



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF APPLIED CHEMISTRY
SUPPLEMENTARY EXAMINATIONS – JULY 2004
PROJECT DEVELOPMENT AND MANAGEMENT – SCH 4210
TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATES

Answer **ANY FIVE (5)** questions from the six (6) provided. Each question carries 20 marks.

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1.
 - (a) List six possible instigators of projects. (6 marks)
 - (b) Briefly outline the various steps that are taken during a project feasibility study. (14 marks)

 2.
 - (a) How does project management fit in the overall strategy of a company? (6 marks)
 - (b) What conflict of interest may occur between the Project Manager and Functional Managers in an organisation? (6 marks)
 - (c) How can these conflicts be managed? (4 marks)
 - (d) List *four (4)* roles of the Project Manager. (4 marks)

 3. A medium sized company B and S Chemical Manufacturers (Pvt) Limited is considering to introduce a new chemical product into the market. The project will cost them \$90 million to start. All of this money will have to be borrowed at an annual interest rate of 28%. The cash flows are projected to be as follows:

\$40m – 1st year, \$20m – 2nd year, \$20m – 3rd year, \$15m – 4th year and \$15m – 5th year.
 - (a) Provide a learned advice to the company as to whether or not they should proceed with this project. (16 marks)
 - (b) What are the shortcomings of the numerical models of project selection? (4 marks)

 4.
 - (a) Graphically present the Project Life-Cycle Structure. (4 marks)

4. (b) To which part of the structure are maximum resources needed and why?
(6 marks)
- (c) What factors influence the shape of the Project Life-Cycle Cash Flow Curve?
(10 marks)
5. Describe the elements of a Project Close-out Report. (20 marks)
6. You have been approached by Mr S Sivuno, an entrepreneur, who would like to invest in a project to produce canned tomatoes. Develop guidelines for him on how he should compile his project proposal.

End of question Paper!!!

Appendix Table 1 Discount factors: Present value of \$1 to be received after t years = $1/(1+r)^t$

Number of years	Interest rate per year														
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909	.901	.893	.885	.877	.870
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826	.812	.797	.783	.769	.756
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751	.731	.712	.693	.675	.658
4	.961	.924	.888	.855	.823	.792	.763	.735	.708	.683	.659	.636	.613	.592	.572
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621	.593	.567	.543	.519	.497
6	.942	.888	.837	.790	.746	.705	.666	.630	.596	.564	.535	.507	.480	.456	.432
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513	.482	.452	.425	.400	.376
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467	.434	.404	.376	.351	.327
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424	.391	.361	.333	.308	.284
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386	.352	.322	.295	.270	.247
11	.896	.804	.722	.650	.585	.527	.475	.429	.388	.350	.317	.287	.261	.237	.215
12	.887	.788	.701	.625	.557	.497	.444	.397	.356	.319	.286	.257	.231	.208	.187
13	.879	.773	.681	.601	.530	.469	.415	.368	.326	.290	.258	.229	.204	.182	.163
14	.870	.758	.661	.577	.505	.442	.388	.340	.299	.263	.232	.205	.181	.160	.141
15	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239	.209	.183	.160	.140	.123
16	.853	.728	.623	.534	.458	.394	.339	.292	.252	.218	.188	.163	.141	.123	.107
17	.844	.714	.605	.513	.436	.371	.317	.270	.231	.198	.170	.146	.125	.108	.093
18	.836	.700	.587	.494	.416	.350	.296	.250	.212	.180	.153	.130	.111	.095	.081
19	.828	.686	.570	.475	.396	.331	.277	.232	.194	.164	.138	.116	.098	.083	.070
20	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149	.124	.104	.087	.073	.061
25	.780	.610	.478	.375	.295	.233	.184	.146	.116	.092	.074	.059	.047	.038	.030
30	.742	.552	.412	.308	.231	.174	.131	.098	.075	.057	.044	.033	.026	.020	.015

Number of years	Interest rate per year														
	16%	17%	18%	19%	20%	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
1	.862	.855	.847	.840	.833	.826	.820	.813	.806	.800	.794	.787	.781	.775	.766
2	.743	.731	.718	.706	.694	.683	.672	.661	.650	.640	.630	.620	.610	.601	.592
3	.641	.624	.609	.593	.579	.564	.551	.537	.524	.512	.500	.488	.477	.466	.455
4	.552	.534	.516	.499	.482	.467	.451	.437	.423	.410	.397	.384	.373	.361	.350
5	.476	.456	.437	.419	.402	.386	.370	.355	.341	.328	.315	.303	.291	.280	.266
6	.410	.390	.370	.352	.335	.319	.303	.289	.275	.262	.250	.238	.227	.217	.207
7	.354	.333	.314	.296	.279	.263	.249	.235	.222	.210	.198	.188	.178	.168	.155
8	.305	.285	.266	.249	.233	.218	.204	.191	.179	.168	.157	.148	.139	.130	.122
9	.263	.243	.225	.209	.194	.180	.167	.155	.144	.134	.125	.116	.108	.101	.094
10	.227	.208	.191	.176	.162	.149	.137	.126	.116	.107	.099	.092	.085	.078	.073
15	.195	.178	.162	.148	.135	.123	.112	.103	.094	.086	.079	.072	.066	.061	.056
20	.168	.152	.137	.124	.112	.102	.092	.083	.076	.069	.062	.057	.052	.047	.043
25	.145	.130	.116	.104	.093	.084	.075	.068	.061	.055	.050	.045	.040	.037	.033
30	.125	.111	.099	.088	.078	.069	.062	.055	.049	.044	.039	.035	.032	.028	.025
35	.108	.095	.084	.074	.065	.057	.051	.045	.040	.035	.031	.028	.025	.022	.020
40	.093	.081	.071	.062	.054	.047	.042	.036	.032	.028	.025	.022	.019	.017	.015
45	.080	.069	.060	.052	.045	.039	.034	.030	.026	.023	.020	.017	.015	.013	.012
50	.069	.059	.051	.044	.038	.032	.028	.024	.021	.018	.016	.014	.012	.010	.009
55	.060	.051	.043	.037	.031	.027	.023	.020	.017	.014	.012	.011	.009	.008	.007
60	.051	.043	.037	.031	.026	.022	.019	.016	.014	.012	.010	.008	.007	.006	.005
65	.024	.020	.016	.013	.010	.009	.007	.006	.005	.004	.003	.003	.002	.002	.001
70	.012	.009	.007	.005	.004	.003	.003	.002	.002	.001	.001	.001	.001	.000	.000

g.: If the interest rate is 10 percent per year, the present value of \$1 received at the end of year 5 is \$0.621.