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Total Number of Pages : 02

B.Tech
PEK4E002

4th Semester Regular / Back Examination 2018-19

ENGINEERING ECONOMICS

BRANCH : AEIE, AERO, AUTO, BIOMED, CIVIL, CSE, ECE, EEE, EIE, ELECTRICAL,
ENV, ETC, IT, MANUTECH, MECH, METTA, MINERAL, MINING, MME, PE, TEXTILE

Max Marks : 100

Time : 3 Hours

Q.CODE : F930

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- How 'Engineering Economics' is different from 'Economics'?
- ₹ 200 is compounded quarterly at 8% rate of interest. Each quarter assigned 2% interest typically. The future value at the end of 1 year for ₹ 200 is-----.
- Write 'sinking fund factor' and 'capital recovery factor'.
- State the difference between Law of Variable Proportions and Laws of Returns to Scale?
- How GDP is different from GNP?
- State two important measures of control inflation?
- State law of supply. Write two important determinants of supply.
- How nominal rate of interest is different from effective rate of interest?
- Define IRR. How is it different from NPV?
- Suppose a firm increased its input by 10%, while its output decreased by 15%. The firm is experiencing with which returns to scale and justify the answer.

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Differentiate microeconomics with macroeconomics. Explain the basic economic problems of an economic system.
- Explain any four factors that influence the price elasticity of demand. Calculate the elasticity co-efficient when the price of a coffee dropped from ₹0.90 to ₹0.80 per cup, the quantity demanded for sugar also decreased from 50 to 20 units.
- Explain depreciation. Differentiate straight line method of depreciation with declining balance method of depreciation.
- The cost of erecting an oil well is ₹ 1,50,00,000. The annual equivalent yield from the oil well is ₹ 30,00,000. The salvage value after its useful life of 10 years is ₹ 2,00,000. Assuming an interest rate of 18% compounded annually, find out whether the erection of the oil well is financially feasible, based on the present worth method.
- Explain any two important functions of a Central Bank.
- Explain the Cost Benefit Analysis (CBA)? In which types of project cases this technique is useful. Point out some of the drawbacks of this analysis.
- A company is trying to diversify its business in a new product line. The life of the project is 10 years with no salvage value at the end of its life. The initial outlay of the project is ₹20, 00,000. The annual net profit is ₹ 3, 50,000. Find the rate of return of the business.

- h) State and explain the law of diminishing returns in brief.
- i) Explain the concept "Fixed Cost" and "Variable Cost" through example and a graph.
- j) A sum of money amounting Rs 2000 is invested at the beginning of year 1 at 8% for one year. Show the interest earned, future value and effective annual interest rate if compounding takes place annually, bi-annually, quarterly and monthly. Comment on the results.
- k) Discuss the Present Worth and Future Worth methods of evaluating engineering alternatives in brief.
- l) What is inflation? Explain the various types of inflation.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3** Discuss the various functions of a commercial bank. Describe the role of commercial bank in developing economy. **(16)**
- Q4** Discuss and draw break-even point through graphical analysis and compute the following by using the data of a company as given below. **(16)**
- Sales = ₹ 60,000
 Fixed Cost = ₹ 15,000
 Variable Cost = ₹ 30,000
- a) Calculate the P/V Ratio, Break-even Point and margin of safety at this level.
 b) Calculate the effect of 10% increase in sale price
 c) Calculate the effect of 10% decrease in sale price.
- Q5** Discuss the various characteristics of a perfectly competitive market. How an Industry determine its equilibrium price under perfect competition? Show graphically the changes in demand and supply and its effect on equilibrium price. **(16)**
- Q6** What is depreciation? Discuss the various causes of depreciation and elaborate any two methods of calculation of depreciation? **(16)**