Combined Graduate Level Examination Tier II 2021

Roll Number	
Candidate Name	
Venue Name	
Exam Date	08/08/2022
Exam Time	9:00 AM - 11:00 AM
Subject	Paper 1 Quantitative abilities

Section : **Quantitative Abilities**

Q.1 The cost price of an article is ₹ 2800. Profit as a percentage of selling price is 20 percent. What is the actual profit (in ₹)?

Ans

✗ 1. ₹ 616

✗ 2. ₹ 504

✓ 3. ₹ 700

✗ 4. ₹ 560

Question Type : **MCQ**
Question ID : **26433083576**
Status : **Answered**
Chosen Option : **3**

Q.2 The sum of the curved surface area and total surface area of a solid cylinder is 2068 cm^2. If radius of its base is 7 cm, then what is the volume of this cylinder? (use π=22/7)

Ans

✗ 1. 2060 cm^3

✗ 2. 2480 cm^3

✓ 3. 3080 cm^3

✗ 4. 2760 cm^3

Question Type : **MCQ**
Question ID : **26433083727**
Status : **Answered**
Chosen Option : **3**

Q.3 If $\sin\theta = (9/41),\ 0° < \theta < 90°$ then what is the value of $\cot\theta$?

Ans

✗ 1. 39/9

✗ 2. 47/8

✗ 3. 35/8

✓ 4. 40/9

Question Type : **MCQ**
Question ID : **26433083735**
Status : **Answered**
Chosen Option : **4**

Q.4 Two circles each of radius 36 cm are intersecting each other such that each circle is passing through the centre of the other circle. What is the length of common chord to the two circles?

Ans

✗ 1. $24\sqrt{3}$ cm

✗ 2. $12\sqrt{3}$ cm

✓ 3. $18\sqrt{3}$ cm

✗ 4. $16\sqrt{3}$ cm

Question Type : **MCQ**
Question ID : **26433083715**
Status : **Answered**
Chosen Option : **3**

Q.5 ABC is an isosceles right angle triangle. Angle ABC = 90 degree and AB = 12 cm. What is the ratio of the radius of the circle inscribed in it to the radius of the circle circumscribing triangle ABC?

Ans

✗ 1. $6-\sqrt{2}:3\sqrt{2}$

✓ 2. $2-\sqrt{2}:\sqrt{2}$

✗ 3. $6-3\sqrt{2}:1\sqrt{2}$

✗ 4. $6-3\sqrt{2}:6\sqrt{2}$

Question Type : **MCQ**
Question ID : **26433083707**
Status : **Answered**
Chosen Option : **2**

Q.6 A, B and C started a business with initial investments of ₹ 20000, ₹ 25000 and ₹ 10000, respectively. After 5 months from start, A invested ₹ 4000 more. After 6 months from start, C invested ₹ 8000 more. After 4 months from start, B withdrew ₹ 8000. At the end of the year, they will receive a profit of ₹ 'x'. In what ratio they will share the profits?

Ans

✗ 1. 71 : 57 : 42

✗ 2. 71 : 59 : 42

✗ 3. 59 : 68 : 42

✓ 4. 67 : 59 : 42

Question Type : **MCQ**
Question ID : **26433083683**
Status : **Answered**
Chosen Option : **4**

Q.7 Which fraction among the following is the least?

$\frac{5}{11}, \frac{7}{12}, \frac{8}{13}, \frac{9}{17}$

Ans
1. $\frac{5}{11}$ ✔
2. $\frac{7}{12}$ ✘
3. $\frac{9}{17}$ ✘
4. $\frac{8}{13}$ ✘

Question Type : **MCQ**
Question ID : **26433083655**
Status : **Answered**
Chosen Option : **1**

Q.8 What is the value of $99\frac{11}{99} + 99\frac{13}{99} + 99\frac{15}{99} + \ldots\ldots + 99\frac{67}{99}$?

Ans
1. 94220/33 ✘
2. 95120/33 ✔
3. 97120/33 ✘
4. 96220/33 ✘

Question Type : **MCQ**
Question ID : **26433083556**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.9 What is the value of $5\sin^2 60° + 7\sin^2 45° + 8\cos^2 45°$?

Ans
1. 10 ✘
2. 57/4 ✘
3. 25 ✘
4. 45/4 ✔

Question Type : **MCQ**
Question ID : **26433083737**
Status : **Answered**
Chosen Option : **4**

Q.10 A bus covered a distance of 162 km. If speed of this bus is 15 m/s, then what will be the time taken?

Ans

✗ 1. 4 hours

✗ 2. 2 hours

✓ 3. 3 hours

✗ 4. 5 hours

Question Type : **MCQ**
Question ID : **26433083588**
Status : **Answered**
Chosen Option : **3**

Q.11 What is the difference between the average of first 148 even positive numbers and the average of first 129 odd positive numbers?

Ans

✗ 1. 21

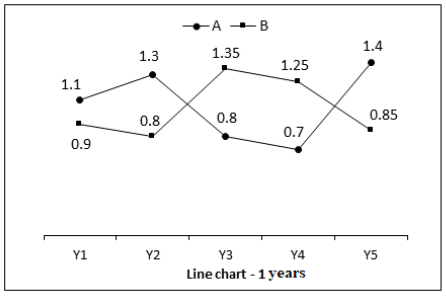
✓ 2. 20

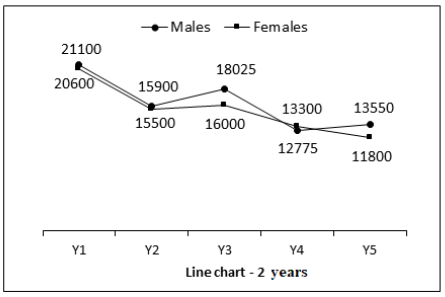
✗ 3. 23

✗ 4. 19

Question Type : **MCQ**
Question ID : **26433083596**
Status : **Answered**
Chosen Option : **2**

Q.12 Two line charts are given below. Line chart 1 shows the ratio of number of males to the number of females in two companies A and B for the 5 years. Line chart 2 shows the total number of males (both companies A and B) and total number of females (both companies A and B) for the 5 years.





What is the ratio of number of males of company B in Y1 to the total number of females of company A in Y3 and Y5?

Ans

1. ✗ 117 : 218
2. ✓ 117 : 215
3. ✗ 129 : 215
4. ✗ 119 : 218

Question Type : **MCQ**
Question ID : **26433083741**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.13 What is the value of $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{7}-\sqrt{5}} \div \frac{\sqrt{14}+\sqrt{10}}{\sqrt{14}-\sqrt{10}} + \frac{\sqrt{10}}{\sqrt{5}}$?

Ans

1. ✗ $\sqrt{2}+2$
2. ✗ $2\sqrt{2}+2$
3. ✓ $\sqrt{2}+1$
4. ✗ $2\sqrt{2}+1$

Question Type : **MCQ**
Question ID : **26433083659**
Status : **Answered**
Chosen Option : 2

Q.14 The ratio of milk to water in a 100 litres mixture is 2 : 3. 10 litres of this mixture is withdrawn and replaced with milk. This process is repeated 2 more times. What is the percentage of milk in final mixture?

Ans

✔ 1. 56.26 percent

✘ 2. 54.27 percent

✘ 3. 58.21 percent

✘ 4. 51.24 percent

Question Type : **MCQ**
Question ID : **26433083586**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.15 ABC is an equilateral triangle. If the area of the triangle is $36\sqrt{3}$, then what is the radius of circle circumscribing the triangle ABC?

Ans

✘ 1. $2\sqrt{3}$

✘ 2. $3\sqrt{3}$

✔ 3. $4\sqrt{3}$

✘ 4. $6\sqrt{3}$

Question Type : **MCQ**
Question ID : **26433083608**
Status : **Answered**
Chosen Option : **3**

Q.16 ABC is a right angle triangle and angle ABC = 90 degrees. BD is a perpendicular on the side AC. What is the value of BD^2?

Ans

✔ 1. AD × DC

✘ 2. BC × AB

✘ 3. BC × CD

✘ 4. AD × AC

Question Type : **MCQ**
Question ID : **26433083711**
Status : **Answered**
Chosen Option : **1**

Q.17 If $\sqrt[3]{N}$ lies between 6 and 7, where N is an integer then how many values N can take?

Ans

✔ 1. 126

✗ 2. 127

✗ 3. 128

✗ 4. 125

Question Type : **MCQ**
Question ID : **26433083560**
Status : **Not Answered**
Chosen Option : **--**

Q.18 An article is sold at 25 percent loss. If its cost price is doubled and selling price is increased by ₹ 660, then there is a profit of 20 percent. What is the original cost price of the article?

Ans

✗ 1. ₹ 480

✗ 2. ₹ 500

✔ 3. ₹ 400

✗ 4. ₹ 360

Question Type : **MCQ**
Question ID : **26433083578**
Status : **Answered**
Chosen Option : **3**

Q.19 Average age of 7 students of a class is 28 years. Average age of first three students is 30 years. Age of fourth student is 4 years less than the age of fifth student. Ages of last two students is same and is 5 more than the average age of first three students. What is the average age of fourth and fifth student?

Ans

✗ 1. 20 years

✗ 2. 36 years

✗ 3. 16 years

✔ 4. 18 years

Question Type : **MCQ**
Question ID : **26433083695**
Status : **Answered**
Chosen Option : **4**

Q.20 The compound interest (compounding annually) on a certain sum at the rate of 8 percent per annum for two years is ₹ 6656. What would be the simple interest on the same sum at the same rate of interest for two years?

Ans

✗ 1. ₹ 5600

✗ 2. ₹ 6224

✓ 3. ₹ 6400

✗ 4. ₹ 6336

Question Type : **MCQ**
Question ID : **26433083574**
Status : **Answered**
Chosen Option : **3**

Q.21 Salaries of B, C, D and E are in the ratio of 2 : 3 : 4 : 5 respectively. Their salaries are increased by 20 percent, 30 percent, 40 percent and 50 percent respectively. If the increased salary of D is ₹560, then what is the sum of the original salaries of B, C, D and E?

Ans

✓ 1. ₹1400

✗ 2. ₹1560

✗ 3. ₹1820

✗ 4. ₹1260

Question Type : **MCQ**
Question ID : **26433083669**
Status : **Not Answered**
Chosen Option : **--**

Q.22 A person sells an article for a loss of 18 percent. If he increases the selling price by ₹ 144 and decreases the cost price by 30 percent, then there is profit of 20 percent. What is the original selling price?

Ans

✗ 1. ₹ 5068

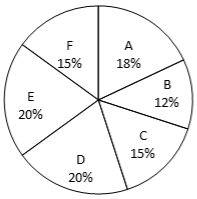
✗ 2. ₹ 6036

✓ 3. ₹ 5904

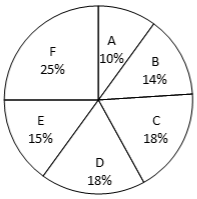
✗ 4. ₹ 6124

Question Type : **MCQ**
Question ID : **26433083679**
Status : **Answered**
Chosen Option : **3**

Q.23 Two pie charts are given below. There are 6 departments in a office. Pie chart 1 shows the number of males in these 6 departments. Number of males in a particular department is shown as a percentage of total number of males in these 6 departments. Pie chart 2 shows the number of females in these 6 departments. Number of females in a particular department is shown as a percentage of total number of females in these 6 departments.



Pie chart - 1



Pie chart - 2

Difference between the number of males in B and C is 600 and difference between the number of females in D and E is 900. What is the sum of number of females in A, B, F and number of males in D, E, A?

Ans

✔ 1. 26300

✘ 2. 29400

✘ 3. 26800

✘ 4. 25700

Question Type : **MCQ**
Question ID : **26433083747**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.24 The slant height of a cone is 20 cm. If area of its base is 616 cm^2, then what is the curved surface area of this cone? (use π=22/7)

Ans

✘ 1. 960 cm^2

✘ 2. 440 cm^2

✘ 3. 1760 cm^2

✔ 4. 880 cm^2

Question Type : **MCQ**
Question ID : **26433083721**
Status : **Answered**
Chosen Option : **4**

Q.25 The height of a cylinder is 6 cm more than the radius of its base. If its radius is 14 cm, then what will be volume of this cylinder? (use π=22/7)

Ans

✗ 1. $13560\ cm^3$

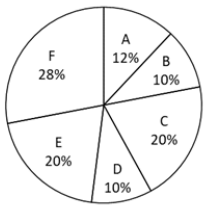
✗ 2. $14340\ cm^3$

✗ 3. $10440\ cm^3$

✓ 4. $12320\ cm^3$

Question Type : **MCQ**
Question ID : **26433083626**
Status : **Answered**
Chosen Option : **4**

Q.26 The pie chart given below shows the number of tyres of 6 companies. Number of tyres of a particular company are shown as a percentage of total number of tyres of these 6 companies.



What is the sum of central angles formed by the sectors representing tyres of company F and A?

Ans

✗ 1. 84 degrees

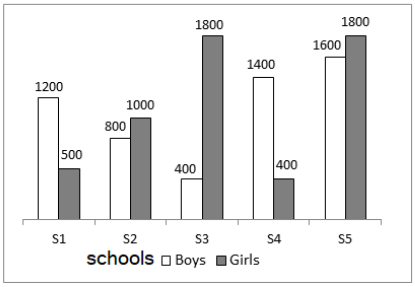
✗ 2. 108 degrees

✓ 3. 144 degrees

✗ 4. 112 degrees

Question Type : **MCQ**
Question ID : **26433083745**
Status : **Answered**
Chosen Option : **3**

Q.27 The bar chart given below shows the number of boys and girls in 5 schools.



If the number of boys in school S6 are 30 percent more than the number of girls in school S1, then number of girls in schools S3 and S4 is what percentage of number of boys in schools S6 and S1?(correct to two decimal places)

Ans

✗ 1. 110.92

✗ 2. 140.48

✗ 3. 124.62

✓ 4. 118.92

Question Type : **MCQ**
Question ID : **26433083642**
Status : **Answered**
Chosen Option : **4**

Q.28 Volume of a cuboid is 4800 cm^3. If the height of this cuboid is 20 cm, then what will be the area of the base of cuboid?

Ans

✗ 1. 150 cm^2

✓ 2. 240 cm^2

✗ 3. 480 cm^2

✗ 4. 120 cm^2

Question Type : **MCQ**
Question ID : **26433083729**
Status : **Answered**
Chosen Option : **2**

Q.29 Radius of a large solid sphere is 14 cm. If is melted to form 8 equal small solid sphere. What is the sum of total surface areas of all the 8 small solid spheres? (use π=22/7)

Ans

✗ 1. 3648 cm^2

✓ 2. 4928 cm^2

✗ 3. 4244 cm^2

✗ 4. 4158 cm^2

Question Type : **MCQ**
Question ID : **26433083624**
Status : **Answered**
Chosen Option : **2**

Q.30 Which of the following is equal to secA – cosA?

Ans

✗ 1. sinA.cotA

✗ 2. cotA.cosA

✓ 3. tanA.sinA

✗ 4. cosA.sinA

Question Type : **MCQ**
Question ID : **26433083632**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.31 ABC and PQR are two triangles. AB = PQ = 6 cm, BC = QR = 10 cm and AC = PR = 8 cm. If angle ABC = x degree, then what is the value of angle PRQ?

Ans

✗ 1. (180 – x) degree

✗ 2. x degree

✓ 3. (90 – x) degree

✗ 4. (90 + x) degree

Question Type : **MCQ**
Question ID : **26433083610**
Status : **Answered**
Chosen Option : **3**

Q.32 ABCD is a quadrilateral. The length of diagonal AC is 24 cm. The sum of perpendicular drawn from vertex B and D on the diagonal AC is 10 cm. What is the area of the quadrilateral?

Ans

✗ 1. 240 cm^2

✗ 2. 180 cm^2

✓ 3. 120 cm^2

✗ 4. 90 cm^2

Question Type : **MCQ**
Question ID : **26433083616**
Status : **Answered**
Chosen Option : **3**

Q.33 Ratio of monthly incomes of A and B is 4 : 5 respectively. Ratio of monthly savings of A and B is 14 : 19 respectively. If the monthly expenditure of A and B is ₹1200 each, then what is the difference between the monthly incomes of A and B?

Ans

✗ 1. ₹2000

✗ 2. ₹ 4000

✓ 3. ₹1000

✗ 4. ₹5000

Question Type : **MCQ**
Question ID : **26433083568**
Status : **Answered**
Chosen Option : **3**

Q.34 If $\left(x+\frac{1}{x}\right)^2 = 3$, then what is the value of $x^6 + x^{-6}$?

Ans

✗ 1. 6

✗ 2. 2

✗ 3. –6

✓ 4. –2

Question Type : **MCQ**
Question ID : **26433083600**
Status : **Answered**
Chosen Option : **4**

Q.35 What is the simplified value of $\frac{(x+y+z)(xy+yz+zx)-xyz}{(x+y)(y+z)(z+x)}$?

Ans

✗ 1. y

✗ 2. z

✓ 3. 1

✗ 4. x

Question Type : **MCQ**
Question ID : **26433083701**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.36 Which of the following is equal to $\left[\frac{\cos\theta}{\sin\theta} + \frac{\sin\theta}{\cos\theta}\right]$?

Ans
✔ 1. cosecθ.secθ
✘ 2. secθ.tanθ
✘ 3. cosecθ.tanθ
✘ 4. cotθ.secθ

Question Type : **MCQ**
Question ID : **26433083630**
Status : **Answered**
Chosen Option : **1**

Q.37 x, y and z are the sides of a triangle. If z is the largest side and $x^2 + y^2 > z^2$, then the triangle is a :

Ans
✘ 1. Isosceles right angled triangle
✔ 2. Acute angled triangle
✘ 3. Obtuse angled triangle
✘ 4. Right angled triangle

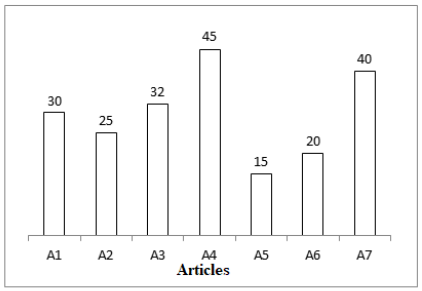
Question Type : **MCQ**
Question ID : **26433083705**
Status : **Answered**
Chosen Option : **2**

Q.38 If a + b = 6 and ab = 5, then what is the value of $a^3 + b^3$?

Ans
✘ 1. 106
✘ 2. 136
✔ 3. 126
✘ 4. 116

Question Type : **MCQ**
Question ID : **26433083598**
Status : **Answered**
Chosen Option : **3**

Q.39 The bar chart given below shows the discount percentage offered by a shopkeeper on seven articles. Selling price of these seven articles : A1, A2, A3, A4, A5, A6 and A7 is Rs.₹ 420, ₹ 600, ₹ 816, ₹ 825, ₹ 425, ₹ 800 and ₹ 840.



Selling price = Marked price $\left[1-\frac{\text{Discount percent}}{100}\right]$

What is the sum of the marked price of these seven articles?

Ans

✗ 1. ₹ 6200

✗ 2. ₹ 8000

✓ 3. ₹ 7000

✗ 4. ₹ 6500

Question Type : **MCQ**
Question ID : **26433083743**
Status : **Not Answered**
Chosen Option : **--**

Q.40

What is the value of $3\,sin^2\,30° + \frac{3}{5}cos^2\,60° - 2\,sec^2\,45°$?

Ans

✗ 1. $\frac{-5}{2}$

✗ 2. $\frac{-5}{8}$

✓ 3. $\frac{-31}{10}$

✗ 4. $\frac{-25}{17}$

Question Type : **MCQ**
Question ID : **26433083636**
Status : **Answered**
Chosen Option : **3**

Q.41 What is the value of $\frac{\sqrt{29.16}}{\sqrt{1.1664}}+\frac{\sqrt{0.2916}}{\sqrt{116.64}}+\frac{\sqrt{0.0036}}{\sqrt{0.36}}$?

Ans
1. 26/5
2. 103/20
3. 27/5
4. 101/20

Question Type : **MCQ**
Question ID : **26433083554**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.42 If the digits of a two digit number is reversed, then the number is decreased by 36. Which of the following is correct regarding the number?
I. The difference of the digits is 4.
II. The value of number can be 84.
III. Number is always a composite number.

Ans
1. I, II and III
2. II and III
3. I and III
4. I and II

Question Type : **MCQ**
Question ID : **26433083562**
Status : **Answered**
Chosen Option : **1**

Q.43 What is the value of $\frac{\cos 50^\circ}{\sin 40^\circ}+\frac{3\operatorname{cosec} 80^\circ}{\sec 10^\circ}-2\cos 50^\circ.\operatorname{cosec} 40^\circ$?

Ans
1. 3
2. 2
3. 5
4. 4

Question Type : **MCQ**
Question ID : **26433083739**
Status : **Answered**
Chosen Option : **2**

Q.44 If $\sqrt{3}\tan\theta = 3\sin\theta$, then what is the value of $\sin^2\theta - \cos^2\theta$?

Ans
1. 1/5
2. 1/4
3. 1/2
4. 1/3

Question Type : **MCQ**
Question ID : **26433083634**
Status : **Answered**
Chosen Option : **4**

Q.45 The base of a prism is a right angle triangle whose sides are 9 cm, 12 cm and 15 cm. Volume of this prism is 648 cm^3. What will be the height of prism?

Ans
1. 14 cm
2. 12 cm
3. 9 cm
4. 16 cm

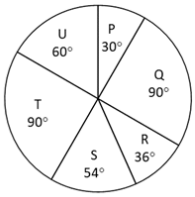
Question Type : **MCQ**
Question ID : **26433083719**
Status : **Answered**
Chosen Option : **2**

Q.46 The cost of a diamond is directly proportional to the square of its weight. The cost of a 14 gm diamond is ₹2560. This diamond got broken down into two pieces in the ratio of 5 : 9. How much loss percent is incurred due to this breakage? (Correct to two decimal places)

Ans
1. 53.47 percent
2. 49.71 percent
3. 45.92 percent
4. 55.41 percent

Question Type : **MCQ**
Question ID : **26433083570**
Status : **Answered**
Chosen Option : **3**

Q.47 The pie chart given below shows the number of males in 6 departments. Number of males in a particular department are shown in the terms of degrees with respect to the total number of males in all the 6 departments. Number of males in department S are 1080.



J = Total number of males in T and P
K = Difference between the number of males in P and Q
What is the value of J + K?

Ans

✔ 1. 3600

✘ 2. 4800

✘ 3. 2400

✘ 4. 1200

Question Type : **MCQ**
Question ID : **26433083646**
Status : **Answered**
Chosen Option : **1**

Q.48 ABCDEF is a regular hexagon. Side of the hexagon is 36 cm. What is the area of the triangle ABC?

Ans

✔ 1. $324\sqrt{3}$ cm^2

✘ 2. $360\sqrt{3}$ cm^2

✘ 3. $240\sqrt{3}$ cm^2

✘ 4. $192\sqrt{3}$ cm^2

Question Type : **MCQ**
Question ID : **26433083717**
Status : **Answered**
Chosen Option : **1**

Q.49 The selling prices of articles A and B are the same. A is sold at a profit of 28 percent and B is sold at a loss of 24 percent. If the total selling price of the both articles is ₹ . 48640, then what is the cost price of A and B, respectively?

Ans

✘ 1. ₹ 26000, ₹ 40000

✘ 2. ₹ 24000, ₹ 38000

✘ 3. ₹ 17000, ₹ 28000

✔ 4. ₹ 19000, ₹ 32000

Question Type : **MCQ**
Question ID : **26433083677**
Status : **Answered**
Chosen Option : **4**

Q.50 What is the sum of all the common terms between the given series S1 and S2?

S1 = 2, 9, 16, ……, 632

S2 = 7, 11, 15, ….., 743

Ans

✔ 1. 6974

✘ 2. 6750

✘ 3. 7140

✘ 4. 6860

Q.51 A alone can do 2/5 of a work in 12 days. B is 25 percent more efficient than A. C alone can do the same work in 12 days less than B. D is 25 percent less efficient than C. If they all work together, then the work will be completed in how many days?

Ans

✔ 1. 240/53

✘ 2. 180/43

✘ 3. 200/51

✘ 4. 300/47

Question Type : **MCQ**
Question ID : **26433083594**
Status : **Answered**
Chosen Option : **1**

Q.52 Which of the following given value is greater than $\sqrt[3]{12}$?

Ans

✘ 1. $\sqrt[6]{121}$

✔ 2. $\sqrt[12]{33214}$

✘ 3. $\sqrt[5]{60}$

✘ 4. $\sqrt[9]{1500}$

Question Type : **MCQ**
Question ID : **26433083661**
Status : **Not Answered**
Chosen Option : **--**

Q.53 If $A = \frac{\sqrt{0.0004} \times \sqrt[3]{0.000008}}{\sqrt[4]{16000} \times \sqrt[3]{125000} \times \sqrt[4]{810}}$ and $B = \frac{\sqrt[3]{0.729} \times \sqrt[4]{0.0016}}{\sqrt{0.16}}$, then what is $A \times B$?

Ans
1. ✗ 7×10^{-7}
2. ✗ $\left(\frac{7}{4}\right) \times 10^{-8}$
3. ✗ 5×10^{-8}
4. ✓ $\left(\frac{7}{3}\right) \times 10^{-7}$

Question Type : **MCQ**
Question ID : **26433083653**
Status : **Not Answered**
Chosen Option : **--**

Q.54 Which of the following is equal to $\frac{1}{\tan\theta} + \tan\theta$?

Ans
1. ✓ $\sec\theta.\operatorname{cosec}\theta$
2. ✗ 1
3. ✗ $\frac{\operatorname{cosec}\theta}{\sec\theta}$
4. ✗ $\tan^2\theta$

Q.55 A, B and C started a business with the investment of ₹ 100000, ₹ 140000 and ₹ 200000 respectively. After 3 months, C left the business. 7 months after C left the business, B also left the business. B and C took their investments with them. At the end of the year, C received his share of profit as ₹ 1155. What is the total share of profits of A and B?

Ans
1. ✗ ₹ 6150
2. ✓ ₹ 5005
3. ✗ ₹ 4995
4. ✗ ₹ 5555

Question Type : **MCQ**
Question ID : **26433083584**
Status : **Answered**
Chosen Option : **2**

Q.56 Sum ₹ 20000 and ₹ 40000 are given on simple interest at the rate of 10 percent and 15 percent per annum respectively for three years. What will be the total simple interest?

Ans

✗ 1. ₹ 36000

✓ 2. ₹ 24000

✗ 3. ₹ 32000

✗ 4. ₹ 28000

Question Type : **MCQ**
Question ID : **26433083673**
Status : **Answered**
Chosen Option : **2**

Q.57 Which of the following is equal to $\left[\frac{\tan\theta+\sec\theta-1}{\tan\theta-\sec\theta+1}\right]$?

Ans

✓ 1. $\frac{1+\sin\theta}{\cos\theta}$

✗ 2. $\frac{1+\tan\theta}{\cot\theta}$

✗ 3. $\frac{1+\cot\theta}{\tan\theta}$

✗ 4. $\frac{1+\cos\theta}{\sin\theta}$

Question Type : **MCQ**
Question ID : **26433083731**
Status : **Not Answered**
Chosen Option : **--**

Q.58 What is the sum of first 20 terms of the following series?

$1 \times 2 + 2 \times 3 + 3 \times 4 + 4 \times 5 + \ldots\ldots$

Ans

✗ 1. 3160

✗ 2. 2940

✗ 3. 3240

✓ 4. 3080

Question Type : **MCQ**
Question ID : **26433083550**
Status : **Not Answered**
Chosen Option : **--**

Q.59 When an article is sold at 5 percent discount, then there is a profit of 14 percent. If the discount is 11 percent, then what will be the profit?

Ans

✗ 1. 7.6 percent

✗ 2. 8.4 percent

✗ 3. 7.2 percent

✓ 4. 6.8 percent

Question Type : **MCQ**
Question ID : **26433083580**
Status : **Answered**
Chosen Option : **4**

Q.60 The height of a solid cylinder is 35 cm. The circumference of its base is 37 cm more than the radius. What will be the volume of this cylinder?

Ans

✗ 1. $4740\ cm^3$

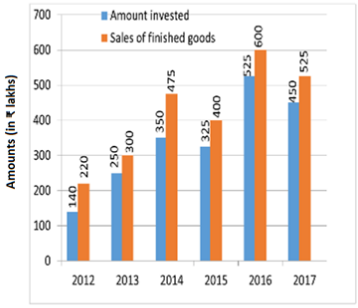
✗ 2. $4850\ cm^3$

✓ 3. $5390\ cm^3$

✗ 4. $4420\ cm^3$

Question Type : **MCQ**
Question ID : **26433083628**
Status : **Answered**
Chosen Option : **3**

Q.61 The following bar graph shows the amounts (in ₹ lakhs) invested by a company in purchasing raw materials and the values (in ₹ lakhs) of finished goods sold by the company, from 2012 to 2017.



The difference between the average amount invested in purchasing raw materials during 2012 to 2017 and the average value of sales of finished goods during the same period 2012 to 2017 is:

Ans

✗ 1. ₹86 lakhs

✗ 2. ₹90 lakhs

✓ 3. ₹80 lakhs

✗ 4. ₹85 lakhs

Question Type : **MCQ**
Question ID : **26433083644**
Status : **Answered**
Chosen Option : **3**

Q.62 Vipul and Manish invested the sum of ₹ 15000 and ₹ 20000 at the rate of 20 percent p.a and 30 percent p.a. respectively on compound interest (compounding annually). If time period is 3 years for both, then what will be the total compound interest earned by Vipul and Manish?

Ans

✗ 1. ₹ 32480

✗ 2. ₹ 31688

✗ 3. ₹ 29460

✓ 4. ₹ 34860

Question Type : **MCQ**
Question ID : **26433083675**
Status : **Answered**
Chosen Option : **4**

Q.63 Raju spends 10 percent and 20 percent of his income on transport and food respectively. He spends 30 percent of the remaining income on clothing . He saves rest of his income. If his saving is ₹26460, then what will be total expenditure on food and clothing together?

Ans

✗ 1. ₹26420

✗ 2. ₹24480

✓ 3. ₹22140

✗ 4. ₹23440

Question Type : **MCQ**
Question ID : **26433083667**
Status : **Answered**
Chosen Option : **3**

Q.64 A alone can do a work in 14 days. B alone can do the same work in 28 days. C alone can do the same work in 56 days. They start the work together and completed the work such that B was not working on last 2 days and A did not work in last 3 days. In how many days (total) was the work completed?

Ans

✗ 1. 82/7 days

✗ 2. 79/7 days

✗ 3. 65/7 days

✓ 4. 72/7 days

Question Type : **MCQ**
Question ID : **26433083693**
Status : **Answered**
Chosen Option : **4**

Q.65 PQR is an equilateral triangle and the centroid of triangle PQR is point A. If the side of the triangle is 12 cm, then what is the length of PA?

Ans

✓ 1. $4\sqrt{3}$ cm

✗ 2. $8\sqrt{3}$ cm

✗ 3. $2\sqrt{3}$ cm

✗ 4. $\sqrt{3}$ cm

Question Type : **MCQ**
Question ID : **26433083709**
Status : **Answered**
Chosen Option : **1**

Q.66 The base of a right prism is an equilateral triangle whose side is 10 cm. If height of this prism is $10\sqrt{3}$ cm, then what is the total surface area of prism?

Ans

✗ 1. $125\sqrt{3}$ cm^2

✗ 2. $325\sqrt{3}$ cm^2

✗ 3. $150\sqrt{3}$ cm^2

✓ 4. $350\sqrt{3}$ cm^2

Question Type : **MCQ**
Question ID : **26433083618**
Status : **Answered**
Chosen Option : **4**

Q.67 A mixture of acid and water contains 20 percent acid . When 10 litres of water is added to the mixture, then the percentage of acid becomes 15 percent. What is the original quantity of mixture?

Ans

✔ 1. 30 litres

✗ 2. 25 litres

✗ 3. 40 litres

✗ 4. 35 litres

Question Type : **MCQ**
Question ID : **26433083685**
Status : **Answered**
Chosen Option : **1**

Q.68

Triangle BAC is similar to triangle PQR. The area of triangle BAC and triangle PQR is 25 cm^2 and 36 cm^2 respectively. If BA =4 cm, then what is the length of PQ?

Ans

✗ 1. 5.8 cm

✗ 2. 4.2 cm

✔ 3. 4.8 cm

✗ 4. 5 cm

Question Type : **MCQ**
Question ID : **26433083612**
Status : **Answered**
Chosen Option : **3**

Q.69 What is the value of $\frac{7}{2}+\frac{11}{3}+\frac{7}{6}+\frac{11}{15}+\frac{7}{12}+\frac{11}{35}+.....+\frac{7}{156}+\frac{11}{575}$?

Ans

✗ 1. 3917/355

✔ 2. 3816/325

✗ 3. 3714/345

✗ 4. 3216/315

Question Type : **MCQ**
Question ID : **26433083558**
Status : **Not Answered**
Chosen Option : **--**

Q.70 The ratio of the three sides of the triangle are 5 : 13 : 12. What is the largest angle of the triangle?

Ans

✗ 1. 80 degrees

✔ 2. 90 degrees

✗ 3. 135 degrees

✗ 4. 120 degrees

Question Type : **MCQ**
Question ID : **26433083606**
Status : **Answered**
Chosen Option : **2**

Q.71 Price of rice is decreased by 25 percent and therefore a person can purchase 30 kg more rice in the same expenditure. If expenditure is ₹5400, then what was the original price of rice per kg?

Ans

✗ 1. ₹ 90 per kg

✓ 2. ₹ 60 per kg

✗ 3. ₹ 75 per kg

✗ 4. ₹50 per kg

Question Type : **MCQ**
Question ID : **26433083566**
Status : **Answered**
Chosen Option : **2**

Q.72 x, y and z are distinct prime numbers where $x < y < z$. If $x + y + z = 70$, then what is the value of z?

Ans

✗ 1. 29

✗ 2. 43

✗ 3. 31

✓ 4. 37

Question Type : **MCQ**
Question ID : **26433083651**
Status : **Answered**
Chosen Option : **4**

Q.73 Rohit's income is ₹32000. If his expenses is 30 percent of total income, then what will be the saving of Rohit?

Ans

✓ 1. ₹22400

✗ 2. ₹19200

✗ 3. ₹24600

✗ 4. ₹18600

Question Type : **MCQ**
Question ID : **26433083663**
Status : **Answered**
Chosen Option : **1**

Q.74 How many numbers are there from 400 to 700 in which the digit 6 occurs exactly twice?

Ans

✗ 1. 19

✗ 2. 18

✗ 3. 21

✓ 4. 20

Question Type : **MCQ**
Question ID : **26433083548**
Status : **Answered**
Chosen Option : **4**

Q.75 The difference between the areas of two concentric circles is 264 cm^2. What is the difference between the square of their radius? (use $\pi = \frac{22}{7}$)

Ans

✗ 1. $70\ cm^2$

✗ 2. $140\ cm^2$

✓ 3. $84\ cm^2$

✗ 4. $64\ cm^2$

Question Type : **MCQ**
Question ID : **26433083614**
Status : **Answered**
Chosen Option : **3**

Q.76 What is the value of $\frac{3\ sin\ 58°}{cos\ 32°} + \frac{3sin42°}{cos\ 48°}$?

Ans

✓ 1. 6

✗ 2. 9

✗ 3. 7

✗ 4. 8

Question Type : **MCQ**
Question ID : **26433083638**
Status : **Answered**
Chosen Option : **1**

Q.77 What is the solution of the following equations ?

$2x + 3y = 12$ and $3x - 2y = 5$

Ans

✓ 1. $x = 3, y = 2$

✗ 2. $x = 2, y = 3$

✗ 3. $x = -2, y = 3$

✗ 4. $x = 3, y = -2$

Question Type : **MCQ**
Question ID : **26433083703**
Status : **Answered**
Chosen Option : **1**

Q.78 A sum of ₹1250 has to distributed among A, B, C and D. Total share of B and D is equal to (14/11) of total share of A and C. Share of D is half of share of A. Share of C is 1.2 of share of A. What are the shares of A, B, C and D respectively ?

Ans

✔ 1. ₹250, ₹575, ₹300, ₹125

✘ 2. ₹350, ₹525, ₹300, ₹125

✘ 3. ₹250, ₹525, ₹300, ₹125

✘ 4. ₹250, ₹575, ₹300, ₹175

Question Type : **MCQ**
Question ID : **26433083671**
Status : **Answered**
Chosen Option : **1**

Q.79 Volume of a cone whose radius of a base and height are r and h respectively, is 400 cm^3. What will be the volume of a cone whose radius of base and height are 2r cm and h cm respectively?

Ans

✘ 1. 100 cm^3

✔ 2. 1600 cm^3

✘ 3. 1200 cm^3

✘ 4. 800 cm^3

Question Type : **MCQ**
Question ID : **26433083620**
Status : **Answered**
Chosen Option : **2**

Q.80 An person 1.8 metre tall is $30\sqrt{3}$ metre away from a tower. If the angle of elevation from his eye to the top of the tower is 30 degree, then what is the height (in m)of the tower?

Ans

✘ 1. 32.5

✘ 2. 37.8

✘ 3. 30.5

✔ 4. 31.8

Question Type : **MCQ**
Question ID : **26433083640**
Status : **Answered**
Chosen Option : **4**

Q.81 If $x + y = 1$, then what is the value of $x^3 + 3xy + y^3$?

Ans
✗ 1. -1
✓ 2. 1
✗ 3. 0
✗ 4. 2

Question Type : **MCQ**
Question ID : **26433083697**
Status : **Answered**
Chosen Option : **2**

Q.82 Marked price of an article is ₹ 28000. It can be sold at one of the following ways:
Way A: A single discount of 24 percent.
Way B: Two successive discounts of 16 percent and 10 percent.
Which way will have lowest selling price and what will be the value of it?

Ans
✗ 1. Way A, ₹ 21168
✗ 2. Way B, ₹ 21280
✗ 3. Way A, ₹ 21280
✓ 4. Way B, ₹ 21168

Question Type : **MCQ**
Question ID : **26433083582**
Status : **Answered**
Chosen Option : **4**

Q.83 If $xy = -6$ and $x^3 + y^3 = 19$ (x and y are integers), then what is the value of $\frac{1}{x^{-1}} + \frac{1}{y^{-1}}$?

Ans
✗ 1. -1
✗ 2. -2
✓ 3. 1
✗ 4. 2

Question Type : **MCQ**
Question ID : **26433083699**
Status : **Answered**
Chosen Option : **3**

Q.84 If $A = 0.3\overline{12}$, $B = 0.4\overline{15}$ and $C = 0.30\overline{9}$, then what is the value of $A + B + C$?

Ans

✔ 1. 1141/1100

✗ 2. 1097/1100

✗ 3. 1211/1100

✗ 4. 1043/1100

Question Type : **MCQ**
Question ID : **26433083657**
Status : **Not Answered**
Chosen Option : **--**

Q.85 Length of a train is 330 metres and it is moving at the speed of 72 km/hr. In how much time will it takes cross a platform of length 710 metres?

Ans

✔ 1. 52 seconds

✗ 2. 56 seconds

✗ 3. 72 seconds

✗ 4. 64 seconds

Question Type : **MCQ**
Question ID : **26433083687**
Status : **Answered**
Chosen Option : **1**

Q.86 Two trains whose lengths are 450 metres and 300 metres are moving towards each other at the speed of 162 km/hr and 108 km/hr respectively. If distance between trains is 300 metres, then in how much time, these trains will cross each other?

Ans

✔ 1. 14 seconds

✗ 2. 35 seconds

✗ 3. 28 seconds

✗ 4. 21 seconds

Question Type : **MCQ**
Question ID : **26433083590**
Status : **Answered**
Chosen Option : **1**

Q.87 A can do 1/4 part of a work in 9 days. B can do 2/3 part of the same work in 28 days. Working together, in how many days can A and B complete the whole work?

Ans

✗ 1. 262/11 days

✓ 2. 252/13 days

✗ 3. 261/15 days

✗ 4. 198/17 days

Question Type : **MCQ**
Question ID : **26433083691**
Status : **Answered**
Chosen Option : **2**

Q.88 An article is sold for ₹ 54120 after two successive discounts of 12 percent and 18 percent. What is the marked price of the article?

Ans

✓ 1. ₹ 75000

✗ 2. ₹ 78000

✗ 3. ₹ 72000

✗ 4. ₹ 81000

Question Type : **MCQ**
Question ID : **26433083681**
Status : **Answered**
Chosen Option : **1**

Q.89 What will be the simple interest on a sum of ₹12000 at the rate of 15 percent per annum for three years?

Ans

✗ 1. ₹ 7200

✗ 2. ₹ 6000

✓ 3. ₹ 5400

✗ 4. ₹ 4500

Question Type : **MCQ**
Question ID : **26433083572**
Status : **Answered**
Chosen Option : **3**

Q.90 The curved surface area of a solid hemisphere is 22 cm^2. What is the total surface area of the hemisphere? (use π=22/7)

Ans

✗ 1. 66 cm^2

✗ 2. 44 cm^2

✓ 3. 33 cm^2

✗ 4. 30 cm^2

Question Type : **MCQ**
Question ID : **26433083622**
Status : **Answered**
Chosen Option : **1**

Q.91 Vinay and Mahesh are 250 metres apart from each other. They are moving towards each other with the speed of 36 km/hr and 54 km/hr respectively. In how much time will they meet each other?

Ans

✗ 1. 12 seconds

✗ 2. 20 seconds

✓ 3. 10 seconds

✗ 4. 15 seconds

Question Type : **MCQ**
Question ID : **26433083689**
Status : **Answered**
Chosen Option : **3**

Q.92 ABC is an equilateral triangle with side 12 cm. What is the length of the radius of the circle inscribed in it?

Ans

✓ 1. $2\sqrt{3}$ cm

✗ 2. $8\sqrt{3}$ cm

✗ 3. $4\sqrt{3}$ cm

✗ 4. $6\sqrt{3}$ cm

Question Type : **MCQ**
Question ID : **26433083604**
Status : **Answered**
Chosen Option : **1**

Q.93 Salary of Mohit is 60 percent more than Vijay. Salary of Vijay is how much percent less than Mohit?

Ans

✗ 1. 42.5

✗ 2. 47.5

✗ 3. 45

✓ 4. 37.5

Question Type : **MCQ**
Question ID : **26433083564**
Status : **Answered**
Chosen Option : **4**

Q.94 AB is the chord of a circle such that AB = 10 cm. If the diameter of the circle is 20 cm, then the angle subtended by the chord at the centre is _____.

Ans

✗ 1. 45 degree

✓ 2. 60 degree

✗ 3. 30 degree

✗ 4. 90 degree

Question Type : **MCQ**
Question ID : **26433083713**
Status : **Answered**
Chosen Option : **2**

Q.95 The radius of a solid sphere is 42 cm. It is melted to form identical small solid spheres whose radius is 7 cm. What is the number of small solid spheres obtained?

Ans

✗ 1. 64

✗ 2. 36

✓ 3. 216

✗ 4. 125

Question Type : **MCQ**
Question ID : **26433083723**
Status : **Answered**
Chosen Option : **3**

Q.96 The graph of the equation $x = a\ (a \neq 0)$ is a _____.

Ans

✗ 1. line parallel to x axis

✓ 2. line parallel to y axis

✗ 3. line at an angle of 45 degree to y axis

✗ 4. line at an angle of 45 degree to x axis

Question Type : **MCQ**
Question ID : **26433083602**
Status : **Not Answered**
Chosen Option : **--**

Q.97 Three years ago, Raman's salary was ₹45000. His salary is increased by 10 percent, A percent and 20 percent in first, second and third year respectively. Raman's present salary is ₹83160. What is the value of A?

Ans

✗ 1. 50

✗ 2. 30

✗ 3. 54

✓ 4. 40

Question Type : **MCQ**
Question ID : **26433083665**
Status : **Answered**
Chosen Option : **4**

Q.98 The height of a cylinder is 45 cm. If circumference of its base is 132 cm, then what is the curved surface of this cylinder? (use π=22/7)

Ans

✗ 1. 6360 cm^2

✗ 2. 6270 cm^2

✗ 3. 5720 cm^2

✓ 4. 5940 cm^2

Question Type : **MCQ**
Question ID : **26433083725**
Status : **Answered**
Chosen Option : **4**

Q.99 How many composite numbers are there from 53 to 97?

Ans

✗ 1. 36

✗ 2. 38

✗ 3. 37

✓ 4. 35

Question Type : **MCQ**
Question ID : **26433083649**
Status : **Answered**
Chosen Option : **2**

Q.100 A alone can do a work in 11 days. B alone can do the same work in 22 days. C alone can do the same work in 33 days.
They work in the following manner:
Day 1: A and B work.
Day 2: B and C work.
Day 3: C and A work.
Day 4: A and B work. And so on.
In how many days will the work be completed?

Ans

✓ 1. 9 days

✗ 2. 12 days

✗ 3. 3 days

✗ 4. 6 days

Question Type : **MCQ**
Question ID : **26433083592**
Status : **Answered**
Chosen Option : **1**