Name: **Enrolment No:**	UPES

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

Course: Power Economics **Semester: I**
Programme: MBA-Power Management **Course Code:ECON 7008**
Time: 03 hrs. **Max. Marks: 100**
Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Statement of question		**CO1**
A	As per Baumol's theory of the firm, the firms are 1. solely motivated to increase sales revenue 2. solely motivated to increase market share 3. aiming at maximizing sales subject to minimum acceptable profit	**01**	
B	We can say with certainty that when the demand for TVs increases in the long run, Prices 1. Will go down 2. Will go up, 3. Change proportionately 4. Cannot be predicted without knowledge of elasticity of demand.	**01**	
C	If demand is inelastic and price increases 1. total revenue will fall 2. total revenue will rise 3. total revenue will unchanged	**01**	
D	A Production function is used by management to know: 1. the amount of input to buy 2. the amount of input to use 3. the amount of output per unit of each input 4. the amount of output using all inputs effciently	**01**	
E	Give the cost function TC = 12000 + 20X - 15 X2 + 0.2 X3 find out average fixed cost when X = 800 is given by 1. Rs. 15 2. Rs. 16 3. Rs. 17 4. Rs. 18	**01**	
F	Which of the following assumption is not necessary for the existence of perfect competition 1. product is homogenous 2. Buyers have no preference as between different sellers 3. Each producer is aware of the profits made by others. 4. Buyers have knowledge of prices in every part of the market	**01**	
G	Margin of Safety can be defined as	**01**	

	1. Excess over Break Even sales 2. Excess over sales 3. Excess over Fixed Cost 4. Excess over contribution		
H	Transfer Earnings are those incomes which 1. are in the hands of individuals 2. are not factor income 3. are not generated by any production process 4. All of them	**01**	
I	WPI was first developed in India in 1. 1930 2. 1931 3. 1932 4. 1933	**01**	
J	From the following, identify which one is not, Trade Cycle characteristics 1. Time frame of several years 2. Recurring Nature 3. The uptrend is fast and acute but the down trend is slow an gradual 4. Business cycle starts at a place and time.	**01**	
State whether True or False:			
1	Cross demand tells the relationship between the price and demand for commodity.		
2	Demand is likely to be more sensitive to price over a short period than a long period.	**01**	
3	For an inferior good, an increase in income shifts the budget line leftward.	**01**	
4	A good with a high relative price must have a low opportunity cost.	**01**	
5	The expansion path of production theory is similar to the income consumption curve in the theory of consumption.	**01**	
6	The Break Even Point simply indicates the point where a firm will be getting neither profit nor loss, such that if the firm was to expand its output beyond this level, it will earn profit and vice versa.	**01**	
7	If the firm's price is below a firm's minimum ATC, it immediately shut down.	**01**	
8	National Income at current prices reflects inflated income.	**01**	
9	For the player in the perfect competition market can earn abnormal profit in the long run.	**01**	
10	Inflation makes losses to the businessmen and profits to the salaried class.	**01**	
	SECTION B		
Q.2	SHORT ANSWER QUESTIONS: Attempt any Four questions.		**CO2**
A	The demand function of potatoes is Q = 20 – 2P. The initial price of potatoes was Rs. 4 per Kg. if the price increases by 20%. Find elasticity of demand?	**05**	
B	How do changes in income affect the slope of the budget constraint? Explain with the help of a diagram?	**05**	
C	Give diagrammatic presentation of 'Expansion Path'	**05**	
D	The Average Cost of producing 10 units is Rs. 30, while the Average Cost of producing 20 units is Rs. 20. Find the Average Cost of producing 30 units.	**05**	

E	Is Inflation a process or effect?	**05**	
F	The Average Cost of producing 10 units is Rs. 30, while the Average Cost of producing 20 units is Rs. 20. Find the Average Cost of producing 30 units.	**05**	
	SECTION-C		
Q.3	**LONG ANSWER QUESTIONS: Attempt any three questions**		**CO3**
A)	The cost and profit details of XYZ Company Limited for the year 2000 are as follows: Net Sales (30,000 units) Rs. 1,20,000 **Cost of Goods Sold** Variable Rs. 50,000 Fixed Rs. 20,000 Gross Profit Rs. 50,000 **Selling Cost:** Variable Rs. 10,000 Fixed Rs. 5,000 Net Profit Rs. 35,000 From the above particulars, calculate: a) Break Even Point **b)** The profit for the sales of Rs. 1,50,000 and Rs. 1,00,000 **c)** What would be the sales volume to earn a net profit of Rs. 40,000	**10**	
B)	If Demand is elastic, comparatively lower price will benefit the businessman, if the demand is inelastic, higher Prices would be better for him." Elucidate this statement and examine the role of price elasticity in business decision.	**10**	
C)	What is the use of mathematics in economic analysis? Explain with the help of maxima and minima and give explain different conditions in which shape of curves varies?	**10**	
D)	*Regression Statistics* Multiple R 0.510494786 R Square 0.260604926 Adjusted R Square 0.09629491 Standard Error 16.91989417 Observations 12 ANOVA *df* *SS* *MS* *F* *Significance F* Regression 2 908.12 454.060 1.58605 0.257007	**10**	

Residual	9	2576.545	286.2828	
Total	11	3484.667		

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	44.95525935	53.72958	0.836695	0.424425	-76.5895	166.5	-76.5895	166.5
WEEKLY POWER CUTS	1.658244939	1.47022	1.127889	0.288536	-1.66762	4.984114	-1.66762	4.984114
TEMPERATURE	2.282291689	1.294623	1.762975	0.110175	-0.64635	5.210933	-0.64635	5.210933

A) Develop and interpret a multiple linear regression equation model to predict from result summary of weekly sales of inverters in NCR region from weekly average power cuts and weekly average temperature.

B) Explain coefficient of determination and adjusted R^2.

SECTION-D

Q.4	**Read and analyze the following the market problem carefully:**		**CO4**
	Price Discrimination by BSES in India The Electricity Act of 2003 has created a new paradigm for the development of the power sector in the country. It has abolished the monopoly of the state electricity boards created through the Electricity (Supply) Act of 1980 and has created a new competitive framework for the development of the power sector in the country, with focus on the consumers and the safeguarding of their interests by independent regulatory commissions. The Act has eliminated/reduced entry barriers in the entire chain of the electricity supply business. With this background, BSES, a company of Anil Ambain's Reliance, has entered for power supply in Delhi and Mumbai. In the supply of power, price discrimination is inevitable. Even in a normal situation, when a monopoly supplier faces different markets, prices differ from one market to another. Monopoly power and price discrimination have been described as Siamese twins. However, in India, it is not only the varying demand cures in the different markets but also the socio-economic consideration that lead to different prices. Subsidies are, once again, inevitable in such a situation. In determining the cost to various users, there are obviously many problems. Determination of the cost to serve is not easy in a multi-user situation. **Table: Electricity Charged by BSES in Delhi in 2007**		

	User KW Units consumed/month Rate Rs./unit/month Domestic 2-5 0-100 2.40 101-200 2.40 201-400 3.90 >400 4.60 Non-Domestic up to KW 5.35 10-100 KW 4.87 Industrial up to 10 KW 5.00 10-100 KW 4.32 Agriculture 1.50 **(Source: Managerial Economics by Dominick Salvatore, 2008)**		
A	Discuss the concept of price discrimination and its applicability in Power Sector with the help of given case let.	**15**	
B	Under which degree of price discrimination does the issue shared in the case falls? Explain.	**15**	