2007 MBA - TRIGONOMETRY QUESTION PAPER

TIME : 3 HOUR

Question 1 of 25
Find the value of cos2 15° – cos230°+ cos2 45° – cos2 60° + cos2 75°.

1. ½

2. ¼

3. – ½

4. – ¼

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Question 2 of 25
Evaluate: sin2 25o + sin2 65o.

1. 0

2. 1

3. -1

4. can’t find

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Question 3 of 25
Solve for x: 2 cos 3x – 1 = 0 where x is any real number.

1. 60o, 300o

2. 20o, 100o

3. $30o, 60o

4. 60o, 180o

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Question 4 of 25
If Cos A = and A lies in the fourth quadrant, find sin A:

1.

2.

3.

4. None of these

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Question 5 of 25
The value of sec 50o sin 40o + cos 40o cosec 50o is.

1. 1

2. 0

3. 2

4. Can't find

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Question 6 of 25
Solve: + = 4 for Î (0, p).

1. 60o

2. 30o

3. 45o

4. None of these

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Question 7 of 25
Solve for x: 2 sin 3x – 1 = 0 where x is an integer

1. 30,150

2. 10,50

3. $30,60

4. None of these

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Question 8 of 25
A ladder 24 m long lay down on the wall such that it touches the wall at midway of the wall's height. At the foot of the ladder, the angle of elevation from the midpoint of the wall is 45o. Find the height of the wall.

1. 24

2. 18

3. 12

4. None of these

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Question 9 of 25
Sin (180° + j) sin (180°– j) cosec2 j is equal to:

1. 1

2. -1

3. 0

4. None of these

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Question 10 of 25
is equal to

1. sec x + tan x

2. sec x – tan x

3. cosec x + cot x

4. cosec x– cot x

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Question 11 of 25
The value of the expression tan 1°

1. 0

2. not defined

3. 1

4. ¥

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Question 12 of 25
If tan A = 3/4, find the value.

1.

2.

3.

4.

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Question 13 of 25
A tree is broken by the wind. The top struck the ground at an angle of 30o and at a distance of 30 m from the root. Find the total height of the tree.

1. 51.96 m

2. 37.89 m

3. 42.53 m

4. 20.35 m

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Question 14 of 25
Convert 2 radians into degrees

1. 90°

2. p/2

3. 114.6°

4. None of these

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Question 15 of 25
Convert 170°30’ into radian

1. 2.976

2. 2.95

3. 2.5

4. None of these

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Question 16 of 25
A wheel makes 600 revolutions per minutes. Find its angular speed in radians per second.

1. 600

2. 62.83

3. $10

4. None of these

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Question 17 of 25
A wheel makes 600 revolutions per minutes. find the time taken by the wheel to turn 120o.

1. 0.45 sec

2. 4 sec

3. $1.91 sec

4. None of these

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Question 18 of 25
Simplify (sin A + cos A)2 + (sin A – cos A)2:

1. 0

2. 3

3. 4

4. 2

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Question 19 of 25
Express the cos 800° in terms of a positive acute angle.

1. sin 80°

2. cos 80°

3. – sin 80°

4. – cos 80°

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Question 20 of 25
From a 60 m high building the angles of depression of two cars on the opposite ends of the building are observed to be 60o & 30o. Find the distance between the cars if the line joining them passes through the foot of the building.

1. 173.2

2. 1.73 m

3. 138.6 m

4. 200 m

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Question 21 of 25
If sin A = – 1/2, then find the value of cos A :

1. ±Ö3/2

2. –

3. – 1

4. 1

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Question 22 of 25
Find the maximum value of 3 –2 cos X :

1. 1

2. 3

3. 5

4. None of these

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Question 23 of 25
Find the minimum value of 3sinq for 0° £ q £ 360°

1. 3/1

2. 1/3

3. 0

4. 1

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Question 24 of 25
The simplified value of
+ will be :

1. X

2. - 2X

3. X/2

4. X - Y

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Question 25 of 25
simplified value of [sin X + sin (p/2 – X)]2 + [cos X – cos (p/2 – X)]2 will be:

1. 1

2. 0

3. 2

4. None of these