Name: **Enrolment No:**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Business Economics-I **Semester: I**
Programme: BBA(H) Specialization in Oil and Gas **CC:ECON 1001**
Time: 03 hrs. **Max. Marks: 100**
Instructions: Do as directed

SECTION A

S. No.		Marks	CO
Q 1	Fill in the blanks	**10**	**CO1**
	Law of demand states that as the ……. Of a commodity …… the quantity ……. Of commodity ……. and vice versa. When the ……. of a good is equal to ……., market is said to be in ……. Demand curve slopes ……. Means price and quantity demanded and …… are …… related to each other.		
	. Choose the appropriate one 1. Which of the following is father of economics? (a) J.M. Keynes (b) Adam Smith (c) Amartya Sen (d) Alferd Marshal 2. Who said economics is the science of wealth (a) J.M. Keynes (b) Adam Smith (c) Amartya Sen (d) Alferd Marshal 3. Elasticity of demand measures: (a) %age change in quantity demanded due %age change in output (b) %age change in output due to %age change in price (c) %age change in quantity demanded due to %age change in Price, Income and price of related good. (d) All of the above. 4. If 100% change in income brings 200% change in quantity demanded of good, then the good is said to be: (a) Normal good (b) Inferior good (c) Luxury good (d) superior good 5. A fall in the price of a commodity, holding everything else constant, results in and is referred to as	**10**	**CO1**

	(a) an increase in demand, (b) a decrease in demand, (c) an increase in the quantity demanded, or (d) a decrease in the quantity demanded. 6. When an individual's income rises (while everything else remains the same), that person's demand for a normal good (a) rises, (b) falls, (c) remains the same, or (d) any of the above. 7. When the price of a substitute of commodity X falls, the demand for X (a) rises, (b) falls, (c) remains unchanged, or (d) any of the above. 8. If the percentage increase in the quantity of a commodity demanded is smaller than the percentage fall in its price, the coefficient of price elasticity of demand is (a) greater than 1, (b) equal to 1, (c) smaller than 1, or (d) zero. 9. If the quantity of a commodity demanded remains unchanged as its price changes, the coefficient of price elasticity of demand is (a) greater than 1, (b) equal to 1, (c) smaller than 1, or (d) zero. 10. If the income elasticity of demand is greater than 1, the commodity is (a) necessity, (b) a luxury, (c) an inferior good, or (d) a nonrelated good.		
SECTION B			
Q 2	For the following utility functions find MU_x , MU_y *and* MRS_{xy}		
	I. $U = x^{0.5} + y^{0.5}$ II. $U = x^{\alpha} + y^{\beta}$ III. $U = x^{0.5} + y^{0.5}$ IV. $U = x^{2/3} + y^{1/3}$ V. $U = x^2 + y^2$	**20**	**CO4**
SECTION-C			
Q 3	Attempt *any three* questions from this section		
	I. Explain the scarcity definition of economics. Do you think that this definition is an improvement over wealth and welfare definition of economics?	**10**	**CO1**
	II. State the law of demand. Determine equilibrium price and quantity for the following: a) $Q_d = 100 - 20P$, $Q_s = -20 + 10P$ b) $Q_d = 24 - 3P$, $Q_s = -6 + 7P$ c) $Q_d = 10 - {}^{2}/_{5}\,P$, $Q_s = -2 + {}^{8}/_{10}\,P$	**10**	**CO3**

<table>
<tr><td></td><td>III. What is production function? Find the marginal product of Labor (MP_L), marginal Product of Capital (MP_K) and Elasticity of Output with respect to Labor ($E_{Q,L}$) and Capital ($E_{Q,K}$) for the following:
a) $Q = L^2.K^2$
b) $Q = L^{1/2}.K^{1/2}$
c) $Q = L^{2/3}.K^{1/3}$</td><td>10</td><td>CO3</td></tr>
<tr><td></td><td>IV. Determine the best level of output for a perfectly competitive firm that sells its product at P = 4 and faces $TC = 0.04\ Q^3 - 0.9Q^2 + 5$. Will the firm produce this level of output? Why?</td><td>10</td><td>CO5</td></tr>
<tr><td colspan="4">SECTION-D</td></tr>
<tr><td>Q4</td><td>a) Calculate income elasticity from the following and comment on the nature of the good whether it’s a necessity, luxury or an inferior good.
<table>
<tr><td>Income (Rs./year)</td><td>4,000</td><td>6,000</td><td>8,000</td><td>10,000</td><td>12,000</td><td>14,000</td><td>16,000</td><td>18,000</td></tr>
<tr><td>Quantity (1b/year)</td><td>100</td><td>200</td><td>300</td><td>350</td><td>380</td><td>390</td><td>350</td><td>250</td></tr>
</table></td><td>15</td><td>CO4</td></tr>
<tr><td></td><td>b) Assume that reliance jio is the only seller of telecom services (monopoly) in the market and its demand and cost function is given by:
$P = 13 - Q$ and $C = 25 + Q + 0.5Q^2$
What Q* maximizes the jio’s profit (or minimizes its loss)? At Q*, what is the price and the profit?</td><td>15</td><td>CO4</td></tr>
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