



National Commerce Olympiad 2012
A True Test Of Your Genius
National Commerce Olympiad Foundation
An NGO For Research & Development Of Commerce Studies

Math XI

1. The product of cube roots of -1 is equal to
 - a. 0
 - b. 1
 - c. -1
 - d. None of these
2. If a, b, c, d, e, f are in A.P., then e-c is equal to
 - a. 2 (c-a)
 - b. 2 (d-c)
 - c. 2 (f-d)
 - d. d-c
3. The product of the roots of the equation $mx^2 + 6x + (2m - 1) = 0$ is -1. Then m =
 - a. 1
 - b. 1/3
 - c. -1
 - d. -1/3
4. There are 10 points in a plane, out of these 6 are collinear. The number of triangles formed by joining these points is
 - a. 100
 - b. 120
 - c. 150
 - d. None of these
5. If the coefficients of x^7 and x^8 in $(2 + x/3)^n$ are equal, then n is equal to
 - a. 56
 - b. 55
 - c. 45
 - d. 15
6. The equation $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ represents a circle, the condition will be
 - a. $a = b$ and $c = 0$



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- b. $f = g$ and $h = 0$
c. $a = b$ and $h = 0$
d. $f = g$ and $c = 0$
7. At what point on the parabola $y^2 = 4x$ the normal makes equal angles with the axes?
a. (4, 4)
b. (9, 6)
c. (4, -4)
d. (1, -2)
8. The curve with parametric equations $x = 1 + 4\cos\theta$, $y = 2 + 3\sin\theta$ is
a. An ellipse
b. A parabola
c. A hyperbola
d. A circle
9. There are 8 MBA and 6 PHD's. a committee of 6 is to be formed such that three particular PHD's are always selected?
a. 165
b. 145
c. 275
d. 125
10. 30 people are in a room. 20 of them play golf. 15 of them play golf and tennis. If everyone plays at least one of the two sports, how many of the people play tennis only?
a) 3
b) 4
c) 5
d) 10



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Answer key

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



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NCOF Sample questions 2012