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UNIVERSITI SAINS MALAYSIA

Second Semester Examination  
2010/2011 Academic Session

April/May 2011

**IEK 317 – ENVIRONMENTAL MANAGEMENT**  
**[PENGURUSAN PERSEKITARAN]**

Duration: 3 hours  
*Masa: [3 jam]*

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

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

**Instructions:** Answer FIVE questions. You may answer the questions either in Bahasa Malaysia or in English.

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

In the event of any discrepancies, the English version shall be used.

*[Sekiranya terdapat sebarang percanggahan pada soalan peperiksaan, versi Bahasa Inggeris hendaklah diguna pakai.]*

1. (a) Explain how you would implement the 3<sup>rd</sup> element of the ISO 14001 Environmental Management System.  
(10 marks)
- (b) Explain the requirements of the eighth element of the ISO 14001 Environmental Management System and its function and importance in the implementation of the system.  
(10 marks)
2. Explain the general principles of an environmental audit.  
(20 marks)
3. Explain how continual improvement is achieved with the implementation of an Environmental Management System.  
(20 marks)
4. (a) Discuss the concept of “Life Cycle Thinking”. Can it be used to achieve sustainable development? Explain your answer.  
(8 marks)
- (b) Describe the benefits for a company to conduct a Life Cycle Assessment (LCA) of their product/s.  
(6 marks)
- (c) Briefly describe methods that can be used by the government to initiate companies to conduct LCA of their products.  
(6 marks)
5. Define and explain the major components of each of these
  - (a) Environmental management system
  - (b) Environmental impact assessment
  - (c) Environmental management plan  
(20 marks)
6. (a) Show how environmental impact assessment and environmental management plan are interrelated.  
(10 marks)
- (b) Outline the overall process of environmental impact assessment .  
(10 marks)

1. (a) *Terangkan bagaimana anda melaksanakan elemen ketiga dalam Sistem Pengurusan Persekitaran ISO 14001.*  
(10 markah)
- (b) *Terangkan keperluan elemen kelapan dalam Sistem Pengurusan Persekitaran ISO 14001 dan fungsi serta kepentingannya dalam pelaksanaan sistem tersebut.*  
(10 markah)
2. *Jelaskan prinsip-prinsip am audit persekitaran.*  
(20 markah)
3. *Jelaskan bagaimana peningkatan berterusan dicapai dengan pelaksanaan Sistem Pengurusan Persekitaran.*  
(20 markah)
4. (a) *Huraikan konsep “Pemikiran Kitar Hidup”. Bolehkah ia digunapakai untuk mencapai pembangunan lestari? Terangkan jawapan anda.*  
(8 markah)
- (b) *Terangkan kebaikan bagi syarikat yang menjalankan Penilaian Kitar Hidup bagi produk mereka*  
(6 markah)
- (c) *Secara ringkas terangkan kaedah-kaedah yang boleh digunakan oleh kerajaan untuk menggalakkan syarikat untuk menjalankan Penilaian Kitar Hidup produk mereka.*  
(6 markah)
5. *Beri takrifan dan jelaskan komponen utama*
  - (a) *Sistem pengurusan alam sekitar*
  - (b) *Penilaian impak alam sekitar*
  - (c) *Pelan pengurusan alam sekitar*(20 markah)
6. (a) *Tunjukkan saling kaitan antara penilaian impak alam sekitar dengan Pelan pengurusan alam sekitar*  
(10 markah)
- (b) *Lakarkan secara rangka keseluruhan proses penilaian impak alam sekitar.*  
(10 markah)