

TIME: 40 minutes

MAXIMUM MARKS: 30

SEM	SET	PAPER CODE	TITLE OF THE PAPER
II	2014	14PEC2106	MATHEMATICAL TOOLS FOR ECONOMICS

SECTION - A**Answer all the questions:** **$30 \times 1 = 30$** **Choose the correct answer:**

- What are the informations required to locate the position of straight line in a plane.
 - Any two points through which it passes
 - The intercept on the y axis and the angle it makes with x axis
 - Intercepts on both axis
 Which is correct?
 - (i) & (ii)
 - (i) & (iii)
 - all the above
 - none of the above
- A slope of the line represents the ration of
 - Vertical rise of fall of the line to the horizontal line
 - Rise or fall on the vertical line to the horizontal line
 - Rise or fall on the horizontal line
 - None of the above
- The slope of the straight line $2x - 3y + 1 = 0$ is
 - $-2/3$
 - $-3/2$
 - $2/3$
 - $3/2$
- Which of the following has the greatest y intercept in magnitude?
 - $2x + 3y = 4$
 - $x + 2y = 3$
 - $3x + 4y = 5$
 - $4x + 5y = 6$
- The equation of the straight line containing the point $(-2, 1)$ and parallel to $4x - 2y = 3$ is
 - $y = 2x + 5$
 - $y = 2x - 1$
 - $y = x - 2$
 - $y = 1/2x$
- Equation of two parallel straight lines differ by
 - x term
 - y term
 - Constant term
 - xy term

7. Given function $y = 8x^4$, $d^2y/dx^2 = ?$
 a) $32x^3$ b) $96x^2$ c) $192x$ d) 192
8. What is elasticity of demand?
 a) $\frac{\text{Proportionate change in quantity demanded}}{\text{Proportionate change in price}}$
 b) $\frac{\text{Proportionate change in price}}{\text{Proportionate change in quantity}}$
 c) $\frac{\text{price}}{\text{quantity}}$ d) $\frac{\text{quantity}}{\text{price}}$
9. If R is the revenue function for x units, dR/dx gives
 a) Average revenue b) Marginal revenue
 c) Total revenue d) None of the above
10. Find the MR at $x = 80$ when the total revenue function is $y = 1400x - 7.5x^2$.
 a) 64000 b) 1392.5 c) 200 d) 700
11. Find the elasticity demand when the demand is $q = 20/p + 1$ and $p = 3$.
 a) $3/4$ b) $4/3$ c) $5/4$ d) $2/3$
12. If $AR = 30$ and price elasticity of demand = 1.5 marginal revenue =
 a) 0 b) 10 c) 30 d) 2
13. What is single valued function?
 a) Corresponding to each value of x, there exists only one value of xy
 b) There exist more than one value
 c) There exist one value for y
 d) All of the above
14. What is limit of a function
 a) $\lim_{x \rightarrow a} f(x) = 1$ b) $\lim_{x \rightarrow a} f(x) = 0$
 c) $\lim_{x \rightarrow a} f(x) = -1$ d) None of the above

