Total No. of Pages- 02

Roll No.--------

IIIrd Semester

B. Tech.

MID SEMESTER EXAMINATION

Sep-2018

HU 201 - Engineering Economics

Time: 1Hours30 Minutes

Max Marks: 25

Note:	Answer all questions. Assume suitable missing data, if any

1. Fill in the blanks: (5)

   a. Wood in a forest is a ---------- commodity.

   b. Labour gets ---------- for its contribution in production.

   c. In ---------- , there are large number of producers producing heterogeneous product.

   d. Cost of producing additional unit is called as ---------- cost.

   e. Good and Services Tax (GST) is ---------- tax.

   f. Resaerve Bank of India is ---------- bank.

   g. Opportunity cost is the -------- of the next best option.

   h. If value of export is -------- than import for a country, its Balance of Payment is known as Adverse Balance of Payment.

   i. In recession, demand of durable goods ----------.

   j. Dumping means selling goods at -------- price in the foreign market than the domestic market.

P.T.O.

SEMESTER THIRD

END SEMESTER EXAMINATION

B.TECH

Nov-Dec.-2018

HU-201 ENGINEERING ECONOMICS

Time: 03: 00 Hours

Max.Marks: 50

Note: ***Answer any five questions. Assume suitable missing data if any.***

1(a) Break-even analysis is a very important analytical technique used to study the relationships between costs, revenues and profits. Explain 5

1(b) A manufacturer has following option 5

	Purchase from the market (in Rs.)	Manufacture within the company (in Rs.)
Selling price /unit	6000with 18% GST per unit	-
Cost of Machine-1	-	4040440 with 18 % GST
Cost of Machine -2	-	220400 with 12% GST
Cost of raw material/unit		999 with 10% and 08% GST

Annual demand is 1000 units. Suggest to the manufacturer whether he should manufacture or purchase?

2(a) What is the rational for government intervention in the market? In the light of these how would you justify the recent move towards demonetization in the Indian economy? 5

2(b) A transport company has been looking for a new tyre for its truck and has located the following alternatives: 5

Brand	Tyre warranty (months)	Price per tyre (in Rs.)
A	12	1,200
B	24	1,800
C	36	2,100
D	48	2,700

If the company feels that the warranty period is a good estimate of the tyre life and that a nominal interest rate (compounded annually) of 12% is appropriate, which tyre should it buy?

3(a) Discuss the nature of soft drink market in India. What incentive may be given by the Government to encourage Indian producers? 5

3(b) A company must decide whether to buy Machine A or Machine B: 5

	Machine A	Machine B
Initial Cost	Rs. 4,00,000	8,00,000
Useful life, in years	4	4
Salvage value at the end of machine life	Rs. 2,00,000	Rs. 5,50,000
Annual maintenance cost	Rs. 40,000	0

At 12% interest rate, which machine should be selected? (use future worth method of comparison

4(a) Explain the role of risk, uncertainty and innovation in the determination of profit. 5

4(b) A Company wants to deposit money to create an R&D reserve. The company will get 15,00,000 every year for next 15 years for R&D. The reserve will grow at the rate of 12 per cent annually. Find out the single payment which should be made now. 5

5(a) Environmental problems are macro level problems. Discuss the role of appropriate technology in this regard. Also suggest framework to impose taxes to control environmental hazards. 5

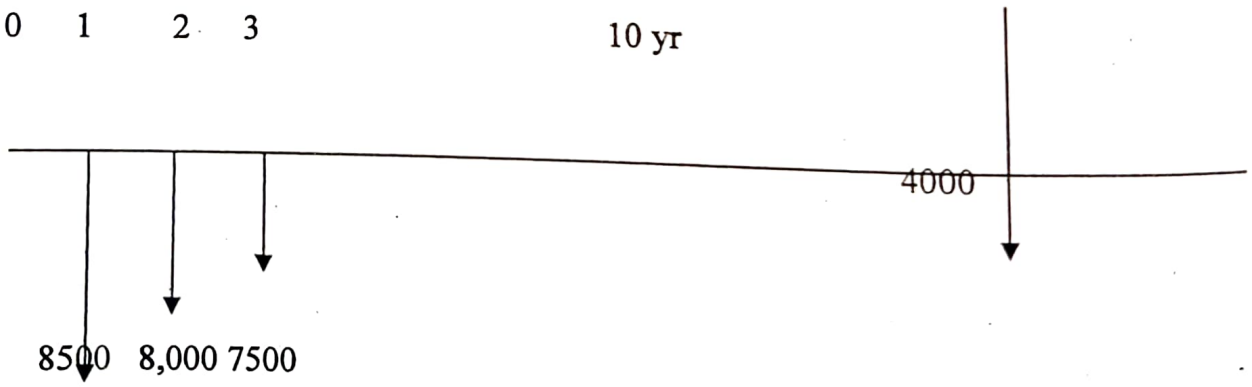
5(b) A firm, Prime Manufacturing is planning to expand its production operation. It has identified three machines which are technologically capable to serve the purpose. The initial outlay and annual revenues with each of the machines are given below: 5

	Initial Outlay (Rs.)	Annual revenue	Life (in years)
Machine I	Rs. 5,45,000	Rs. 2,50,000	15
Machine II	Rs. 6,14,000	Rs. 3,30,000	12
Machine III	Rs. 6,00,900	Rs. 3,50,000	10

If the rate of interest is 12%, which machine the company should opt for? Find out the result by Present Worth method.

6(a) If you are CEO of an MNC, discuss Business Risk which you will consider while deciding location for your foreign venture. 5

6(b) Consider following cash flow diagram. Calculate the total amount at the end of the 10th year at the interest rate of 15%, compounded annually. 5



7(a) Discuss application of Engineering & Technology to improve life at slum. 5

7(b) Discuss salient feature of the Indian Economy 5

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Mid-semester Examination **Sept.2019**

Third Semester **B.Tech**

HU201- Engineering Economics

Marks-25 Marks **Tim e-1.30 Hrs.**

Attempt all questions.

Q1. Write 'True' or 'false' 10*1/2=5

(a) Goods and service tax is a direct tax.

(b) Cross elasticity of complementary goods are positive.

(c) Complementary goods are those goods which can be used in each other's place.

(d) Labor gets wages for their contribution in production.

(e) Price elasticity is greater than one for necessary goods.

(f) There are few producers in the monopolistic condition market.

(g) In case of adverse balance of payment, value of export is more than the value of import.

(h) Wood in a forest is a free good.

(i) Cost of the next best option is the opportunity cost of best option.

Q2. Discuss the significance of price elasticity of demand. 5

Q3.Difference between Microeconomics and macroeconomics 5

Q4. What is inflation? Discuss the measures to control inflation 5

Q5. How tax is different from subsidy? 5

Total Number of Page-4 Roll No.----------

B. Tech. Nov-Dec 2019

End-Semester Examination **Third Semester**

HU- 206: Engineering Economics

Time: 3 Hour **Max. Marks: 70**

Note: Answer All questions,
Assume suitable missing data, if any

1(a) You will suggest 'Labour intensive production process' or 'Capital intensive production process' for a labour surplus country like India. Discuss with suitable example. 7

1(b) In the design of a jet engine part, the designer has a choice of specifying either an aluminum alloy casting or a steel casting. Either material will provide equal service, but the aluminum casting will weigh 1.2 Kg. as compared with 1.35 Kg. for steel casting. The aluminum can be cost Rs. 80.00 per Kg. and the steel one for Rs. 35.00 per Kg. The cost of machining per unit is Rs. 150.00 for aluminum and R. 170.00 for steel. Every Kilogram of excess weight is associated with a penalty of Rs. 1300 due to increased fuel consumption. Which material should be specified and what is the economic advantage of the selection per unit? 3

1(C) The chief engineer of refinery operation is not satisfied with the preliminary design for storage tanks to be used as part of a plant expansion programme. The engineer who submitted the design was called in and asked o reconsider the overall dimensions in the light of an article in the "Chemical Engineer", entitled "How to size future process vessels"? 4

The original design submitted called for 4 tanks 5.2 m is diameter and 7 m in height. From a graph of the article the engineer found that the present ratio of height to diameter of 1.35 is 111% of the minimum cost and that the minimum cost for a tank was when the ratio of height to diameter was 4:1.

The cost for the tank design as originally submitted was estimated to be Rs. 9,00,000. What are the optimum tank dimensions if the volume remains the same as the original design? What total savings may be expected through the redesign?

2(a) What do you mean Price Elasticity of Demand? How it is different from Cross Elasticity of Demand? Also discuss significance of Price Elasticity of Demand. 7

2(b) What amount of money saved today will yield Rs. 40,000/- in third year and Rs. 55,000/- after five year at the 12% rate of interest compounded annually. 3

2 (C) A company has to replace a machine in the production line after 11 years at the cost of Rs. 60,00,000/-. It plans to deposit an equal amount at the end of every year for the next 11 years at an interest rate of 11 per cent which is compounded annually. Find the equivalent amount that must be deposited at the end of every year for next 11 years. 4

3(a) Discuss the nature of automobile market in India. What incentive may be given by the Government to encourage Indian producer? 7

3 (b) Below is given a demand equation; 3

$$Q = -6P + 4000$$

Calculate price elasticity of demand if price is (i) Rs. 4 (ii) Rs 10 and (iii) Rs. 15. Is the demand at these prices elastic or inelastic?

3(c) The market supply and demand functions for deluxe pizzas in a small town are given by 4

Demand $Q = 100 - 3.5\ P$

Supply $Q = 15 + 1.5\ P$

i. Determine the equilibrium price and quantity.

ii. If the city Government levies a tax of Rs. 3.00/pizza on the pizza parlor, determine the new equilibrium price and quantity of pizza

4(a) What do you mean by Inflation? Discuss fiscal policy and monetary policy to control Inflation. 7

4(b) A Company wants to deposit money to create an R&D reserve. The company will get 15,00,000 every year for next 15 years for R&D. The reserve will grow at the rate of 12 per cent annually. Find out the single payment which should be made now. 7

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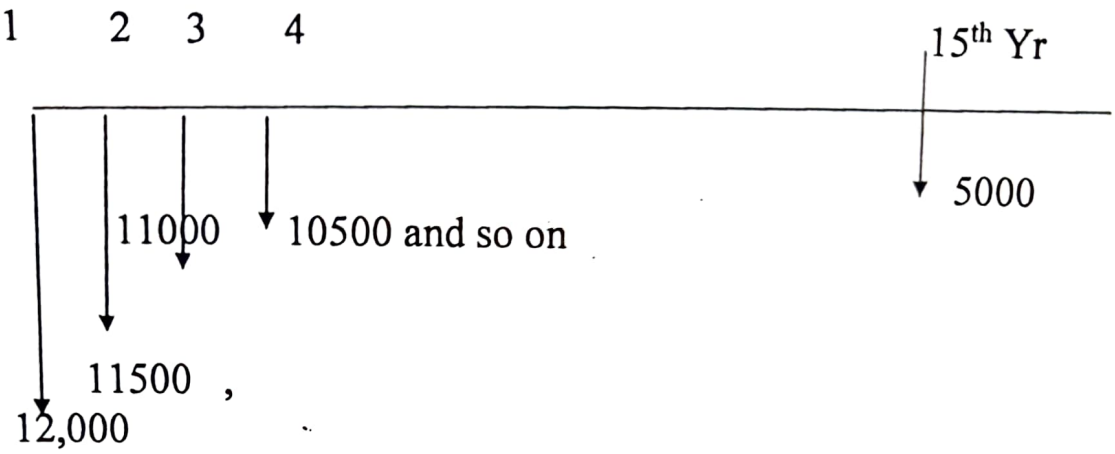
6(a) Discuss application of Engineering & Technology to improve life at slum. 7

6(b) Consider following cash flow diagram. Calculate the total amount at the end of the 15th year at the interest rate of 11%, compounded annually. 7



7(a) What do you mean by Taxation? How it is different from Subsidies? Discuss with suitable example. 7

7(b) Two years ago, a machine was purchased at a cost of Rs. 4,00,000 to be useful for ten years. Its salvage value at the end of its life is Rs. 60,000. The annual maintenance cost is Rs. 60000. The market value of the present machine is Rs. 320000. Now a new machine to cater to the need of the present machine is available at Rs. 3,80,000 to be useful for eight years. Its annual maintenance cost is Rs. 45000. The salvage value of the new machine is Rs. 40000. Using an interest rate of 11%, find whether it is worth replacing the present machine with the new machine? 7

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