  
Status : **Answered**  
Chosen Option : **4**

Q.22 If  $9x^2 - 6x + 1 = 0$ , then the value of  $27x^3 + (27x^3)^{-1}$  will be:

- Ans
- 1. 1
  - 2. 8
  - 3. 4
  - 4. 2

Question ID : 6549786185  
Status : Answered  
Chosen Option : 4

Q.23 Study the given graph and answer the question that follows.



In which month is the actual production of ACs 20% more than its target production?

- Ans
- 1. January
  - 2. March
  - 3. May
  - 4. February

Question ID : 6549786196  
Status : Answered  
Chosen Option : 3



**Q.24** Study the given graph which shows the Target and Actual production of ACs' (in thousands) of a factory over five months and answer the question that follows.

Target and Actual Production of AC's (in Thousands) of a factory over five months



The ratio of the combined target production of ACs from January to April to that of the actual production of ACs from March to May is:

- Ans**
- 1. 19 : 15
  - 2. 15 : 19
  - 3. 13 : 15
  - 4. 15 : 13

Question ID : **6549786900**  
Status : **Answered**  
Chosen Option : **3**

**Q.25** The successive discounts 18 % , 10 % and 15 % are equivalent to a single discount of:

- Ans**
- 1. 39.25%
  - 2. 37.27%
  - 3. 45.16%
  - 4. 41.32%

Question ID : **6549786883**  
Status : **Answered**  
Chosen Option : **2**