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UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Kedua  
Sidang Akademik 2002/2003

Februari / Mac 2003

**EPM 372/3 – Pengurusan Kejuruteraan II**

Masa : 3 jam

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**ARAHAN KEPADA CALON :**

Sila pastikan bahawa kertas soalan ini mengandungi **EMPAT (4)** mukasurat dan **ENAM (6)** soalan yang bercetak serta **DUA (2)** halaman lampiran sebelum anda memulakan peperiksaan.

Sila jawab **LIMA (5)** soalan sahaja.

Soalan perlu dijawab didalam Bahasa Malaysia.

**Lampiran :**

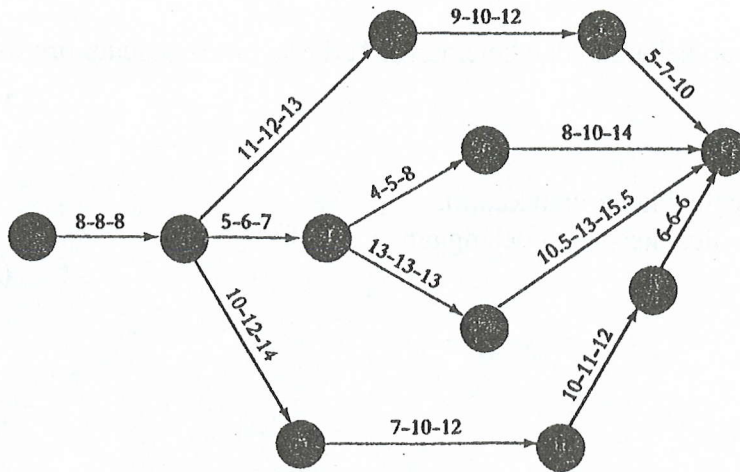
1. Appendix B Tables

[2 mukasurat]

Setiap soalan mestilah dimulakan pada mukasurat yang baru

- S1. [a]** Berikan huraian mengenai :
- (i) 4 tugas umum yang dijalankan oleh seorang pengurus
  - (ii) 3 faktor penting yang perlu diambil kira oleh seorang pengurus kejuruteraan.
- (30 markah)**
- [b]** Terangkan jenis-jenis pengurus. Berikan pendapat anda jenis pengurus manakah yang lebih berkesan dalam menangani organisasi yang baru ditubuhkan berbanding organisasi yang telah lama wujud.
- (30 markah)**
- [c]** Bincangkan :
- (i) elemen penting di dalam pengurusan kualiti menyeluruh yang perlu diterapkan oleh sesebuah organisasi.
  - (ii) 2 alatan teknikal kualiti yang dapat membantu organisasi berdayasaing
- (40 markah)**
- S2. [a]** Terangkan :
- (i) perbandingan antara teori ciri tersendiri (traits) dan teori kepimpinan bersituasi (situational leader)
  - (ii) Model Blake-Mouton (Managerial Grid) dan Model Hersey-Blanchard
- (30 markah)**
- [b]** Huraikan kaedah yang anda gunakan sebagai seorang pengurus kejuruteraan bagi memotivasi pekerja di bawah seliaan anda untuk meningkatkan prestasi mereka.
- (30 markah)**
- [c]** Bincang mengenai teori/model motivasi :
- (i) Maslow
  - (ii) Herzberg
  - (iii) Vroom
- Lakukan perbandingan ringkas bagi teori/model tersebut.
- (40 markah)**
- S3. [a]** PERT (program evaluation and review technique) dan CPM (critical path method) merupakan dua teknik yang digunakan secara meluas bagi membantu perancangan sesuatu projek. Dengan menggunakan teknik ini, apakah maklumat yang boleh diperolehi oleh pengurus projek?
- (20 Markah)**
- [b]** Senaraikan kelemahan-kelemahan teknik PERT dan CPM.
- (20 markah)**

- [c] Gambarajah rangkaian berikut menggambarkan tiga masa anggaran bagi setiap aktiviti.



Rajah S5[a] Gambarajah Rangkaian

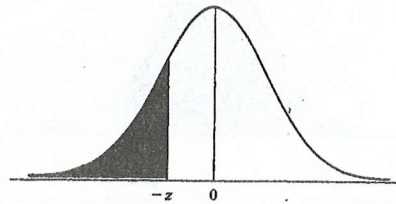
Tentukan:

- (i) Jangkaan masa tamat dan varians bagi setiap laluan. **(30 markah)**
  - (ii) Kebarangkalian projek tersebut akan memerlukan lebih 49 minggu untuk disiapkan. **(15 markah)**
  - (iii) Kebarangkalian projek tersebut boleh disiapkan dalam masa 46 minggu atau kurang. **(15 markah)**
- S4. [a] Apakah itu projek dan senaraikan fasa-fasa yang terlibat dalam suatu kitar hayat projek. **(30 markah)**
- [b] Apakah itu pengurusan projek? Senaraikan dan terangkan dengan ringkas objektif utama yang perlu dicapai dalam pengurusan projek. **(30 markah)**
- [c] Terangkan dengan ringkas apakah perancangan projek, penskedulan dan kawalan. **(40 markah)**
- S5. [a] Bincangkan isu-isu dan cabaran-cabaran baru yang perlu dihadapi oleh industri kecil dan sederhana di Malaysia dalam dunia perniagaan, domestik dan sejagat. **(40 markah)**

**Appendix B Tables**

**TABLE B**

1. Areas under the standardized normal curve from  $-\infty$  to  $-z$

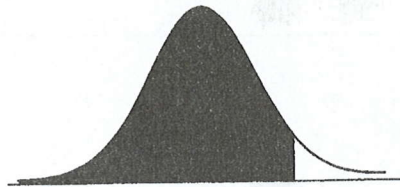


.09	.08	.07	.06	.05	.04	.03	.02	.01	.00	<i>z</i>
.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	-3.4
.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	-3.3
.0005	.0005	.0005	.0006	.0006	.0006	.0006	.0006	.0007	.0007	-3.2
.0007	.0007	.0008	.0008	.0008	.0008	.0009	.0009	.0009	.0010	-3.1
.0010	.0010	.0011	.0011	.0011	.0012	.0012	.0013	.0013	.0013	-3.0
.0014	.0014	.0015	.0015	.0016	.0016	.0017	.0018	.0018	.0019	-2.9
.0019	.0020	.0021	.0021	.0022	.0023	.0023	.0024	.0025	.0026	-2.8
.0026	.0027	.0028	.0029	.0030	.0031	.0032	.0033	.0034	.0035	-2.7
.0036	.0037	.0038	.0039	.0040	.0041	.0043	.0044	.0045	.0047	-2.6
.0048	.0049	.0051	.0052	.0054	.0055	.0057	.0059	.0060	.0062	-2.5
.0064	.0066	.0068	.0069	.0071	.0073	.0075	.0078	.0080	.0082	-2.4
.0084	.0087	.0089	.0091	.0094	.0096	.0099	.0102	.0104	.0107	-2.3
.0110	.0113	.0116	.0119	.0122	.0125	.0129	.0132	.0136	.0139	-2.2
.0143	.0146	.0150	.0154	.0158	.0162	.0166	.0170	.0174	.0179	-2.1
.0183	.0188	.0192	.0197	.0202	.0207	.0212	.0217	.0222	.0228	-2.0
.0233	.0239	.0244	.0250	.0256	.0262	.0268	.0274	.0281	.0287	-1.9
.0294	.0301	.0307	.0314	.0322	.0329	.0336	.0344	.0351	.0359	-1.8
.0367	.0375	.0384	.0392	.0401	.0409	.0418	.0427	.0436	.0446	-1.7
.0455	.0465	.0475	.0485	.0495	.0505	.0516	.0526	.0537	.0548	-1.6
.0559	.0571	.0582	.0594	.0606	.0618	.0630	.0643	.0655	.0668	-1.5
.0681	.0694	.0708	.0721	.0735	.0749	.0764	.0778	.0793	.0808	-1.4
.0823	.0838	.0853	.0869	.0885	.0901	.0918	.0934	.0951	.0968	-1.3
.0985	.1003	.1020	.1038	.1056	.1075	.1093	.1112	.1131	.1151	-1.2
.1170	.1190	.1210	.1230	.1251	.1271	.1292	.1314	.1335	.1357	-1.1
.1379	.1401	.1423	.1446	.1469	.1492	.1515	.1539	.1562	.1587	-1.0
.1611	.1635	.1660	.1685	.1711	.1736	.1762	.1788	.1814	.1841	-0.9
.1867	.1894	.1922	.1949	.1977	.2005	.2033	.2061	.2090	.2119	-0.8
.2148	.2177	.2206	.2236	.2266	.2296	.2327	.2358	.2389	.2420	-0.7
.2451	.2483	.2514	.2546	.2578	.2611	.2643	.2676	.2709	.2743	-0.6
.2776	.2810	.2843	.2877	.2912	.2946	.2981	.3015	.3050	.3085	-0.5
.3121	.3156	.3192	.3228	.3264	.3300	.3336	.3372	.3409	.3446	-0.4
.3483	.3520	.3557	.3594	.3632	.3669	.3707	.3745	.3783	.3821	-0.3
.3859	.3897	.3936	.3974	.4013	.4052	.4090	.4129	.4168	.4207	-0.2
.4247	.4286	.4325	.4364	.4404	.4443	.4483	.4522	.4562	.4602	-0.1
.4641	.4681	.4721	.4761	.4801	.4840	.4880	.4920	.4960	.5000	-0.0

**Appendix B Tables**

**TABLE B (concluded)**

2. Areas under the standardized normal curve from  $-\infty$  to  $+z$



<i>z</i>	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
.7	.7580	.7611	.7642	.7673	.7703	.7734	.7764	.7794	.7823	.7852
.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9991	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998