2007 MBA – MATHS MODEL QUESTION PAPER

TIME : 3 HOUR

Quantative aptitude test :

1.

You have a rectangle sheet of paper measuring 13 inches by 8 inches. Using a pair of scissors and making a single cut along a straight line across the rectangle, remove the largest possible square from the rectangle. Set the square aside and repeat this procedure on the residual piece. Continue this process until you have nothng but a piece of squares. How much square do you have in you pile?

5

6

7

8

2.

36 identical chairs have to be arranged in rows with the same number of chairs in each row. Each row must contain at least three chairs. A row is parallel to the front of the room. How many different arrangements are possible?

5

6

7

9

3.

The value of $f(5) + g(5) + h(5) + i(5)$ is equal to :

h(25)

g(25)

i(25)

f(25)

4.

If ? and ? are the roots of the equation $x2 – px + q = 0$ find the value of ?3 + ?3.

p3 + q3 – 2pq

p3 – 3pq

qp2 – 3q2

none of these

5.
Harry and Jon plan to spend the afternoon at the fair. After paying the entrance price of Rs.5.00 each they entered the fair ground. Jon looked around and saw that the Dragon ride was Rs. 3.50 and the Loppo was Rs. 2.75. In addition, there were 3 activities he wanted to do which cost Rs. 1.50 each. Jon guessed that snacks and drinks would cost Rs. 3.50. Jon could see that he did not have enough money. Jon then borrowed Rs. 6.00 from Harry. They noted that after Harry gave Jon Rs. 6, Harry still had Rs. 12.00 more than Jon. How much more money did Harry have than Jon had before Harry gave Jon Rs.6.00?

Rs. 12

Rs.18

Rs.24

Rs. 30

6.
A personnel officer drove from Lake Charles to a conference in Baton Rouge. The total distance for the round trip was 240 miles. The time required to travel one way to Baton Rouge was two hours. Due to heavy traffic during the return trip to Lake Charles, an extra hour was required. How much slower was the personnel officer traveling on the return trip?

10 mph slower

15 mph slower

20 mph slower

25 mph slower

7.
A state park is budgeted at an amount 9 times the amount budgeted for a nearby city park. If the combined yearly budget of both parks is Rs.1,000,000, what is the average monthly budget of the city park?

Rs.8,111.00

Rs.8,222.22

Rs.8,333.33

Rs.8,444.44

8.
Joseph has two number cubes, each with faces labeled by the numbers – 15, – 10, – 5, 5, 10, and 15. If Joseph rolls the two cubes and adds the resulting numbers, what is the probability that the sum will be 0?

Can't determined

1/12

1/4

1/6

9.
In how many ways can a multiple-choice objective question (with one or more than one, out of the four, answer choices being possibly correct) be answered?

3

15

16

4

10.
The roots of the equation f(x) = x! are …

Real

Imaginary

Not defined

Insufficient data

11.
]What is the profit percentage of a dishonest cloth merchant who uses a scale which weighs less by 16.67% and claims to sell at cost price?

20

15

16

10

12.
Let b > 0 be an integer and suppose that $(237)b = (157)10$. What is $(345)b$ when written in base 10?

229

230

231

232

13.
How many litres of Rs 16 per litre wine should a merchant add with 25 litres of Rs 20 per litre wine, so that he earns 25% by selling the mixture at Rs 22?

62.5 litres

37.5 litres

42.5 litres

25 litres
14.
What is the total distance travelled by a steel ball which is dropped on a floor from a 10 m high ceiling, if it jumps up to half the height of the previous jump after every collision with the floor?

20 m

30 m

50 m

100 m
15.
The graph of $f(x) = x!$ is

Discontinuous

Exponential

Polynomial

Can't be plotted
16.
The perimeter of a right triangle is 40 and the sum of the squares of its sides is 578. Find the length of the smallest side.

6

7

8

9
17.
From a plywood tile 5 cell ? 5 cell, in how many different ways can square tiles (with integral cells) be formed if the central cell is missing?

55

25

24

36
18.
The rate of diffusion of a gas is inversely proportional to the cube root of its density and is directly proportional to the temperature in oC. If a gas with a density of 27 units at 64oC diffuses at a rate of 12 units, what will be its rate of diffusion at a density of 64 units and 45o C temperature?

8.46 units

12.96 units

5.33 units

6.33 units
19.
On a certain test, the average score for the women in the class is 83, while the average score for the men in the class is 71. If the average score of all the students in the class is 80, what percentage of the students are women?

60%

65%

70%

75%
20.
F [{F(1, 0) ? F(0, 5)} {F(7, 7) ? F(2, 0)}] = ?

15

2

9

7