

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

B.Tech III Semester (All Branches)

COURSE CODE: 10B11PD311

MAX. MARKS:25

COURSE NAME: MANAGERIAL ECONOMICS

COURSE CREDITS: 3

MAX. TIME: 1 Hr 30 mins

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Make suitable assumptions, wherever necessary.

1. "Firms and households are interdependent on each other and are integral part of an economic system". Discuss. (3)
2. What is Income Elasticity? How goods can be categorized on the basis of it? (2)
3. Differentiate between: (2x1.5=3)
 - a) Trend Projection and Seasonal Variation
 - b) Delphi method and Expert opinion
4. An investigation into the demand of TV sets in the following satellite towns has supplied the following data: (3)

Town	Population('000)	Demand for TV sets ('000)
A	12	20
B	15	38
C	15	38
D	18	40
E	18	45
F	22	40

Estimate the number of TV sets demanded in G town with a population of 30,000.

5. A multiplicative demand function of the form is estimated using the cross-section data. (3)

$$Q_d = BP^{a_p} I^{a_I} P_o^{a_o}$$

The results are as follows:

	Variable			
	Constant (B)	Price (P)	Income (I)	Price of Other Good (P _o)
Estimated Coefficient	0.02248	-0.2243	1.3458	0.1034
Standard error	0.01885	0.0563	1.5012	0.8145
Number of observations	224	R ²		0.2515

Interpret the above equation at 95% confidence interval. (t-table is given at the end of the question paper, on next page)

6. The big six corporation has determined the following total cost function. (2)
 $TC = 170 - 22Q + 1.5Q^2$
 At what total cost the marginal cost is minimum?

P.T.O.

7. Explain and illustrate with a graph, the three stages of production. (3)
8. In a company, the relationship between output and inputs, namely, permanent labourers and contract labourers, is as follows:
 $Q = 20PL - PL^2 + 12 CL - 0.5 CL^2$, where, PL is permanent labour and CL is contract labour.
 The hourly wage rate of PL is Rs40 and that of CL is Rs 20. (2x3=6)
- The production manager recommends that 6 PLs and 8 CLs be hired. How many units of output are produced using this combination of inputs?
 - Is this combination of inputs efficient? If not what is the efficient combination of inputs to get the same output?
 - If the budget for labor is Rs 5000, how much of each type of labour should the company hire?

t-table:

668 Tables

Degrees of Freedom	Confidence Interval	Significance Level		
		10%	5%	1%
1		6.314	12.706	63.657
2		2.920	4.303	9.925
3		2.353	3.182	5.841
4		2.132	2.776	4.600
5		2.015	2.571	4.032
6		1.943	2.447	3.707
7		1.895	2.365	3.499
8		1.860	2.306	3.355
9		1.833	2.262	3.250
10		1.812	2.228	3.169
11		1.796	2.201	3.106
12		1.782	2.179	3.055
13		1.771	2.160	3.012
14		1.761	2.145	2.977
15		1.753	2.131	2.947
16		1.746	2.120	2.921
17		1.740	2.110	2.898
18		1.734	2.101	2.878
19		1.729	2.093	2.861
20		1.725	2.086	2.845
21		1.721	2.080	2.831
22		1.717	2.074	2.819
23		1.714	2.069	2.807
24		1.711	2.064	2.797
25		1.708	2.060	2.787
26		1.706	2.056	2.779
27		1.703	2.052	2.771
28		1.701	2.048	2.763
29		1.699	2.045	2.756
60		1.671	2.000	2.660
120		1.658	1.980	2.611
inf		1.645	1.960	2.576