NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA
THEORY EXAMINATION
QUESTION PAPER (Regular)

Month and Year of Exam: December, 2019

Programme: B.TECH.

Subject: Economics for Engineers

Course Code: HSIR-12

Total number of questions: 5

Roll No. _____

Semester: 1st/2nd

Maximum Marks: 50

Time Allowed: 3 Hours

Questions to be attempted: 5

Candidates before starting to write the solutions, should please check the question paper for any discrepancy, and also ensure that they have been delivered the question paper of right course number and right subject title. Immediately report the discrepancy, if any, and sort it out.

Ques I. **(i)** The annual Sales of a company are given below: **(5)**

Year	2010	2011	2012	2013	2014	2015	2016
Sales (in Lakhs)	80	90	92	83	94	99	92

using the **method of ordinary least squares**, fit straight line trend and estimate the annual sales for the year 2020.

(ii) The following information is given about advertising and sales: **(5)**

	Advertising Expenditure (x) (in Lakhs)	Sales (y) (in Lakhs)
Mean	. 10	90
Standard Deviation	3	12
Correlation Coefficient = 0.8		

(a) Calculate the two regression lines.

(b) Find the likely sales when advertising expenditure is Rs. 15 Lakhs.

(c) What should be advertising expenditure if the company wants to attain sales target of Rs. 120 Lakhs?

OR

What do you mean by law of demand? Discuss the causes for downward sloping of a demand curve. Also, discuss its exceptions. **(10)**

Ques II. Explain the law of variable proportions in detail. Which is the best stage in this law and why? **(10)**

Ques III. What is monopoly? How the price and output are determined under monopoly? **(10)**

Ques IV. **(i)** A granite company is planning to buy a fully automated granite cutting machine. If it is purchased under down payment, the cost of the machine is Rs. 16,00,000. If it is purchased under instalment basis, the company has to pay 25% of the cost at the time of purchase, and the remaining amount in 10 annual equal instalments of Rs. 2,00,000 each. Suggest the best alternative for the company using the present worth basis at $i = 18\%$, compounded annually. **(5)**

(ii) A person is planning a new business. The initial outlay and cash flow pattern for the new business are as listed below. The expected life of the business is five years. Find the rate of return for the new business. **(5)**

Period	0	1	2	3	4	5
Cash Flow (Rs.)	- 1,00,000	30,000	30,000	30,000	30,000	30,000

Ques V. Discuss the role of fiscal policy in an economy. Do you think its role is expanding in the real world? **(10)**