**Area**

**MCQ – Single Correct**

1. The area ( in sq. units) of the region {(x,y):x ≥0, x + y ≤ 3 , x2 ≤ 4y and y ≤ 1 + } is :

(1)  (2) 

(3)  (4)  **[2017]**

2. The area ( in sq. units ) of the region {(x,y) : y2 ≥ 2x and x2 + y2 ≤ 4x , x ≥ 0 , y ≥ 0 } is :

(1)  (2) 

(3)  (4) π -  **[2016]**

3. The area ( in square units ) of the region described by {(x,y) : y2 ≤ 2x and y ≥ 4x -1} is :

(1)  (2) 

(3)  (4)  **[2015]**

4. The area of the region described by A = {(x,y) : x2 + y2 ≤ 1 and y2 ≤ 1 – x } is **[2014]**

(1)  (2) 

(3)  (4) 

5. The area ( in square units ) bounded by the curves  x-axis, and lying in the first quadrant is

(1) 36 (2) 18

(3)  (4) 9 **[2013]**

6. The area bounded between the parabola  and  and the straight line y = 2 is

(1)  (2) 

(3)  (4)  **[2012]**

7. The area bounded by the curves y2 = 4x and x2 = 4y is

(1) 8/3 (2) 0

(3) 32/3 (4) 16/3 **[2011]**

8. The area bounded by the curves y = cos x and y = sin x between the ordinates x = 0 and x = 3π/2 is

(1)  (2) 

(3)  (4)  **[2010]**

9. The area of the plane region bounded by the curves x + 2y2 = 0 and x + 3y2 = 1 is equal to

(1) 5/3 (2) 1/3

(3) 2/3 (4) 4/3 **[2008]**

10. The area enclosed between the curve y = loge(x + e) and the coordinate axes is

(1) 1 (2) 2

(3) 3 (4) 4 **[2005]**

11. The parabolas y2 = 4x and x2 = 4y divide the square region bounded by the lines x = 4 , y = 4 and the coordinate axes. If S1 , S2 , S3 are respectively the areas of these parts numbered from top to bottom; then S1 : S2 : S3 is

(1) 1 : 2 : 1 (2) 1 : 2 :3

(3) 2 : 1 : 2 (4) 1 : 1 : 1 **[2005]**

12. Let f(x) be a non-negative continuous function such that the area bounded by the curve y = f (x), x-axis and the ordinates x = 3 :  and x = β > π/4 is . Then f(π/2) is

(1)  (2) 

(3)  (4)  **[2005]**

13. The area of the region bounded by the curves y = |x-2|, x = 1, x = 3 and the x-axis is

(1) 1 (2) 2

(3) 3 (4) 4 **[2004]**

14. The area of the region bounded by the curves y = |x - 1| and y = 3 - |x| is

(1) 2 sq units (2) 3 sq units

(3) 4 sq units (4) 6 sq units **[2003]**

15. The area bounded by the curves y = ln x, y = ln |x| , y = |ln x| and y = |ln| |x| is

(1) 4 sq. units (2) 6 sq. units

(3) 10 sq. units (4) none of these **[2002]**