UNIT I INTRODUCTION TO ECONOMICS

PART – A (2 MARKS)

1. What is elasticity of Demand?

   Elasticity of demand may be defined as the degree of responsiveness of quantity demanded to a Change in price.

2. Define the term `cost' ?

   Cost may be defined as a total of all expenses incurred, whether paid of outstanding in the manufacture and sale of a product.

3. What is opportunity cost?

   Opportunity cost may be defined as the potential benefit that is given up as you seek an alternative course of action. In other words, the expected return or benefit for gone in rejecting one course of action for another.

4. What do you mean by marginal cost?

   The institute of cost & works Accountants of India defined marginal cost as, "the amount at any given volume of output by which aggregate cost are changed, if the volume of output is increased or decreased by one unit.

5. Explain marginal costing?

   Marginal costing is defined by the ICWA as, "the ascertainment by differentiating between fixed costs, of marginal costs and of the effect on profit of changes in volume or type of output".

6. What is meant by marginal revenue?

   The revenue that can be obtained from selling one more unit of product is called marginal revenue.

7. Give a short note on sunk cost?

   A cost which was incurred or sunk in the past and is not relevant to the particular decision making is a sunk cost or sunk loss. It may be variable or fixed or both.

8. List out the elements of cost?

   The elements of cost are:
   - ✓ V Materials
   - ✓ Labor cost
   - ✓ Expenses

9. Define the term costing?

   Institute of costs and Management Accountants, (I.C.M.A) London has defines costing as the ascertainment of costs. "it refers to the techniques and process of ascertaining costs and studies the principles and rules concerning the determination of costs of products and services" .

10. What is Break-even point?

    The Break-even point is, therefore, the volume of output at which neither a profit is made nor a loss is incurred. It is a point where the total sales are equal to total cost.

11. Define P/V ratio.

    Profit-Volume ratio expressed as a percentage indicates the relative profitability of different products

PART: B (16 MARKS)

1. Explain in detail about flow in an economy?
2. Explain the concept of law of supply and demand with suitable example?
3. Briefly explain about element of cost and its classification?
4. Explain the concept of break even analysis with clear diagram?
5. Briefly explain about process planning and its various types?

UNIT-II VALUE ENGINEERING

PART – A (2 MARKS)

12. What do you mean by `Make or Buy Decisions?
    - ✓ Make or buy decision is a determination whether to produce a component part internally or to buy it from an outside supplier.
    - ✓ The Organization should evaluate the costs and benefits of manufacturing a product or product component against purchasing it and then select the alternative which results in the lower cost.

13. What are the different approaches followed in make or buy decision?
    The following are the approaches followed in make or buy decision.
    - ✓ Simple cost analysis
    - ✓ Economic analysis
    - ✓ Break-even analysis

14. What is mean by value analysis/value engineering?
    - ✓ Value analysis is a special type of cost reduction technique.
    - ✓ It critically investigates and analyses the different aspects of materials, design, cost and production of each and every component of the product in produce it economically without decreasing its utility, function or reliability.

15. What do you mean by value of a product?

Value differs from both price and cost in the sense that it is the cost proportionate to the function. We can express value mathematically as Value =function or utility/ cost

16. Explain `function' .

    Function specifies the purpose of the product or what the product does, what is its utility etc.

17. What are the different types of values?
    - ✓ Cost value
    - ✓ Exchange value
    - ✓ Use value
    - ✓ Esteem value

18. What are the various functions of a product?

    Functions can be classified into the following three categories:

    - ✓ Primary functions
    - ✓ Secondary functions
    - ✓ Tertiary functions

19. Write any four objectives of value analysis.
    - ✓ Reduce the cost of the product
    - ✓ Simplify the product
    - ✓ Use (new) cheaper and better materials
    - ✓ Modify and improve product design so as to make it acceptable to consumer

20. List any four advantage of value engineering.
    - ✓ Value engineering/analysis identifies and reduces the product cost.
    - ✓ It modifies and improve the product design
    - ✓ It increases the performance/utility of the product by economical means.
    - ✓ It helps to generate new ideas.

PART :B (16 MARKS)

1. Explain in details about criteria for make or buy decision and its approaches? (Also see problems)
2. Problems in single –payment compound amount method?
3. Problems in single payment present worth factor?
4. Problems in equal payment series sinking fund factor method?
5. Problems in equal payment series present worth factor method?
6. Problems in equal payment series capital recovery factor method?

UNIT-III CASH FLOW

PART – A (2 MARKS)

21. What is revenue dominated cash flow?

    The profit/revenue, salvage value of all inflows to an organization will be assigned with positive sign and the cost outflows will be assigned with negative sign is called revenue dominated cash flow.

22. What is cost of dominated cash flow?

    ✓ The cost outflow will be assigned with positive sign and profit, revenue salvage value all inflows etc,.
    ✓ Will be assigned with negative sign is called cost dominated cash flow.

23. Mention the various rate of return method.

    ✓ Internal rate of return(IRR)
    ✓ Average rate of return(ARR)
    ✓ Net present value method (NPV)
    ✓ Pay-back period (PBP)

24. What is rate of return?

    Rate of return is the break-even interest rate, I, which equates the present worth of a project' scash outflows to the present worth its cash inflow

25. What is present worth method?

    ✓ The present worth measures the surplus in an investments project at time zero (0).
    ✓ The present worth of all cash inflows is computed the present worth of all cash outflows associated with an investment of project is called present worth method.

PART: B (16 MARKS)

1. Problems in present worth method (Revenue dominated cash flow diagram)
2. Problems in future worth method (Revenue dominated cash flow diagram)
3. Problems in Annual equivalent method (Revenue dominated cash flow diagram)
4. Problems in Annual equivalent method (cost dominated cash flow diagram)
5. Problems in rate of return method

UNIT-IV REPLACEMENT AND MAINTENANCE ANALYSIS

PART – A (2 MARKS)

26. What is future worth analysis?
   - ✓ Net future worth measures the surplus at time period other then 0.
   - ✓ Future worth analysis is particularly useful in an investment situation where we need to compute the equivalent worth of a project at the end of its investment period.

27. What is annual equivalent method?
   The criterion provide a basis for measuring investment worth by determining equal payments on an annual basis is called annual equivalent method.

28. What is Replacement analysis?
   - ✓ Replacement analysis involves the Replacement of existing obsolete or worn-out assets in order to avoid failure in operations.
   - ✓ The problems often faced by management of various industries are whether to replace equipment or to continue to use existing equipment, and when existing equipment should be replaced with efficient equipment.
   - ✓ This class of decision analysis is known as replacement analysis.

29. What is mean by gradual failure?
   - ✓ Gradual failure is progressive in nature.
   - ✓ It can be depicted in machine equipment, which is gradually depreciating or deteriorating with the time resulting in very high operating and maintenance cost and/or decreased residual value.
   - ✓ It is easier to predict such type of failure and taking the corrective measures by providing a replacement policy for such machine equipment.

30. Define economic service life of an asset?
   The economic service life of an asset is defined to be the period of useful life that minimizes the annual equivalent cost of owning and operating the asset.

31. What are the types of replacement problem?

   (a) Replacement of assets that deteriorate with time (replacement due to gradual failure, or were and tear of the components of the machine).

   This can be further classified in to the following types:
   1. Determination of economic life an asset
   2. Replacement of an asset with a new asset.
   (b)Simple probabilistic model for assets which fails completely. (Replacement due to sudden failure).

32. Explain annual equivalent total cost.

   Annual equivalent total cost of owning and operating an asset is a

summation of the capital recovery cost (average first cost) and the annual equivalent operating cost of the asset.

33. Name the types of maintenance.
   - ✓ Corrective or Breakdown maintenance.
   - ✓ Scheduled maintenance
   - ✓ Preventive maintenance and
   - ✓ Predictive maintenance.

34. State the main causes of breakdown.
   - ✓ Failure to replace worn out parts
   - ✓ Lack of lubrication
   - ✓ Indifference towards minor faults

35. State any two disadvantages of break down maintenance.

   1. Delays in production
   2. Faster plant deterioration

36. Explain Predictive maintenance.
   - ✓ It is comparatively a newer maintenance technique.
   - ✓ Equipment conditions are measured periodically or on a continuous basis and this enable maintenance men to take a timely action such as equipment adjustments repair or overhaul.

UNIT-V DEPRECIATION

PART – A (2 MARKS)

37. Define the term "Depreciation".

   Depreciation is the process of allocating the acquisition cost of the tangible assets less salvage value, if any, in a systematic and a rational manner over the estimated life of the asset.

38. Mention the various method used in depreciation calculation.

   The various methods used in depreciation calculation are:
   1. Straight line method
   2. Declining method
   3. Sum of the years digits method
   4. Sinking fund or annuity method
   5. Service output method

39. What is service output method of depreciation?

   Service output method of depreciation is a type of computing depreciation base on service rendered by an asset

40. What are the causes of depreciation?

> The causes of depreciation are:
> - ✓ Wear and tear
> - ✓ Depletion
> - ✓ Obsolescence
> - ✓ Lapse of time

41. Write five reasons for providing depreciation.

> The reasons for providing depreciations are:
> - ✓ To know the correct profits
> - ✓ To show correct financial position.
> - ✓ To make provision for replacement of asset
> - ✓ To compute tax liability
> - ✓ To decide for show much to buy or sell the assets in the second hand market

42. What is evaluation of public alternatives?

> Evaluation of public alternatives is nothing but the selecting of best alternative from the available alternatives.

43. Define the term inflation?
> - ✓ Inflation may be defined as a sustained in the general price level.
> - ✓ It is an economic condition where there is a rise in prices resulting in the fall in the purchasing power of money

44. What is sinking fund?
> - ✓ A depreciation fund equal to be actual loss in the value of the asset is estimated for each year.
> - ✓ This amount is invested outside the business in a separate account called sinking fund.

45. What is amortization?
> - ✓ Amortization is a routine decrease in value of an intangible asset, or the process of paying off a debt over time through regular payments.
> - ✓ Amortization refers to the expensing of intangible capital assets (intellectual property: patents, trademarks, copyrights. Etc,) in order to show their decrease in value as a result of use or passage of time.

PART – B (16 MARKS)

1. Problems in different types of depreciation methods   (16)

2. Problems in inflation adjusted decision   (16)

3. Problems in finding the economic life of an asset   (16)

4. (a) (i) How to adjust inflation in evaluating public alternatives? Explain the procedure.
       (8) (ii)Find the depreciation annuity by annuity method after three years, when the
       initial cost
of the machine is Rs 8,00,000 an salvage value at the end of three years is Rs 4,00,000.Rate of
interest 10 %   (8)

5. (i) What is economic life of an asset? How to determine it? Explain
   (ii) The cost of a machine is Rs 1,60,000 and its scrap value is Rs 40,000 .Estimate life 5
years .Using sum of years digits method ,determine depreciation charges for each year.   (16)