
UNIVERSITI SAINS MALAYSIA

First Semester Examination
2007/2008 Academic Session

October / November 2007

EUP 301/3 – Engineering Management
[Pengurusan Kejuruteraan]

Duration : 3 hours
[Masa : 3 jam]

Please check that this examination paper consists of THIRTEEN pages of printed material including appendices before you begin the examination.
[Sila pastikan kertas peperiksaan ini mengandungi TIGA BELAS muka surat bercetak termasuk lampiran sebelum anda memulakan peperiksaan ini.]

Instructions: There are three sections in this examination paper. Please follow the given instruction in each section.

*[**Arahan:** Terdapat tiga bahagian di dalam kertas peperiksaan ini. Sila ikut arahan dalam setiap bahagian.]*

You may answer the question either in Bahasa Malaysia or English.

[Anda dibenarkan menjawab soalan sama ada dalam Bahasa Malaysia atau Bahasa Inggeris.]

All questions **MUST BE** answered on a new sheet.

*[Semua jawapan **MESTILAH** dijawab pada muka surat baru.]*

Write the answered question numbers on the cover sheet of the answer script.

[Tuliskan nombor soalan yang dijawab di luar kulit buku jawapan anda.]

BAHAGIAN A – PENGURUSAN PEMASARAN
(PART A – MARKETING MANAGEMENT)

1. Jawab **DUA** soalan. Soalan 1(a) adalah wajib dan pilih satu lagi soalan dari 1(b) atau 1(c).
*Answer **TWO** questions. Question 1(a) is compulsory and select another one question from 1(b) or 1(c).*

- (a) Baca artikel di bawah:
Read the article below:

Taking Haier Higher

Founded in 1984 out of its predecessor, Qingdao Refrigerator, Haier first marketed refrigerators from a German company called Liberhaier. It gained unfavorable reputation when its inferior quality products were smashed just before they went off the production line. Yet, over the next 16 years, Haier's sales rose 11,600 times, while its product variety increased from a single refrigerator model to nearly 70 products in nearly 11,000 variants. Its brand value rose nearly eight times between 1995 and 2000. Its products are sold in over 160 countries and retail at over 38,000 outlets. Haier's global branding strategy aims at positioning the company as a local brand in different world markets in conjunction with enhanced product competitiveness and strong corporate operations. Haier's branding is communicated on billboards in Tokyo and New York, and via a sponsorship deal with Italian Premiership Football. Haier is promoted as a global brand, not Chinese or American although most people think it a German brand. Last year, Haier and National Basketball Association (NBA) signed a multiyear strategic alliance to co-promote their brands in China and the U.S. Haier's international business framework encompasses a global network of design, procurement, production, distribution and after-sale services. In overseas markets, Haier products are available in 12 of the top 15 chain stores in Europe and 10 leading chain stores in the USA. Haier is now approaching its goal of being "local" in American and European markets via localized design, manufacturing and sales processes. In addition, Haier has set up production facilities and plants in the USA, Italy, Pakistan, Jordan and Nigeria. In addition to high quality home appliances, Haier is also focused on offering best-of-breed service solutions to its customers. Haier's service system runs throughout the production process from product design, production, manufacturing, to pre-sale, under sales and after sales service. However, after having the Chinese market to itself for a decade, Haier now faces competition from domestic upstarts and such foreign entrants as Samsung, Siemens and Electrolux. A price war in the last few years had lowered appliances process and pressured Haier's profit margins. Haier responded by partnering Sanyo and Taiwan's Sampo in production and distribution alliances. It also now makes digital TVs with LG Electronics. Finally, it is diversifying into such unrelated businesses as finance, computers and mobile phones. Now, Haier's product categories range from refrigerators, refrigerating cabinets, air conditioners, washing machines, televisions, mobile phones, home theatre systems, computers, water heaters, DVD players and integrated furniture. Haier is making inroads into the Malaysian market with the setting up of a manufacturing plant in Selangor. It is a joint venture with Kuala Lumpur-based Basswinn group, with a guarantee of technology transfer to Malaysia.

Source: adapted from www.haier.com

Berdasarkan artikel tentang Syarikat Haier, buat penilaian dan terangkan tentang;

Based on the article on Haier Company, evaluate and explain it's;

- (i) Strategi produknya
Product strategy
- (ii) Strategi perletakan harganya
Pricing strategy
- (iii) Strategi promosinya
Promotion strategy
- (iv) Strategi pengagihannya
Placing strategy
- (v) Strategi pasarannya
Market strategies

(20 markah)

- (b) Konsep pemasaran memberi kesan terhadap semua bidang perniagaan. Dari aspek pengeluaran, para jurutera dan perekabentuk perlu mengeluarkan item-item yang memenuhi keperluan pelanggan yang meliputi perkhidmatan selepas jualan di mana aduan pelanggan perlu diambilkira dengan serius. Pemasaran perhubungan menekankan nilai "sepanjang hayat" pelanggan. Sebagai contohnya, sebuah pengeluar automobil mempunyai sebuah model untuk para pemandu muda, sebuah lagi untuk para keluarga dengan anak-anak dan sebuah lagi untuk para pengguna berumur pertengahan.

Dalam pemasaran perhubungan, mengapakah para pemasar dalam industri sering merujuk kepada pengguna apabila membuat keputusan?

(7 markah)

The marketing concept affects all areas of business. In terms of engineers and designers have to produce items that meet customers' needs up to after sales services where customer complaints need to be taken seriously. Relationship marketing focuses on the "lifetime" value of the customer. For example, an automotive manufacturer has one model aimed at young drivers, another aimed at families with children and another aimed at middle-aged users.

In relationship marketing, why should marketers in industry always refer to the consumer when making decision?

- (c) Teknologi maklumat terutamanya Internet membuka banyak peluang untuk e-dagang. Pengetahuan tentang corak pembelian pelanggan yang dilakukan dengan komputer membolehkan pelanggan disasarkan dengan lebih tepat. Selain daripada revolusi dalam komunikasi, teknologi satelit telah menghasilkan pelbagai peluang pembangunan dalam bidang kejuruteraan.

Dari perspektif pemasaran perindustrian, bagaimanakah teknologi-teknologi baru memberi kesan terhadap industri kejuruteraan?

(7 markah)

Information technology especially the Internet is opening up many opportunities for e-commerce. Knowledge about consumers' buying patterns which is held on computers allows more accurate targeting of customers. Apart from the revolution in communications, satellite technology has generated various development opportunities in engineering area.

From the perspective of industrial marketing, how do new technologies will affect the engineering industry?

BAHAGIAN B – EKONOMI KEJURUTERAAN
(PART B – ENGINEERING ECONOMICS)

Jawab semua soalan.

2. Menggunakan konsep permintaan dan penawaran, terangkan keperluan untuk diperkenalkan strategi berikut berkenaan dengan jambatan Pulau Pinang:
- (i) Pengekalan kadar tol untuk menyeberangi Jambatan Pulau Pinang
 - (ii) Keputusan untuk menambah lorong pada Jambatan Pulau Pinang
 - (iii) Keputusan untuk membina Jambatan Kedua Pulau Pinang

Jawapan anda perlu menggunakan argumen untuk permintaan dan penawaran, konsep keseimbangan antara permintaan dan penawaran, dan argumen lain yang sesuai.

(15 markah)

Using the demand and supply concept, explain the need to introduce the varying strategies related to the Penang Bridge:

- (i) Not changing the toll rates to cross the Penang Bridge*
- (ii) Decision to build additional lanes to the existing Penang Bridge*
- (iii) Decision to build the second Penang Bridge.*

Your answer should use the arguments relating to the demand and supply concept, the equilibrium between supply and demand and other relevant arguments.

3. Sebuah syarikat memerlukan RM 1,400,000.00 sebagai modal untuk menjalankan sebuah projek. Tiga bank telah memberikan tawaran seperti berikut:
- (i) Peminjaman adalah mengikut "Simple Interest" pada kadar 11.5% setahun untuk tempoh 5 tahun – principal dan interest dibayar dihujung.
 - (ii) Peminjaman adalah mengikut "compound interest" pada kadar 8% setahun untuk tempoh masa 5 tahun – interest dibayar setiap tahun dan principal dibayar dihujung.
 - (iii) Peminjaman adalah mengikut "compound interest" pada kadar 12.5% setahun untuk tempoh masa 10 tahun – interest dibayar setiap tahun, dan principal dibayar dihujung.

Tunjukkan pelan pembayaran balik bagi tawaran setiap bank. Pilih pelan yang anda rasakan paling sesuai, dan beri justifikasi anda.

(10 markah)

A company requires RM 1,400,000.00 as capital to start a project. The company has received three offers from banks as follows:

- (i) Terms are using "simple interest", at the rate of 11.5% per year for a five year return period – principal and interest are paid at the end
- (ii) Terms are using "compound interest", at the rate of 8% per year for a return period of 5 years – interest is paid annually and principal is paid at the end
- (iii) Terms are using "compound interest" at the rate of 12.5% per year for a return period of 10 years – interest is paid annually, and principal is to be paid at the end.

Show the pay-back plan for each bank. Select your best plan and provide your justifications.

4. Terangkan dua dari tiga konsep berikut:

- (i) Keseimbangan antara permintaan dan penawaran
- (ii) Konsep keanjalan
- (iii) Ekonomi Pengetahuan

(8 markah)

Explain two from the following three concepts:

- (i) Demand and supply equilibrium
- (ii) The elasticity concept
- (iii) Knowledge Economy

BAHAGIAN C – PENGURUSAN SUMBER MANUSIA
(PART C – HUMAN RESOURCES MANAGEMENT)

Jawab soalan 5 dan pilih mana-mana dua dari soalan 6, 7 & 8.
Answer question 5 and choose any two from question 6, 7 & 8.

5. (i) Ramalan sumber manusia termasuk

- (a) hubungkan data nasional dengan perancangan syarikat untuk keperluan kakitangan
- (b) perbandingan data sumber manusia dari peringkat nasional dengan keperluan kakitangan
- (c) analisis data syarikat untuk meramal keperluan masa depan
- (d) pembangunan polisi kakitangan supaya seiring dengan matlamat jangka pendek dan panjang organisasi

Human resource forecasting involves

- (a) *the interrelation of national or regional data with company projections for personnel needs*
- (b) *the comparison of national human resource data with specific organisational objectives*
- (c) *the analysis of company's data to predict future needs*
- (d) *the development of personnel policies to coincide with short and long term organisational goals*

(ii) Kajian menyeluruh atas tugas tertentu di mana pekerja mesti melakukan untuk menyempurnakan kerja, keadaan di mana tugas dijalankan dan alatan yang digunakan untuk menyelesaikan tugas dipanggil

- (a) huraian tugas
- (b) penentuan tugas
- (c) analisis tugas
- (d) penaksiran tugas

A thorough study of a specific job that identifies the tasks which the employee must perform to complete the work, the condition under which the job is performed and the equipment used in getting the job done is called

- (a) *job description*
- (b) *job specification*
- (c) *job analysis*
- (d) *job evaluation*

(iii) Teknik Delphi digunakan untuk meramal permintaan sumber manusia. Manakah di antara pernyataan berikut TIDAK BENAR mengenai teknik

- (a) Ia mungkin melibatkan beberapa tindakbalas
- (b) Orang luar mungkin diminta memberikan pendapat mengenai arah tuju masa depan
- (c) Peserta memberi pendapat mereka secara bebas
- (d) Data masukkan digunakan sebagai maklum balas untuk tindak balas selanjutnya

The Delphi Technique is used to predict human resource demand. Which of the following statement is NOT TRUE about the technique?

- (a) *It may involved taking several round of responses*
- (b) *Outsiders maybe asked to provide their opinions regarding future directions*
- (c) *Participants provide their opinion independently*
- (d) *The input data are used as a feedback for further refinement of the responses*

(iv) Sebuah syarikat yang bercadang untuk memilih calon untuk jawatan pegawai perhubungan pelanggan mungkin akan

- (a) menggunakan ujian kemahiran tugas
- (b) menggunakan ujian personaliti
- (c) merujuk kepada maklumat yang dihantar oleh pemohon
- (d) menyemak kepada rujukan yang diberi pemohon

A company intending to select a candidate for a customer relation officer post may most probably

- (a) *use job skill tests*
- (b) *use personality tests*
- (c) *refer to resumes submitted by applicants*
- (d) *check on references provided by applicants*

(v) Manakah teknik pembangunan yang terbaik untuk membina pemimpin

- (a) pembangunan organisasi
- (b) permodelan kelakuan
- (c) padanan pemimpin
- (d) pembinaan kumpulan

Which development technique is best for building leaders?

- (a) *Organisational development*
- (b) *Behavioural modelling*
- (c) *Leadership matches*
- (d) *Team building*

- (vi) Amalan biasa sesebuah organisasi untuk memastikan persekitaran kerja yang bebas kemalangan dan bebas penyakit adalah dengan
- (a) mengurangkan premium insuran kesihatan tetapi kekalkan perlindungan
 - (b) menyalahkan penyakit berkaitan organisasi kepada persekitaran luar
 - (c) memberi pekerja perlindungan gantirugi kepada pekerja yang cedera
 - (d) mengumumkan rekod keselamatan pada papan kenyataan

A common practice for an organisation to use in promoting an accident free and ill free environment is to

- (a) *reduce health insurance premiums while maintaining coverage*
- (b) *blame occupational illness of employees on the external environment*
- (c) *provide workers' compensation coverage for injured employees*
- (d) *post safety and health records for department on bulletin boards*

- (vii) Di antara sistem maklum balas prestasi penilaian yang berikut, sistem manakah yang kurang baik untuk digunakan bagi menilai seorang penyelia yang mempunyai sifat lebih menekan berbanding penyelia yang lain.

- (a) penyelia kepada orang bawahan
- (b) orang bawahan kepada
- (c) penilaian rakan sekerja
- (d) maklumbalas pelanggan

Which performance appraisal feedback system has the disadvantage that a supervisor who is more demanding more than his peers maybe unfairly criticised?

- (a) *Supervisor to subordinates*
- (b) *Subordinates to supervisor*
- (c) *Peer evaluation*
- (d) *Customer feedback*

- (viii) Menurut kaedah Kirkpatrick bagi menilai program latihan, penilaian pertama dan yang paling penting adalah

- (a) reaksi
- (b) keputusan
- (c) tingkah laku
- (d) pembelajaran

According to Kirkpatrick's method of evaluating training program, the first and most basic measure is

- (a) *Reaction*
- (b) *Results*
- (c) *Behaviour*
- (d) *Learning*

- (ix) Penggunaan skala ukuran terkenal sebagai teknik untuk menilai pekerja. Walau bagaimanapun, kesilapan dan kecenderungan kepada sesuatu dimensi mungkin berlaku. Kecenderungan untuk seseorang menilai semua dimensi di atas suatu skala merujuk kepada

- (a) kecenderungan kebiasaan
- (b) kesan "halo"
- (c) kecenderungan pertengahan
- (d) kesalahan sifat

The use of rating scales is popular as a techniques used to appraise employees. However, errors and bias can occur. The tendency of people to rate similarly on all of the dimensions being assessed refer to the

- (a) *recency bias*
- (b) *halo effect*
- (c) *central tendency*
- (d) *attribution errors*

- (x) Manakah yang berikut TIDAK merupakan ciri 'Pengurusan Sumber Manusia'

- (a) Perhubungan selalu dan terus
- (b) Kelenturan
- (c) Konsisten
- (d) Konflik tidak dapat dielakkan

Which of the following is NOT a characteristic of 'Human Resource Management' principle?

- (a) *Communicate often and directly*
- (b) *Flexibility*
- (c) *Consistency*
- (d) *Conflict not seen as inevitable*

- (xi) Temuduga penilaian memberi peluang penilai untuk

- (a) memberi penekanan hanya kepada bahagian yang pekerja perlu baiki
- (b) memberi respon emosi untuk prestasi pekerja
- (c) memberi teguran kepada pekerja yang berbentuk peribadi
- (d) memilih bahagian tertentu untuk menilai pekerja

The evaluation interview allows the appraiser an opportunity to

- (a) *focus on only those areas in which the employees needs to improve*
- (b) *give emotional responses to the worker's performance*
- (c) *reprimand the employees for any personal attributes*
- (d) *select on certain specific areas to base the appraisal*

- (xii) Proses di mana wakil pengurusan dan kesatuan mencapai persetujuan mengenai kontrak pekerjaan dinamakan
- (a) insentif kewangan
 - (b) motivasi keadaan
 - (c) kontrak kesatuan
 - (d) perbincangan secara kolektif

The process by which management and union representatives come to an agreement regarding a work contract is called

- (a) *a monetary incentive*
 - (b) *situational motivation*
 - (c) *union contract*
 - (d) *collective bargaining*
- (xiii) Suatu proram latihan dan pembangunan merupakan strategi untuk membantu
- (a) perubahan srtuktur
 - (b) pengurusan stres berorientasikan manusia
 - (c) perubahan manusia
 - (d) perubahan teknologi

A training and development program is a strategy used to facilitate

- (a) *structural change*
- (b) *people oriented stress management*
- (c) *people change*
- (d) *technological change*

(13 markah)

6. (a) Banyak faktor yang mempengaruhi prestasi seseorang individu atau kumpulan. Nyatakan **LIMA** (5) faktor dari kumpulan faktor organisasi dan sosial.

(5 markah)

*Many factors affect an individual's or team performance. List **FIVE** (5) that are from the organisational and social factors.*

- (b) Nyatakan **LIMA** (5) matlamat penilaian pekerja.

(5 markah)

*List **FIVE** (5) purposes of staff appraisal.*

7. (a) Nyatakan **LIMA** (5) kebaikan pengambilan dalaman. (5 markah)

List FIVE (5) advantages of internal recruiting.

- (b) Bincangkan dengan ringkas **EMPAT** (4) tahap yang terlibat dalam perancangan gunatenaga. (5 markah)

Describe briefly the FOUR (4) phases involved in manpower planning.

8. (a) Bincangkan dengan ringkas **DUA** (2) kaedah penilaian prestasi. (5 markah)

Describe briefly TWO (2) types of performance appraisal method.

- (b) Bincangkan dengan ringkas apa yang dimaksudkan sebagai 'analisis kerja'? (5 markah)

Describe briefly what is meant by 'job analyses'?

LAMPIRAN

No. Angka Giliran: _____

Nota:

Helaian ini hendaklah digunakan semasa menjawab soalan no. 3 dan diserahkan bersama dengan buku jawapan anda.

Soalan No. 5	Bulatkan jawapan yang betul			
i.	(a)	(b)	(c)	(d)
ii.	(a)	(b)	(c)	(d)
iii.	(a)	(b)	(c)	(d)
iv.	(a)	(b)	(c)	(d)
v.	(a)	(b)	(c)	(d)
vi.	(a)	(b)	(c)	(d)
vii.	(a)	(b)	(c)	(d)
viii.	(a)	(b)	(c)	(d)
ix.	(a)	(b)	(c)	(d)
x.	(a)	(b)	(c)	(d)
xi.	(a)	(b)	(c)	(d)
xii.	(a)	(b)	(c)	(d)
xiii.	(a)	(b)	(c)	(d)

(Jumlah: 13 markah)