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DAYANANDA SAGAR COLLEGE OF ENGINEERING

(An Autonomous Institute Affiliated to VTU, Belagavi)

Shavige Malleshwara Hills, Kumaraswamy Layout, Bengaluru-560078

Department of Electronics and Communication Engineering

UG Continuous Internal Assessment – II

Course: ENGINEERING ECONIMICS — Semester : 6

Course Code: 18HS6ICEEM — Date: 08/07/2021

Maximum marks: 50 — Duration: 09:30am to 11:00am

1	a	A fixed increase in the value of investment, leads to _____ progression. i. Arithmetics ii. Geometric iii. Any iv. Both		1X10 L1 &L2 CO1 CO2
	b	Depreciation is a process of _____ in value of asset i. Decrease ii. Increase iii. Constant iv. None		
	c	72 rule is used to calculate approximate value of _____. i. IRR ii. PW iii. FW iv. Annuity		
	d	MARR is used in decision making of _____ among available alternatives. i. Best ii. Worst iii. Average iv. None		
	e	The vertical arrows in CFD indicates i. Magnitude of value ii. Time iii. Rate iv. Years		
	f	Equivalent annual worth includes i. Inflow ii. Outflow iii. Both iv. None		
	g	Accumulating certain amount in certain time based on agreement or contract is called i. Sinking fund ii. Average cost iii. Annual fund iv. Fixed fund		
	h	In declining balance method for calculation for depreciation the value of K is limited to. i. 1/n ii. 60% iii. 2/n iv. Twice the normal K		
	i	Ravi purchases a Fridge for Rs.40000. Calculate the EMI to be paid for a period of 4 years at an interest rate of 10%. i. 11000 ii. 12440 iii. 12620 iv. 14230		
	j	An investment of Rs.1000 yields Rs.8000 after 3 years. What is internal rate of return? i. 200%, ii. 100%, iii. 300% iv. 400%		
2	a	The purchase cost of a machine is ₹10,00,000 and earns ₹2,50,000 at the end of 1st year and revenue increases with ₹10000 every year for next 10 years. Salvage value of machine is ₹75000. Calculate the Equivalent annual worth of the machine.	10	L3/CO3
3	a	A flat purchased for ₹8,00,000, has value after 15 years is ₹32,00,000, if the annual rental income is ₹1,50,000, and maintenance cost Rs 10,000 what will be the Rate of return?	06	L3/CO2
	b.	Explain annual equal worth comparison method with its advantages and limitations.	04	L2/CO3

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<tr><td>4</td><td>a</td><td>Define depreciation and explain its impact on value of an asset</td><td>04</td><td>L1/CO2</td></tr>
<tr><td></td><td>b</td><td>A company has designed a product with R&D cost of ₹10 lakhs. A return of ₹5 lakhs is expected at the year end and it is expected to fetch ₹5 Lakhs for the next three years. Calculate the rate of return for this prototype.</td><td>06</td><td>L2/CO3</td></tr>
<tr><td></td><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>5</td><td>a</td><td>If P=25,000, S=2,000 n=8 years, i =15% calculate Depreciation and Book value for all the 8 years.</td><td>08</td><td>L3/CO3</td></tr>
<tr><td></td><td>b.</td><td>Explain the importance of book value.</td><td>02</td><td></td></tr>
<tr><td>6</td><td>a</td><td>The following alternatives can perform the same function.
<table>
<tr><th>Alternative</th><th>First cost</th><th>Life(years)</th><th>Salvage value</th><th>Annual cost</th></tr>
<tr><td>A</td><td>5,000</td><td>5</td><td>2,500</td><td>500</td></tr>
<tr><td>B</td><td>6,000</td><td>6</td><td>3,000</td><td>600</td></tr>
<tr><td>C</td><td>3,000</td><td>4</td><td>NIL</td><td>600</td></tr>
</table>
At an annual rate of 10%, rank the alternatives as per the Equal annual cost.</td><td>10</td><td>L4/CO3</td></tr>
<tr><td></td><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>7</td><td>a</td><td>A machine is purchased for ₹5000 with no salvage value. It is expected to serve for 5 years. Calculate the book value by sum of the years digit method and declining balance method, for all the 5 years.</td><td>10</td><td>L3/CO2</td></tr>
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