02/05/2023

Indian Institute of Engineering Science and Technology , Shibpur

B.Tech 4th Year 8th Semester(CE/ME/Min) Final Examination, May '23

FINANCE ECONOMICS &MANAGEMENT for ENGINEERS(HSS III)(HU - 4201)

(Use Separate Answer scripts for two halves. Answer Modulewise and start writing Answers for each Module on a separate page)

Full Marks : 50 Time : 3 hours

Each Module carries 16 marks (3x16=48). 2 marks for neatness

1st Half

Module I

A Explain with an imaginary example the concept of (any Two)

i. Operating Leverage ii. Financial Leverage iii. Combined Leverage.

(2x4)

B. i. Explain what is NPV Or PBP Or IRR.

ii. Give your opinion based on NPV regarding the acceptability of the following Two projects with reason: .

	Project A	Project B
Initial Outlay	Rs 1,00,000	Rs 1,00,000
Cost of Capital	10%	10%
Estimated Inflows Year 1	Rs 10,000	18,000
2	25,000,	27,000
3	35,000	36,000
4	47,000	49,000
5	10,000	2,000(2+6) (See Table if needed)

Module II

Economics

Answer both question No 1&2

1. Use the following information to answer questions a to d:

The table below shows data for Apples for an individual firm.

Quantity of Apples	Fixed Costs (FC)	Variable Costs (VC)	Total Costs (TC)
0	?	?	80
1	80	117	197

2	80	252	332
3	?	?	485
4	80	?	656
5	80	765	845
6	80	?	1052
7	?	1197	1277
8	80	1440	1520

a. Given this data, what are fixed costs when quantity is 0?

b. Given this data, what are variable costs when quantity is 0?

c. Given this data, what are variable costs when quantity is 3?

d. Given this data, what are variable costs when quantity is 4? (4)

2. a. Assume that a manufacturing company produces 1000 units and sells them at a price of Rs 5 each. The Average Total Cost (ATC) is Rs 7,000 with a fixed cost (FC) of Rs 4000 and a variable cost (VC) of Rs 3,000 for all units. Evidently, this manufacturing company is operating at a loss of Rs 2000 (economic loss). Whether this firm should continue its production in the short run? Give proper reasons. (5)

   b. What is planning curve? (2)

Attempt any one question from below :

3. How to determine National Income by Income Method? (5)

4 What is Investment Multiplier? Why the theory of multiplier does not generally apply to Less Developed Countries? (5)

2nd Half

Module III

Management

Answer any two questions. Each question carries 8 marks.

1. Differentiate between strategic and operational planning. Explain the concept of differentiation strategy with suitable examples. (4+4)
2. What conditions encourage a firm to pursue stability strategies? What are the different types of expansion strategies? (4+4)
3. What are the advantages of the managerial grid? Discuss the advantages and disadvantages of the different channels for transmitting a message. (2+6)

Table C: Present Value Factor of a Lump Sum (PVF) of Re 1

	Interest Rate													
Year	*1%*	*2%*	*3%*	*4%*	*5%*	*6%*	*7%*	*8%*	*9%*	*10%*	*11%*	*12%*	*13%*	*14%*
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009	0.005	0.003	0.002	0.001

(Contd...)