

- 一. 解釋名辭(20%; 若僅翻譯名辭, 不給分; 解釋正確, 但不夠詳盡, 給一分; 解釋正確, 且夠詳盡, 給二分.)
1. Average Person
  2. Sound Pressure Level
  3. Articulation Index
  4. Two Eyes Convergence
  5. Nervous System Conduction Time
  6. Population Stereotype Behavior
  7. Eye Camera
  8. Modality Compatibility
  9. Conduction Deafness
  10. Viscous Damping
- 二. 視覺陳示有效溝通有那三個最基本步驟? 此三步驟需考慮那些視覺能力及條件? 請詳加說明. (9%)
- 三. 假設某班同學身高成常態分配(Normal Distribution), 已知該班 15th Percentile 之身高為 160 cm, 全班平均身高為 170cm, 試求 (1) 該班70%ile之身高值, (2) 該班同學身高之標準偏差(Standard Deviation)值. (4%)
- 四. 何謂人體工學之連桿分析法( Link Analysis)? 其需考慮那些條件於設計中? 請詳加說明. (4%)
- 五. 在人體活動中, 影響反應時間( Reaction Time)之因素有那些? 並試說明其如何影響? (5%)
- 六. 人體工學工作分析法( Task Analysis)之程序可由那些部份組成? 請詳加說明其如何進行和考慮. (8%)

附錄

標準常態分配機率表

$P(-\infty < z < z_0)$

$z_0$	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
.0	.500000	.503989	.507978	.511966	.515953	.519938	.523922	.527903	.531881	.535856
.1	.539828	.543795	.547758	.551717	.555670	.559618	.563560	.567495	.571424	.575345
.2	.579260	.583166	.587064	.590954	.594835	.598706	.602568	.606420	.610261	.614092
.3	.617911	.621720	.625516	.629300	.633072	.636831	.640576	.644309	.648027	.651732
.4	.655422	.659097	.662757	.666402	.670031	.673645	.677242	.680822	.684386	.687933
.5	.691462	.694974	.698468	.701944	.705402	.708840	.712260	.715661	.719043	.722405
.6	.725747	.729023	.732271	.735503	.738714	.741904	.745073	.748221	.751348	.754453
.7	.757536	.761148	.764238	.767305	.770350	.773373	.776373	.779350	.782305	.785236
.8	.788145	.791030	.793892	.796731	.799546	.802338	.805106	.807850	.810570	.813267
.9	.815940	.818589	.821214	.823814	.826391	.828944	.831472	.833977	.836457	.838913
1.0	.841345	.843752	.846136	.848495	.850830	.853141	.855428	.857690	.859929	.862143
1.1	.864334	.866500	.868643	.870762	.872857	.874928	.876976	.879000	.881000	.882977
1.2	.884930	.886861	.888768	.890651	.892512	.894350	.896165	.897958	.899727	.901475
1.3	.903200	.904902	.906582	.908241	.909877	.911492	.913085	.914656	.916207	.917736
1.4	.919243	.920730	.922196	.923642	.925066	.926471	.927855	.929219	.930563	.931889
1.5	.933193	.934478	.935744	.936992	.938220	.939429	.940620	.941792	.942947	.944083
1.6	.945201	.946301	.947384	.948449	.949497	.950528	.951543	.952540	.953521	.954486
1.7	.955434	.956367	.957284	.958185	.959070	.959941	.960796	.961636	.962462	.963273
1.8	.964070	.964852	.965620	.966375	.967116	.967843	.968557	.969258	.969946	.970621
1.9	.971283	.971933	.972571	.973197	.973810	.974412	.975002	.975581	.976148	.976704
2.0	.977250	.977781	.978308	.978822	.979325	.979818	.980301	.980774	.981237	.981691
2.1	.982136	.982571	.982997	.983414	.983823	.984222	.984614	.984997	.985371	.985738
2.2	.986097	.986447	.986791	.987126	.987454	.987776	.988091	.988396	.988696	.988989
2.3	.989276	.989556	.989830	.990097	.990358	.990613	.990862	.991106	.991344	.991576
2.4	.991802	.992024	.992240	.992451	.992656	.992857	.993053	.993244	.993431	.993613

第二部份：(本部份共計50%，和問人體工學之應用。)

- 一. 以機車安全帽設計(考慮性別、年齡……)為例，說明人(頭部)-機(機車)界面之相關人性因素(Human Factors)設計準則。(10%)
- 二. 以機車安全帽之產品設計為例，試進行一項“新”的人體工學實驗，以合理提高機車安全帽之產品設計品質。實驗中應詳述各項細節及產品設計應用之方法。(30%)
- 三. 假設你(或妳)考上工業設計研究所，試簡述你(或妳)對工業設計與人體工學，將如何進行學術之研究，以提昇未來進行產品設計時之決策(Design Decision-Making)品質？(10%)