



KINGS



COLLEGE OF ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING
QUESTION BANK

SUBJECT CODE: MA1451

YEAR: IV

SUBJECT NAME: ENGINEERING ECONOMICS AND COST ANALYSIS

SEM: VIII

UNITI - INTRODUCTION TO ECONOMICS

PART – A (2MARKS)

1. Define Economics?
2. Write any four goals of economy?
3. Explain law of supply and demand?
4. Write about factors in fluency demand?
5. Write about factors in fluency supply?
6. Define Economic efficiency?
7. Define engineering economics?
8. Define marginal cost?
9. Define marginal revenue?
10. Define sunk cost?
11. Define break even analysis?
12. Define P/V ratio?
13. Define processes planning?

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?

UNITII - VALUE ENGINEERING

PART – A (2 MARKS)

1. What are the approaches available for make or buy decision?
2. Define value engineering?
3. Write any four aims of value engineering?
4. Write the basic steps of value engineering?
5. Define time value of money?
6. Define single –payment compound amount method?
7. Define single payment present worth factor?
8. Define equal payment series sinking fund factor method?
9. Define equal payment series present worth factor method?
10. Define equal payment series capital recovery factor method?

PART :B (16 MARKS)

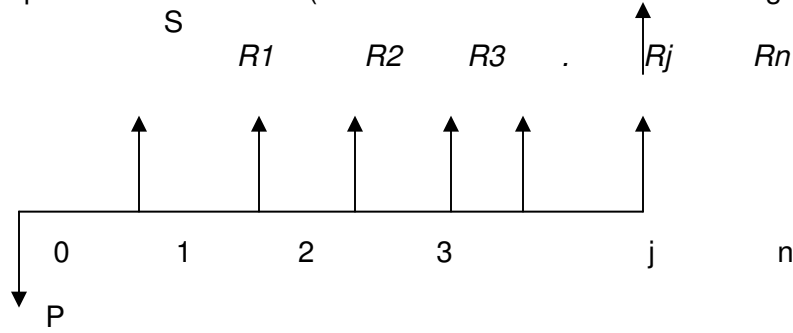
1. Explain in details about criteria for make or buy decision and its approaches? (Also see problems)
2. Problems in single –payment compound amount method?
3. Problems in single payment present worth factor?
4. Problems in equal payment series sinking fund factor method?
5. Problems in equal payment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

UNIT III - CASH FLOW

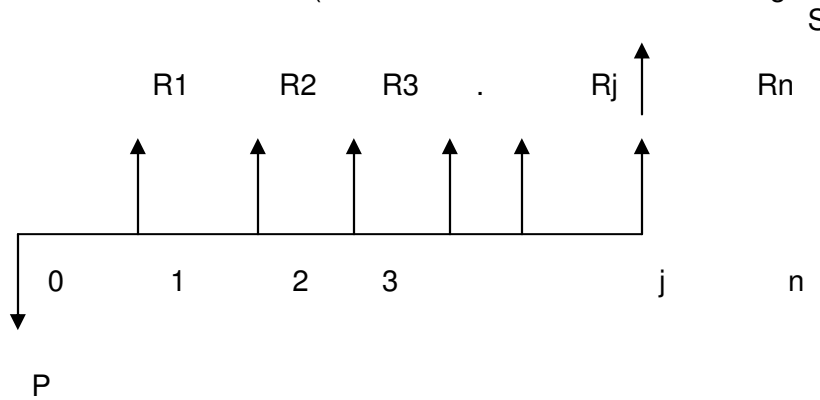
PART – A (2 MARKS)

1. Write down the techniques for comparing the worthiness of the project?

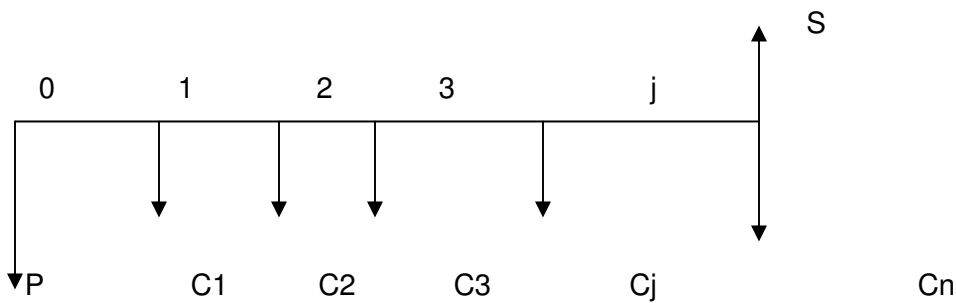
2. Define present worth method(Revenue dominated cash flow diagram)



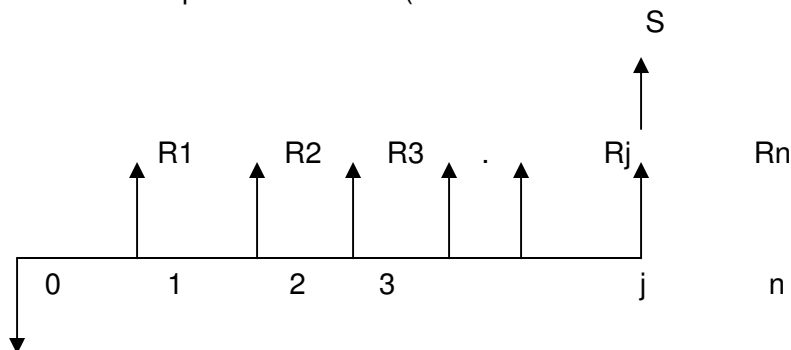
3. Define future worth method(Revenue dominated cash flow diagram)



4. Define future worth method(cash dominated cash flow diagram)

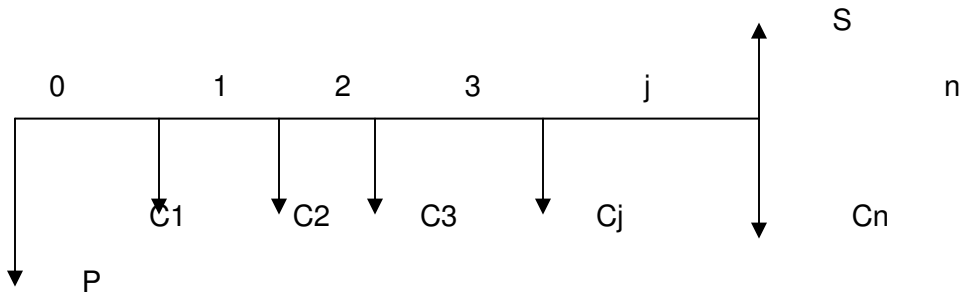


5. Define Annual equivalent method(Revenue dominated cash flow diagram)



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6. Define Annual equivalent method(cost dominated cash flow diagram)



7. Define rate of return 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 MAINTAINENCE ANALYSES

PART – A (2 MARKS)

1. Write the different types of maintenance?
2. Define prevention maintenance (PM)?
3. Define Break down maintenance ?
4. Write the different types of Replacement?
5. Define economic life of an asset?
6. What are the types of Replacement policies?

PART – B

1. Problems in Maintenance
 2. Problems in types of Replacement?
 3. Problems in finding the economic life of an asset?
 4. Problems in Capital recovery with return
 5. Problems in Simple probabilistic model for assets which fail completely
 - 6.(i) What is defender challenger concept in replacement ?Illustrate with an example. (8)
 - (ii) Explain the causes for replacement of assets ,in detail with examples (8)
 7. Initial cost of a machine is Rs 6,00,000, with other details as below: (8)
- Year 1 2 3 4 5
- Resale value (Rs) 4,20,000 3,00,000 2,04,000 1,44,000 96,500
- Cost of spares (Rs) 40,000 42,700 48,800 57,000 68,000
- Cost of labour (Rs) 1,40,000 1,60,000 1,80,000 2,10,000 2,50,000
- Determine the optimum period for replacement of the machine.

UNIT-5

DEPRECIATION

PART – A (2 MARKS)

1. Define Depreciation?
2. What are the types of Depreciation?
3. Define Straight line method of depreciation?
4. Define Declining balance method of depreciation?
5. Define Sum of the year-digits method of depreciation?
6. Define sinking fund method of depreciation?
7. Define Service output method of depreciation?
8. Define inflation?

PART – B

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 and a 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.