**Area**

**Choose the most appropriate option (a, b, c or d).**

Q 1. P(α, f(α)) and Q(β, f(β)) are ends of an arc in the first quadrant. The area bounded by the arc, ordinates through P and Q, and the x-axis is

(a)  (b)  (c)  (d) 

Q 2. The area bounded by the lines y = |x – 2|, |x| = 3 and y = 0 is

(a) 13 unit2 (b) 5 unit2 (c) 9 unit2 (d) 7 unit2

Q 3. The area bounded by the curve and the line y = 0 is

(a) 4π (b) 2π (c) π (d) 

Q 4. The area bounded by the curve y2 = 4x and the double ordinate x = 2, is

(a)  (b)  (c)  (d) 

Q 5. The area bounded by the curve x2 = ky, k > 0 and the line y = 3 is 12 unit2. Then k is

(a) 3 (b)  (c)  (d) none of these

Q 6. The area bounded by the curve y = 2x, the x-axis and the y-axis is

(a) loge 2 (b) loge 4 (c) log4 e (d) log2 e

Q 7. The area of the portion enclosed by the curve and the axes of reference is

(a)  (b) a2 (c)  (d) 

Q 8. The area bounded by the curve x = cos-1y and the lines |x| = 1 is

(a) sin 1 (b) cos 1 (c) 2 sin 1 (d) 2 cos 1

Q 9. The area bounded by the curve , the line 2y + 3 = x and the x-axis in the first quadrant is

(a) 9 (b)  (c) 36 (d) 18

Q 10. The area of the region bounded by the pairs of lines y = |x – 1| and y = 3 - |x| is

(a) 3 unit2 (b) 4 unit2 (c) 6 unit2 (d) 2 unit2

Q 11. The ratio in which the area bounded by the curves y2 = 4x and x2 = 4y is divided by the line x = 1 is

(a) 64 : 49 (b) 15 : 34 (c) 15 : 49 (d) none of these

Q 12. Let f(x) be a continuous function such that the area bounded by the curve y = f(x), the x-axis and the two ordinates x = 0 and x = a is The is

(a)  (b)  (c)  (d) 

Q 13. The area bounded by the curve f(x) = cex(c > 0), the x-axis and the two ordinates x = p and x = q is proportional to

(a) f(p) . f(q) (b) |f(p) – f(q)| (c) f(p) + f(q) (d) 

Q 14. The ordinate x = a divides the area bounded by the x-axis, the curve and the ordinates x = 2 and x = 4 into equal parts. Then a is

(a) 3 (b)  (c)  (d) 

Q 15. The area of the ellipse falling in the first quadrant is

(a)  (b)  (c)  (d) 

1c 2a 3b 4c 5a 6d 7a 8c 9a 10b

11c 12a 13b 14c 15b