

QUESTION 1

Assume the following PERT-Cost inputs:

Activity	<u>Estimated times (days)</u>		<u>Estimated costs (dollars)</u>	
	Normal	Crash	Normal	Crash
0-1	8	6	E2,400	E3,240
1-2	6	6	2,100	2,100
1-5	3	1	750	1,450
2-3	4	3	1,980	2,580
2-4	16	3	4,640	9,918
3-4	0	0	0	0
3-6	11	6	3,080	5,040
4-6	6	3	2,400	4,080
5-6	5	2	<u>1,300</u>	<u>2,392</u>
			<u>E18,650</u>	<u>E30,800</u>

REQUIRED:

- a) Construct the PERT - Time network (10 Marks)
- b) Determine the project time and costs after crashing (30 Marks)
Total (40 Marks)

QUESTION 2

What are the factors that affect pricing decision?

(30 Marks)

QUESTION 3

A. Khanyakwezwe Ltd is considering the purchase of a new machine. The cost of this machine will be E60,000 and will have a useful life of 10 years and will have no salvage/scrap value. The machine will be depreciated on a straight-line basis. Income before depreciation and taxes is expected to be E30,000.

REQUIRED: assuming a 40% tax rate compute

- i) the pay back period (5 Marks)
- ii) the accounting rate of return (5 Marks)

B. Lithize Investments is considering a project that requires an initial investment of E159 600. Expected cash inflows from operations are E70,000 per year for 3 years.

REQUIRED: Compute the internal rate of return. (5 Marks)

C. ABC Ltd is considering to undertake a project which will require an investment of E108,000. The expected annual cash inflow from operation is E24000 for nine (9) years. The company's hurdle rate is 14%.

REQUIRED: using the NPV method, determine whether the project should be accepted or rejected. (5 Marks)

- D.** Abahle Ltd is considering the purchase of a new machine. The present value of the cash flow from operations is E75300. The machine will cost E64000

REQUIRED:

- i) Compute the profitability index (PI) (5 Marks)
- ii) Determine whether you would invest in the new machine (5 Marks)

(Total: 30 Marks)

QUESTION 4

Fill in the missing numbers in the following independent cases (30 Marks)
(2 marks each)

	<u>Case 1</u>	<u>Case 2</u>	<u>Case 3</u>
Revenue	a	E450,000	k
Expenses	E100.000	f	l
Segment profit	b	g	E20,000
Average total investment	E300,000	h	m
Asset turnover	c	4	2.5
Profit margin	d	8%	n
Achieved ROI	e	i	12%
Residual Income	E15.000	E5.000	o
Target ROI	12%	j	14%

NB. Show all your workings

Table 10-1 Present Value of \$1

Years N	5%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	25%
1	0.952	0.943	0.926	0.909	0.893	0.877	0.862	0.847	0.833	0.820	0.806	0.800
2	0.907	0.890	0.857	0.826	0.797	0.769	0.743	0.718	0.694	0.672	0.650	0.640
3	0.864	0.840	0.794	0.751	0.712	0.675	0.641	0.609	0.579	0.551	0.524	0.512
4	0.823	0.792	0.735	0.683	0.636	0.592	0.552	0.516	0.482	0.451	0.423	0.410
5	0.784	0.747	0.681	0.621	0.567	0.519	0.476	0.437	0.402	0.370	0.341	0.328
6	0.746	0.705	0.630	0.564	0.507	0.456	0.410	0.370	0.335	0.303	0.275	0.262
7	0.711	0.665	0.583	0.513	0.452	0.400	0.354	0.314	0.279	0.249	0.222	0.210
8	0.677	0.627	0.540	0.467	0.404	0.351	0.305	0.266	0.233	0.204	0.179	0.168
9	0.645	0.592	0.500	0.424	0.361	0.308	0.263	0.225	0.194	0.167	0.144	0.134
10	0.614	0.558	0.463	0.386	0.322	0.270	0.227	0.191	0.162	0.137	0.116	0.107
11	0.585	0.527	0.429	0.350	0.287	0.237	0.195	0.162	0.135	0.112	0.094	0.086
12	0.557	0.497	0.397	0.319	0.257	0.208	0.168	0.137	0.112	0.092	0.076	0.069
13	0.530	0.469	0.368	0.290	0.229	0.182	0.145	0.116	0.093	0.075	0.061	0.055
14	0.505	0.442	0.340	0.263	0.205	0.160	0.125	0.099	0.078	0.062	0.049	0.044
15	0.481	0.417	0.315	0.239	0.183	0.140	0.108	0.084	0.065	0.051	0.040	0.035
16	0.458	0.394	0.292	0.218	0.163	0.123	0.093	0.071	0.054	0.042	0.032	0.028
17	0.436	0.371	0.270	0.198	0.146	0.108	0.080	0.060	0.045	0.034	0.026	0.023
18	0.416	0.350	0.250	0.180	0.130	0.095	0.069	0.051	0.038	0.028	0.021	0.018
19	0.396	0.331	0.232	0.164	0.116	0.083	0.060	0.043	0.031	0.023	0.017	0.014
20	0.377	0.312	0.215	0.149	0.104	0.073	0.051	0.037	0.026	0.019	0.014	0.012

Table 10-2 Present Value of \$1 Received Annually for N Years

Years N	5%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	25%
1	0.952	0.943	0.926	0.909	0.893	0.877	0.862	0.847	0.833	0.820	0.806	0.800
2	1.859	1.833	1.783	1.736	1.690	1.647	1.605	1.566	1.528	1.492	1.457	1.440
3	2.723	2.673	2.577	2.487	2.402	2.322	2.246	2.174	2.106	2.042	1.981	1.952
4	3.546	3.465	3.312	3.169	3.037	2.914	2.798	2.690	2.589	2.494	2.404	2.362
5	4.330	4.212	3.993	3.791	3.605	3.433	3.274	3.127	2.991	2.864	2.745	2.689
6	5.076	4.917	4.623	4.355	4.111	3.889	3.685	3.498	3.326	3.167	3.020	2.951
7	5.786	5.582	5.206	4.868	4.564	4.288	4.039	3.812	3.605	3.416	3.242	3.161
8	6.463	6.210	5.747	5.335	4.968	4.639	4.344	4.078	3.837	3.619	3.421	3.329
9	7.108	6.802	6.247	5.759	5.328	4.946	4.607	4.303	4.031	3.786	3.566	3.463
10	7.722	7.360	6.710	6.145	5.650	5.216	4.833	4.494	4.192	3.923	3.682	3.571
11	8.306	7.887	7.139	6.495	5.937	5.453	5.029	4.656	4.327	4.035	3.776	3.656
12	8.863	8.384	7.536	6.814	6.194	5.660	5.197	4.793	4.439	4.127	3.851	3.725
13	9.394	8.853	7.904	7.103	6.424	5.842	5.342	4.910	4.533	4.203	3.912	3.780
14	9.899	9.295	8.244	7.367	6.628	6.002	5.468	5.008	4.611	4.265	3.962	3.824
15	10.380	9.712	8.559	7.606	6.811	6.142	5.575	5.092	4.675	4.315	4.001	3.859
16	10.838	10.106	8.851	7.824	6.974	6.265	5.669	5.162	4.730	4.357	4.033	3.887
17	11.274	10.477	9.122	8.022	7.120	6.373	5.749	5.222	4.775	4.391	4.059	3.910
18	11.690	10.828	9.372	8.201	7.250	6.467	5.818	5.273	4.812	4.419	4.080	3.928
19	12.085	11.158	9.604	8.365	7.366	6.550	5.877	5.316	4.844	4.442	4.097	3.942
20	12.462	11.470	9.818	8.514	7.469	6.623	5.929	5.353	4.870	4.460	4.110	3.954