

Q.1

If $A = 2(\sin^6 \theta + \cos^6 \theta) - 3(\sin^4 \theta + \cos^4 \theta)$ then the value of 3α such that $\cos \alpha = \sqrt{\frac{3+A}{5+A}}$ is:

- Ans
- 1. 90°
 - 2. 180°
 - 3. 45°
 - 4. 135°

Question ID : 8161612202

Status : Answered

Chosen Option : 4

Q.2

If $117 \cos^2 A + 129 \sin^2 A = 120$ and $170 \cos^2 B + 158 \sin^2 B = 161$, then the value of $\operatorname{Cosec}^2 A \operatorname{Sec}^2 B$ is:

- Ans
- 1. 1
 - 2. 16
 - 3. 9
 - 4. 4

Question ID : 8161612201

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.3

A person purchases 40 items at ₹10 each. He sells a part of them at 25% profit and the remaining at 10% loss. The net profit is 4% in this transaction. The number of items he sold at a loss, is:

- Ans
- 1. 16
 - 2. 18
 - 3. 24
 - 4. 22

Question ID : 8161612186

Status : Answered

Chosen Option : 3

Q.4

A cylindrical vessel with radius 6 cm and height 5 cm is to be made by melting a number of spherical metal balls of diameter 2 cm. The minimum number of balls needed is:

- Ans
- 1. 125
 - 2. 105
 - 3. 115
 - 4. 135

Question ID : 8161612184

Status : Answered

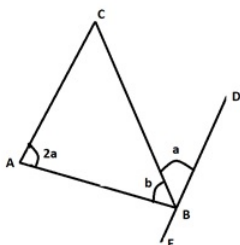
Chosen Option : 4

Q.5 A sum of ₹12,000 was taken at simple interest at some rate. After four months, ₹6,000 more was added and the total principal was charged at double the earlier rate of interest. At the end of the year, if the total interest was ₹2,800, what was the initial rate of interest?

- Ans**
- 1. 10%
 - 2. 14%
 - 3. 16%
 - 4. 12%

Question ID : **8161612190**
 Status : **Answered**
 Chosen Option : **1**

Q.6 In the given figure, if AC, DE are parallel and $\angle CAB = 38^\circ$, then the value of $\angle ABC + 5\angle CBD$ is:



- Ans**
- 1. 196°
 - 2. 218°
 - 3. 178°
 - 4. 158°

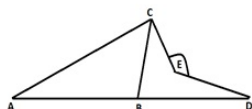
Question ID : **8161612193**
 Status : **Answered**
 Chosen Option : **2**

Q.7 The average of 35 consecutive natural numbers is N. Dropping the first 10 numbers and including the next 10 numbers, the average is changed to M. If the value of $M^2 - N^2 = 600$, then the average of $3M$ and $5N$ is:

- Ans**
- 1. 90
 - 2. 115
 - 3. 120
 - 4. 100

Question ID : **8161612185**
 Status : **Not Attempted and Marked For Review**
 Chosen Option : **--**

Q.8 If in the given figure, $\angle ACB + \angle BAC = 80^\circ$; $\angle BDE = 35^\circ$; $\angle BCE = 45^\circ$, then the marked angle $\angle CED$ is:



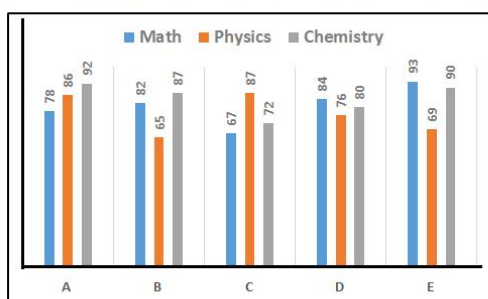
- Ans**
- 1. 150°
 - 2. 160°
 - 3. 135°
 - 4. 120°

Question ID : 8161612192

Status : **Not Attempted and Marked For Review**

Chosen Option : --

Q.9 The following graph gives the performance of five students A, B, C, D, E in Math, Physics and Chemistry.



Based on the given information - considering that a performance is based on the difficulty level of the paper, which of the following statements is correct?

- Ans**
- 1. Math is easier for B than for E and A
 - 2. Physics is easier for C than for B and E
 - 3. For D, all subjects are of the same difficulty
 - 4.

For C, Math is the most difficult and Chemistry is the easiest

Question ID : 8161612205

Status : **Answered**

Chosen Option : 2

Q.10 A man purchased a car for ₹12 lakhs and was insured for 80% of the cost. He sold the car at a 15% loss, but had not yet delivered it to the buyer when he met with an accident. After the accident, the car was damaged a lot and the insurance company paid 90% of the insured amount. The net difference in the two transactions is:

- Ans**
- 1. ₹1.56 lakhs
 - 2. ₹1.38 lakhs
 - 3. ₹88 lakhs
 - 4. ₹92 lakhs

Question ID : 8161612187

Status : **Not Answered**

Chosen Option : --

Q.11

The value of $\left(a^{\frac{2}{3}} + 2a^{\frac{1}{2}} + 3a^{\frac{1}{3}} + 2a^{\frac{1}{6}} + 1\right)\left(a^{\frac{1}{3}} - 2a^{\frac{1}{6}} + 1\right) - a^{\frac{1}{2}}\left(a^{\frac{1}{2}} - 2\right)$, when $a=7$, is:

- Ans
- 1. 0
 - 2. 7
 - 3. 1
 - 4. $\sqrt{7}$

Question ID : 8161612197

Status : Not Answered

Chosen Option : --

Q.12 If, $2^{x+y-2z} = 8^{8z-5-y}$; $5^{4y-6z} = 25^{y+z}$; $3^{4x-3z} = 9^{x+z}$ then the value of $2x + 3y + 5z$ is:

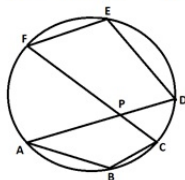
- Ans
- 1. 44
 - 2. 28
 - 3. 56
 - 4. 32

Question ID : 8161612196

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.13 In the following figure, if angles $\angle ABC = 95^\circ$ $\angle FED = 115^\circ$ (not to scale). Then the angle $\angle APC$ is equal to:



- Ans
- 1. 135°
 - 2. 150°
 - 3. 120°
 - 4. 155°

Question ID : 8161612191

Status : Answered

Chosen Option : 2

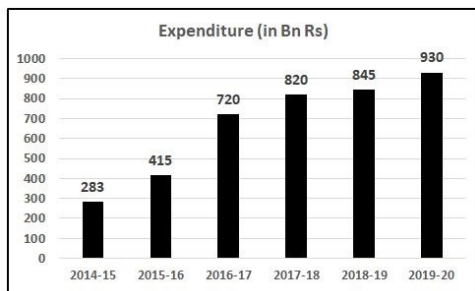
Q.14

If $A = \left[\frac{3}{7} \text{ of } 4\frac{1}{5} \div \frac{18}{25} + \frac{17}{24} \right] \text{ of } \left[\frac{289}{16} \div \left(\frac{3}{4} + \frac{2}{3} \right)^2 \right]$, then the value of $8A$ is:

- Ans
- 1. 132
 - 2. 213
 - 3. 231
 - 4. 321

Question ID : 8161612199
 Status : Answered
 Chosen Option : 3

Q.15 The following graph shows the expenditure on education sector by Indian government for the years-2014 -15 to 2019- 20



If the government plans to increase the expenditure by 30% on the average of the expenditures in 2016-17, 2017-18, 2018-19, then the approximate amount (in billions of rupees) to be spent in 2020-21 is:

- Ans
- 1. ₹1,129.5
 - 2. ₹1,033.5
 - 3. ₹1,087.3
 - 4. ₹1,162.6

Question ID : 8161612203
 Status : Not Answered
 Chosen Option : --

Q.16 5 men and 8 women can complete a task in 34 days, whereas 4 men and 18 women can complete the same task in 28 days. In how many days can the same task be completed by 3 men and 5 women?

- Ans
- 1. 56
 - 2. 72
 - 3. 64
 - 4. 36

Question ID : 8161612182
 Status : Answered
 Chosen Option : 2

Q.17 If $2145 : x :: 3003 : 42$, then the value of y so that $x : 2508 :: y : 11704$, is:

- Ans
- 1. 156
 - 2. 96
 - 3. 212
 - 4. 140

Question ID : 8161612189
Status : Not Answered
Chosen Option : --

Q.18

The value of $\frac{1}{(9-4\sqrt{5})^2} + \frac{1}{(9+4\sqrt{5})^2}$ is:

- Ans
- 1. 322
 - 2. 424
 - 3. 246
 - 4. 286

Question ID : 8161612195
Status : Not Answered
Chosen Option : --

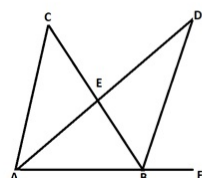
Q.19

The value of $\left[\frac{\sqrt{3} + 2\sin P}{1 - 2\cos P} \right]^3 + \left[\frac{1 + 2\cos P}{\sqrt{3} - 2\sin P} \right]^3$ is:

- Ans
- 1. 1
 - 2. 0
 - 3. $2\sin P \cos P$
 - 4. $\sin P \cos P$

Question ID : 8161612200
Status : Not Answered
Chosen Option : --

Q.20 In the given figure, AD is bisector of angle $\angle CAB$ and BD is bisector of angle $\angle CBF$. If the angle at C is 34° , the angle $\angle ADB$ is:



- Ans
- 1. 32°
 - 2. 17°
 - 3. 34°
 - 4. 16°

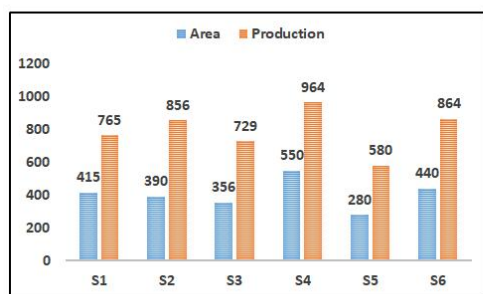
Question ID : **8161612194**
 Status : **Not Answered**
 Chosen Option : --

Q.21 A sells an item at 20% profit to B, B sells the same at 10% profit to C and receives ₹1,32,000.0. Had C purchased the same item from A, he would have spent 5% less than what he spent with B. What profit would A have made then?

- Ans
- 1. ₹25,400
 - 2. ₹25,540
 - 3. ₹24,540
 - 4. ₹24,450

Question ID : **8161612188**
 Status : **Not Answered**
 Chosen Option : --

Q.22 The following graph shows the production of paddy in the agricultural land available the 6 places S1, S2, S3, S4, S5, S6 (area in hundreds of hectares and production in thousands of tonnes)

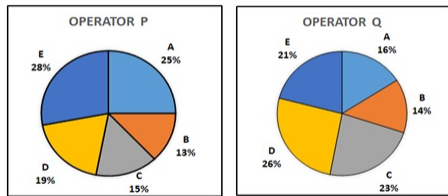


Based on the information, the production ratio (production to land) is highest and lowest, respectively, in:

- Ans
- 1. S5, S3
 - 2. S3, S6
 - 3. S2, S1
 - 4. S2, S4

Question ID : **8161612206**
 Status : **Not Answered**
 Chosen Option : --

Q.23 The percentage of customers of two network operators P and Q across the cities A, B, C, D, E is shown in the given pie charts.



Based on the information in the pie charts, if the customers of operator P are 3.6 lakhs, and the customers of operator Q are 4.2 lakhs, then in the city C, the positive difference between the customers of the operators is:

- Ans**
- 1. 44,500
 - 2. 42,600
 - 3. 52,000
 - 4. 48,000

Question ID : **8161612204**
 Status : **Not Answered**
 Chosen Option : --

Q.24 Which of the following numbers is divisible by 6?

- Ans**
- 1. 23,408
 - 2. 1,00,246
 - 3. 43,923
 - 4. 3,49,722

Question ID : **8161612198**
 Status : **Not Answered**
 Chosen Option : --

Q.25 The distance between two railway stations is 1176 km. To cover this distance, an express train takes 5 hours less than a passenger train while the average speed of the passenger train is 70 km/h less than that of the express train. The time taken by the passenger train to complete the travel is:

- Ans**
- 1. 12 hours
 - 2. 23 hours
 - 3. 17 hours
 - 4. 18 hours

Question ID : **8161612183**
 Status : **Not Answered**
 Chosen Option : --