2007 MBA - PROGRESSION TEST QUESTION PAPER

TIME : 3 HOUR

Progression test

Question 2 of 25
the sum of 5 + 55 + 555 + ... to n term

1. 5/81 [10n+1 - 9n-10]

2. 5/81[10n - 9n + 10]

3. 5/9[10n - 9n + 10]

4. None of these

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Question 3 of 25
Three numbers whose sum is 15 are in A.P. ; if 1,4 and 19 be added to them respectively, the results are in G.P. Determine the numbers.

1. 2, 5, 8

2. 1, 6, 8

3. $8, 5, 2

4. None of these

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Question 4 of 25
Find the general term of the geometric progression with the 2nd term = ½, the 5th term = 4.

1. 2n-3

2. 2n +3

3. 2n - 1

4. None of these

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Question 5 of 25
the sum of 1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + … to 2n terms.

1. n

2. -n

3. n2

4. 2n - 1

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Question 6 of 25
If x, y, z are in A.P. then (x + 2y - z) (2y + z - x) (z + x -y) = ?

1. xyz

2. 2xyz

3. 4xyz

4. None of these

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Question 7 of 25
In a certain colony of cancerous cells, each cell divides into two every hour. How many cells will be produced from a single cell if the rate of division continues for 10 hours?

1. 1000

2. 1035

3. 1023

4. 1003

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Question 8 of 25
Find the sum of all natural numbers between 250 and 1000 which are exactly divisible by 3?

1. 156375

2. 14637

3. 136375

4. None of these

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Question 9 of 25
Find the sum of the series to n terms 3 + 6 + 10 + 16 + …

1. 2n + 1

2. n + n2 -2n

3. $2n -1 + n + n2

4. None of these

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Question 10 of 25
If (xn + 1 + yn + 1) / (xn + yn) is the harmonic mean of x and y, find the value of n?

1. 1

2. -2

3. 2

4. -1

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Question 11 of 25
Te 6th and 17th terms of an A.P. are 19 and 41 respectively, then the 40th term is

1. 87

2. 80

3. 60

4. 65

5. 78

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Question 12 of 25
Find the sum of first 24 terms of A.P: a1, a2, a3, ……, if it is known that a1 + a5 + a10 + a15 + a20 + a24 = 225.

1. 900

2. 950

3. 1000

4. None of these

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Question 13 of 25
After striking a floor a certain ball rebounds toth of the height from which it has fallen. Find the total distance that it travels before coming to rest, if it is gently dropped from a height of 120 metres.

1. 1080

2. 1000

3. 900

4. 890

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Question 14 of 25
Nidhi arranges to pay off a debt of Rs. 3600 to CASA Bank by 40 annual installments in the form of an A.P. When 30 of the installments had been repaid she dies, leaving a third of the debt unpaid. What is the value of the first installment

1. 45

2. 47

3. 49

4. 51

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Question 15 of 25
The interior angles of a polygon are in A.P. The smallest angle is 120o and the common difference is 5o. Find the number of sides of the polygon.

1. 6

2. 7

3. $8

4. 9

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Question 16 of 25
In an A. P. fourth term is –13/2, seventeenth is zero and last one is 21. Find the no. of terms.

1. 47

2. 48

3. 49

4. 59

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Question 17 of 25
A person saves each year Rs. 100 more than he saved in the preceding year, and he saves Rs. 200 the

first year. How many years would it take for his savings, not including interest to amount to Rs. 23000?

1. 16

2. 18

3. $16

4. 22

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Question 18 of 25
A body falls 16 metres in the first second of its motion, 48 metres in the second, 80 metres in the third, 112 metres in the fourth and so on. How far does it fall during the 11th second of its motion?

1. 300 metres

2. 306 metres

3. 326 metres

4. 336 metres

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Question 19 of 25
If H is H.M. between a and b then the value of H/a + H/b is

1. 2

2.

3.

4. None of these

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Question 20 of 25
Thesum of three consecutive terms of an A.P. is 15 and the sum of their squares is 83. Find the terms.

1. 3, 6, 9

2. 3, 5, 7

3. $4, 7, 9

4. 3, 5, 9

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Question 21 of 25
The sum of 100 terms of the series 12 -22 + 32 -42 + ……..is

1. - 5050

2. - 4950

3. - 1101

4. 240

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Question 23 of 25
If a, b, c, d and in G.P. then (a - c)2 + (b -c)2 + (b - d)2 =

1. 0

2. (a -d)2

3. (b - d)2

4. None of these

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Question 24 of 25
If x, y, z are in A.P. then , , are

1. A.P

2. G.P

3. H.P

4. None of these

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Question 25 of 25
If a, b, c are in A.P. then 1/bc, 1/ ca, 1/ab are in

1. A.P.

2. G.P.

3. H.P.

4. None of these