

B.Tech. Biotechnology: Semester-IV	
BBT 406: ENGINEERING ECONOMICS	
Teaching Scheme	Examination Scheme
Lectures: 2 hrs/Week	Internal Marks – 15 Marks
Tutorials: 0 hr/Week	End Semester Exam – 35 marks
Credits: 2	

Course Objective

This course aims at providing the student with advanced concepts of engineering economic analysis and its role in engineering decision making. Additionally, the course also covers topics such as depreciation, after tax analysis, replacement analysis, uncertainty, inflation, deflation, and estimation of future events.

Course Learning Outcomes

After completing the course, the student shall be able to:

- CO1: Describe the role of economics in the decision making process and perform calculations in regard to interest formulas.
- CO2: Estimate the Present, annual and future worth comparisons for cash flows.
- CO3: Calculate the rate of return, depreciation charges and income taxes.
- CO4: Enumerate different cost entities in estimation and costing.

Unit 1: Introduction

Introduction: Definition – Nature – Scope and Significance of Economics for Engineers. Demand and Supply: Demand – Types – Determinants – Law of Demand – Elasticity of Demand – Types – Significance – Supply – Market price determination – Case Study in Demand Forecasting – Meaning – Methods – Consumer Survey – Trend Projections – Moving average.

Unit 2: Cost and Revenue

Concepts – Classifications – Short run and long run cost curves – Revenue – Concepts – Measurement of Profit (Case Study). Market Structure: Perfect Competition – Characteristics – Price and output determination in short run and long run – Monopoly – Price Discrimination – Monopolistic Competition – Product Differentiation – Oligopoly and Duopoly.

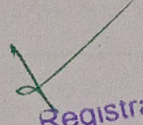
Unit 3: Market Failure


Head

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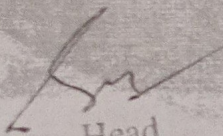
Causes – Type of Goods – Rivalrous and Non-rivalrous goods –
Excludable and Non-excludable goods – Solutions – Government Intervention. Money and Banking: Money
– Functions – Quantity theory of money – Banking – Commercial Banks – Functions – Central Bank (RBI)
– Functions – Role of Banks in Economic Development.

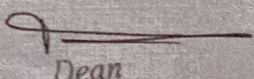
Unit 4: Foreign Exchange

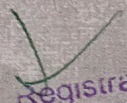
Balance of Payments – Exchange rate determination – Methods
of foreign payments – International Institutions – IMF, IBRD. Business Cycle and National Income: Meaning
– Phases of business cycle - Inflation – Causes – Control measures - Deflation - National Income – Concepts –
Methods of calculating national income – Problems in calculating national income.

Suggested Readings

- Premvir Kapoor, "Sociology & Economics for Engineers", Khanna Publishing House, 2018.
- Dewett. K.K., Navalur M. H., "Modern Economic Theory", S. Chand and Company Ltd, New Delhi, 24th Edn., 2014.
- Lipsey & Chrystal, "Economics", Oxford University Press, 2010.
- **References:**
- Paul A Samuelson & William, "Economics", Tata McGraw Hill, New Delhi, 2012.
- Francis Cherinullem "International Economics", McGraw Hill Education, 2011.
- William A McEachern and Simrit Kaur, "Micro ECON", Cengage Learning, 2013.
- William A McEachern and Indira A., "Macro ECON", Cengage Learning, 2014.


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