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B.TECH
PEK3E001

3rd Semester Regular Examination 2016-17
ENGINEERING ECONOMICS

BRANCH(S): ALL

Time: 3 Hours

Max Marks: 100

Q.CODE: Y731

Answer Part-A which is compulsory and any four from Part-B.
The figures in the right hand margin indicate marks.

Part – A (Answer all the questions)

Q1 Answer the following questions: *multiple type or dash fill up type* (2 x 10)

- a)** (i) A key difference between microeconomics and macroeconomics is
(ii) Microeconomics deals with the individual parts of the economy, while the macroeconomics studies the whole economic system
(iii) Microeconomics studies the whole economic system, while macroeconomics deals with the individual parts of the economy
(iv) Microeconomics is only concerned with theories, whereas macroeconomics involves policy decisions
(v) Microeconomics analyzes the inflation problem in the economy, while macroeconomics analyzes price changes for individual products in the economy.
- b)** An economist would estimate the ----- to determine the relationship between two goods
(i) Income elasticity of demand
(ii) Cross elasticity of demand
(iii) Price elasticity of demand
(iv) Price elasticity of supply
- c)** If the elasticity of demand for a refrigerator is 1.5, this means
(i) A few substitute exists
(ii) A 1% decrease in price will lead to a 15% increase in quantity demanded
(iii) A 5% decrease in price will lead to a 7.5% increase in quantity demanded
(iv) A 10% increase in price will lead to a 150% decrease in quantity demanded
- d)** The law of variables proportions states that
(i) Marginal product may starts declining with the commencement of production
(ii) Marginal product starts declining after initial phase of increasing returns
(iii) Marginal product may remain constant for some time and then decline
(iv) All the above
- e)** Subsidies given on fertilizers, farmers results in ----- for fertilizers
(i) A shift in the supply curve
(ii) A shift in the demand curve

- (iii) A movement along the supply curve
- (iv) A movement along the demand curve
- f) Which of the following equation is wrong?
 - (i) National Income = Gross National Product
 - (ii) National Income = Effective Demand
 - (iii) National Income = Consumption + Saving
 - (iv) National Income = Consumption + Investment
- g) The market which deals with long-term funds is
 - (i) Capital market
 - (ii) Money market
 - (iii) Investment and finance
 - (iv) Credit market
- h) Which out of the following is not a function of the Central Bank
 - (i) Banker to the Government
 - (ii) Bankers bank
 - (iii) Banker to the citizens
 - (iv) Custodian of foreign exchange
- i) Annual equivalent revenue is computed by using
 - (i) $PW(i) + (A/P, i, n)$
 - (ii) $PW(i) - (A/P, i, n)$
 - (iii) $PW(i) (A/P, i, n)$
 - (iv) $PW(i) / (A/P, i, n)$
- j) P/V Ratio is
 - (i) Net Profit / Margin of Safety
 - (ii) Net Profit + Margin of Safety
 - (iii) Net Profit - Margin of Safety
 - (iv) Net Profit * Margin of Safety

Q2 Answer the following questions: Short answer type (2X10)

- a) What is GNP? How does it differ from GDP.
- b) What is demand-pull inflation?
- c) What is effective interest rate?
- d) What is the difference between Law of Variable Proportions and Laws of Returns to Scale?
- e) What is overdraft?
- f) What are the factors influence supplies?
- g) What is depreciation? Why there is a need for charge of depreciation.
- h) What is angle of incidence of a firm? Show through diagram.
- i) What is demand-pull inflation?
- j) What is cost-benefit ratio?

Part – B (Answer any four questions)

Q3 a) Raj Corporation Ltd. has prepared the budget estimates for the year 2014-15 (10)

Sales Unit	= 15,000
Fixed Expenses	= ₹34,000
Sales Value	= ₹ 1,50,000
Variable cost	= ₹ 6 per unit

You are required to calculate

- (i) Find the P/V ratio, Break-even Point and margin of safety
 (ii) Calculate the revised P/V ratio, Break-even Point and margin of safety in case of (a) decrease of 10% in selling price (b) Increase of ₹6,000 in fixed costs.

b) If the price of a pen increases from ₹1 to ₹2 and the quantity demand for pens decreases from 50 to 40 units, calculate the price elasticity of demand and interpret the result. **(5)**

Q4 a) What is inflation? Discuss the various causes and types of inflation? **(10)**
b) How equilibrium price is determined under perfect competition? **(5)**

Q5 a) What is depreciation? Discuss the various reasons for charging depreciation? Distinguish between decline balance and straight-line method of depreciation. **(10)**

b) What is elasticity of demand? Discuss the various factors governing elasticity of demand. **(5)**

Q6 a) A company has to select one of the following projects: **(10)**

	Project - A	Project - B
Cost	11,000	10,000
Cash Inflows		
Year 1	6,000	1,000
Year 2	2,000	1,000
Year 3	1,000	2,000
Year 4	5,000	10,000

Using the *Internal Rate of Return* method suggests which project is preferable.

b) What will be the present worth of a series of eight equal payment of ₹ 223 at 15% rate of interest? **(5)**

Q7 a) Discuss the Present Worth and Future Worth methods of evaluating engineering alternatives. **(10)**

b) Shyam Computers has purchased a machine by ₹ 7,000 with a life period of 5 years. It has no salvage value. The company has a cost of capital (rate of return) 7%. Determine. **(5)**

- (i) Depreciation charge
 (ii) Depreciation reserves at the end of 3 years
 (iii) Book value of the computers at the end of 3 years

Q8 a) Two mutually exclusive projects are being considered for investment project. Project A1 requires an initial outlay of ₹ 30,00,000 with net receipts estimated as ₹ 9,00,000 per year for the next 5 years. The initial outlay for Project A2 is ₹60,00,000 and net receipts have been estimated at ₹ 15,00,000 per year for the next 7 years. There is no salvage value associated with the either of the projects. Using the benefit cost ratio, which project would you select? Assume an interest rate of 10%. **(10)**

b) Draw an imaginary cash flow diagram? Discuss the various types of cash flow diagrams? **(5)**

Q9 a) Discuss the various functions of Reserve Bank of India? **(10)**

b) What is fixed cost? How does it different from variable cost and total cost explain with the help of suitable diagram. **(5)**