

UNIVERSITI SAINS MALAYSIA

Second Semester Examination  
Academic Session 2004/2005

March 2005

**APW 302E – Management Information Systems**  
**[Sistem Maklumat Pengurusan]**

Duration: 3 hours  
[Masa : 3 jam]

Please check that this examination paper consists of FOUR pages of printed material before you begin the examination.

*[Sila pastikan bahawa kertas peperiksaan ini mengandungi EMPAT surat yang bercetak sebelum anda memulakan peperiksaan ini.]*

**Instruction:** Answer **ALL** questions. You may answer a question either in Bahasa Malaysia or in English.

**Arahan:** Jawab **SEMUA** soalan. Anda dibenarkan menjawab soalan sama ada dalam Bahasa Malaysia atau Bahasa Inggeris]

**Support your answers with charts, diagrams, and case study examples.  
Gunakan carta, gambarajah dan contoh kajian kes untuk menyokong jawapan anda.**

**Question 1 (40 marks/markah)**

Read the accompanying article thoroughly and then answer the followings:  
*Baca rencana yang dilampirkan dengan teliti dan jawab soalan berikut:*

- (a) List the 5 main highlights of the article.  
*Senaraikan 5 isu utama bagi rencana tersebut.* [ 20 marks/markah ]
- (b) What is knowledge? Describe how knowledge is managed by organisations such as Frito-Lay, to achieve competitive advantage.  
*Apakah itu ilmu? Huraikan bagaimana ilmu diurus oleh organisasi seperti Frito-Lay, untuk mencapai kelebihan saingan.* [10 marks/markah]
- (c) How does the database approach to data management increase the efficiency and effectiveness of an organization?  
*Bagaimanakah kaedah pangkalan data dalam pengurusan data mampu mempertingkatkan keupayaan dan keberkesanan sesebuah organisasi?* [10 marks/markah]

**Question 2 (10 marks/markah)**

Briefly answer the followings:  
*Jawab soalan berikut dengan ringkas:*

- (a) Identify a special system that can facilitate decision-making among senior managers and describe TWO ways in which this system can help high-level management?  
*Kenalpasti sebuah sistem khusus untuk memudahkan pembuatan keputusan bagi pengurus kanan dan huraikan DUA cara di mana sistem tersebut boleh membantu pengurusan atasan?* [ 5 marks/markah ]
- (b) Identify the types of structural organizational change that are enabled by information technology. Describe ONE type that involves rethinking the nature of the business and the nature of the organization itself.  
*Kenalpasti jenis perubahan pada struktur organisasi yang digalakkan oleh teknologi maklumat. Huraikan SATU jenis yang merangkumi ulang-pertimbangan tentang asas perniagaan serta asas organisasi tersebut.* [ 5 marks/markah ]

Question 3 (20 marks/markah)

KakKiah is a 'nyonya kebaya' (traditional Malay/Chinese costume) designer and tailor. Nyonya Kebaya Sdn. Bhd. was founded thirty years ago offering exclusively-designed garments and materials. KakKiah is well-known in Melaka, and her regular customers also include boutiques in Kuala Lumpur. KakKiah has been advised by many of her customers to extend her business on the Internet.

*KakKiah merupakan pereka dan penjahit kebaya nyonya (pakaian tradisi Melayu/Cina). Nyonya Kebaya Sdn. Bhd telah ditubuhkan tiga-puluh tahun dahulu dengan menawarkan pakaian serta kain tempahan-khas. KakKiah sangat terkenal di Melaka dan pelanggan tetapnya termasuk butik eksklusif di Kuala Lumpur. KakKiah telah dinasihatkan oleh ramai pelanggannya untuk memperkembangkan perniagaannya ke dalam Internet.*

- (a) Describe the management, technological, and organisational challenges if KakKiah wishes to pursue the e-commerce strategy.  
*Huraikan cabaran pengurusan, teknologi, dan organisasi sekiranya KakKiah ingin melaksanakan strategi e-dagang tersebut.*

[ 12 marks/markah ]

- (b) Name the process of changing from the old system to the new system. Describe the four main strategies in the named process.  
*Namakan proses perubahan dari sistem yang lama kepada sistem yang baru. Huraikan empat strategi di dalam proses tersebut.*

[ 8 marks/markah ]

Question 4 (30 marks/markah)

"The blending of Internet technologies, globalised challenges, and traditional business concerns is impacting all industries and is the latest phase in the evolution of business. All companies need to update their business infrastructures and change the way they work to respond more immediately to customer needs." Discuss.

*"Integrasi teknologi Internet, cabaran globalisasi, dan perihal perniagaan tradisi mempengaruhi kesemua industri dan ia merupakan fasa terkini dalam evolusi perniagaan. Semua syarikat perlu mengemaskini infrastruktur perniagaan dan merubah cara kerja dilaksanakan untuk lebih prihatin kepada keperluan pengguna". Huraikan.*

**ARTICLE: FRITO-LAY**

Frito-Lay is well-known to the general public, with products such as Fritos, potato chips, Doritos, Cheetos, and Cracker Jacks. It is the largest snack food maker in the world, selling 40% of the world's salty snacks in 120 countries and reaching 60% of the market in the United States. Headquartered in Plano, Texas, Frito-Lay has more than 37,000 employees, and sales reaching USD13 billion in 2000.

The company also enjoys a very good reputation both for its management, and its use of computer technology. In 1989, the company installed a data warehouse so it would know the location and price for each bag of chips that was sold throughout the US.

In 1991, handheld computers were given out to their sales staff. The main goal for the handheld computers was to offer its customers as much choice as possible, by empowering (or giving more power to) its field staff, which had the closest contact with its customers. In 1995, USD130 million was spent to buy 15,000 new handheld computers that would enable the company to make even better use of information technology.

As technology continued to improve, the decisions moved further down the organisation, finally reaching the sales staff working at the individual store level. In addition, management also wanted to improve communications and track inventories.

Despite the investments in information systems, Frito-Lay had serious problems managing its data. Data were fragmented. Both sales staff and sales information were scattered around the country. Data about the company, policies, and experiences were stored in different systems geographically; and data were also captured and stored in technologies that do not communicate.

Thus, the sales staff found it nearly impossible to gather data, and had serious problems sharing information with each other. Sales staff in different locations would have to do similar research or ask similar questions. Sales staff working with the same customer did not have any way to brainstorm together or collaborate on a particular challenge. Staff members also did not have ways to identify and consult with internal experts on particular companies or issues. Performance suffered. Frito-Lay simply had not built the information technology infrastructure needed to access data from other locations.

As a consequence, Frito-Lay had to make its information easily available by building a knowledge management portal. The portal had to be able to locate information requested by the sales team. The system would have to search databases in the marketing, sales, and operations departments.

Security was also a key function of the portal. The project built in password protections so that the portal users could only access appropriate data.

After the initial prototype was developed into a fully-working system, the new portal named Customer Community Portal (CCP) went live in January 2000. The new tool became valuable for communication; used for daily contact management, call reporting, weekly cross-country meetings, training, document-sharing, and access to data and industry news. As a result, team members no longer need to fax documents around the country in order to share information or physically travel to the retail customers.