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Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2013/2014**

COURSE NAME : OCCUPATIONAL SAFETY &
HEALTH
COURSE CODE : BDA31302
PROGRAMME : 3BDD
EXAMINATION DATE : JUNE 2014
DURATION : 2 HOURS
INSTRUCTION : ANSWER FOUR (4) QUESTIONS
ONLY

THIS QUESTION PAPER CONSISTS OF NINE (9) PAGES

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- Q1** (a) Explain briefly the objective of establishment Occupational Safety and Health Act 1994. (4 marks)
- (b) Sketch the composition of the Safety and Health Committee in an Organization which have more than 100 employees. (6 marks)
- (c) Syarikat Makmur has appointed you as management representative to implement occupational safety & health management system base on Occupational Health and Safety Assessment Series (OHSAS) 18001:2007 model. Base on your knowledge, how to develop the system? (15 Marks)
- Q2** (a) Based on **Figure Q2(a)** has been given, identify potential hazards, assess the risks by utilizing appropriate techniques and recommend control measures for mitigating the identified hazards. Risks control should be in accordance to the sequence of hierarchy of control. Prepare the exercise in a Hazard Identification, Risk Assessment and Risk Control (HIRARC) table / format. (15 marks)
- (b) Explain briefly risks control accordance to the sequence of hierarchy of control. (4 Marks)
- (c) Explain briefly Fault Tree Analysis Technique. (6 Marks)
- Q3** (a) List three (3) types of point-of-operation guards. (3 Marks)
- (b) Explain five (5) hazard identified and general control measures at site construction base on **Figure Q3(b)** have been given. (10 Marks)
- (c) Explain the complete steps of conducting mouth-to-mouth resuscitation or cardiopulmonary resuscitation (CPR) when trying to save someone's life (12 marks)

- Q4** (a) Explain the basic strategies to prevent and control toxic hazards at the workplace. (7 marks)
- (b) On your opinion, explain the strategies which can be implemented by employers to overcome the problem of AIDS at the workplace. (15 Marks)
- (c) Prevention is better than cure. List three (3) strategies to prevent vibration hazards at the workplaces. (3 Marks)
- Q5** (a) Based on the Accident / Incident Theory, system failure is one of the causes of workplace accidents. Explain briefly about this statement. (7 Marks)
- (b) You are production manager at a factory which produces palm oil based products. One day, one of your workers suffered injuries to his wrist after it was trapped in a machine. Based on the investigations carried out, you discovered that among the causes of the accident was the machine's failure to operate properly, workers who were not serious and negligent. With the help of a figure, explain how these factors caused the accident and injury based on Heinrich's Domino Theory. (10 Marks)
- (c) On your opinion, identify how the worker factor poses an accident risk at the workplace. (8 Marks)

- END OF QUESTION -

- S1** (a) Terangkan objektif Akta Keselamatan dan Kesihatan Pekerjaan 1994 diwujudkan.
(4 Markah)
- (b) Lakarkan komposisi Jawatankuasa Keselamatan & Kesihatan untuk Organisasi yang mempunyai lebih 100 orang pekerja.
(6 Markah)
- (c) Syarikat Makmur Sdn. Bhd telah melantik anda sebagai wakil pengurusan untuk melaksanakan sistem pengurusan keselamatan dan kesihatan pekerja berdasarkan model Siri Penilaian Kesihatan dan Keselamatan Pekerjaan (OHSAS) 18001:2007. Berdasarkan pengetahuan anda, bagaimanakah untuk membangunkan sistem tersebut?
(15 Markah)
- S2** (a) Berdasarkan **Gambar S2(a)** yang diberikan, kenalpasti potensi hazard, menilai risiko dengan menggunakan teknik yang sesuai dan mencadangkan langkah-langkah kawalan untuk mengurangkan risiko daripada hazard yang dikenalpasti. Kawalan risiko hendaklah mengikut urutan hirarki kawalan. Sediakan aktiviti tersebut di dalam Jadual / format Kenalpasti Hazard, Penilaian Risiko dan Kawalan Risiko (HIRARC).
(15 Markah)
- (b) Jelaskan secara ringkas kawalan risiko mengikut turutan hirarki kawalan.
(4 Markah)
- (c) Jelaskan secara ringkas teknik 'Fault Tree Analysis'.
(6 Markah)
- S3** (a) Senaraikan tiga (3) jenis titik operasi penghadang.
(3 Markah)
- (b) Jelaskan lima (5) bahaya yang dikenalpasti dan langkah-langkah kawalan di tapak bina berdasarkan **Gambar S3(b)** yang diberikan.
(10 Markah)
- (c) Terangkan langkah-langkah yang lengkap menjalankan pernafasan mulut-ke-mulut atau bantuan pernafasan (CPR) ketika cuba untuk menyelamatkan nyawa seseorang.
(12 Markah)

- S4** (a) Terangkan strategi asas untuk mencegah dan mengawal hazard toksik di tempat kerja. (7 Markah)
- (b) Pada pendapat anda, terangkan strategi yang boleh dilaksanakan oleh majikan untuk mengatasi masalah AIDS di tempat kerja dan terangkan secara ringkas. (15 Markah)
- (c) Mencegah lebih baik daripada merawat. Nyatakan tiga (3) strategi untuk mencegah hazard getaran di tempat kerja. (3 Markah)
- S5** (a) Berdasarkan Teori Kemalangan / Kejadian, kegagalan sistem adalah salah satu punca kemalangan. Terangkan secara ringkas. (7 Markah)
- (b) Anda adalah seorang pengurus pengeluaran di sebuah kilang yang menghasilkan produk berasaskan minyak sawit. Satu hari, salah seorang pekerja anda mengalami kecederaan di pergelangan tangan selepas ia terperangkap di dalam mesin. Berdasarkan siasatan yang dijalankan, anda mendapati bahawa antara punca kemalangan itu kegagalan mesin beroperasi dengan betul, pekerja yang tidak serius dan cuai. Dengan bantuan rajah, terangkan bagaimana faktor-faktor ini menyebabkan kemalangan dan kecederaan berdasarkan Teori Domino Heinrich. (10 Markah)
- (c) Pada pandangan anda, kenalpasti bagaimana faktor pekerja menimbulkan risiko kemalangan di tempat kerja. (8 Markah)

-SOALAN TAMAT-

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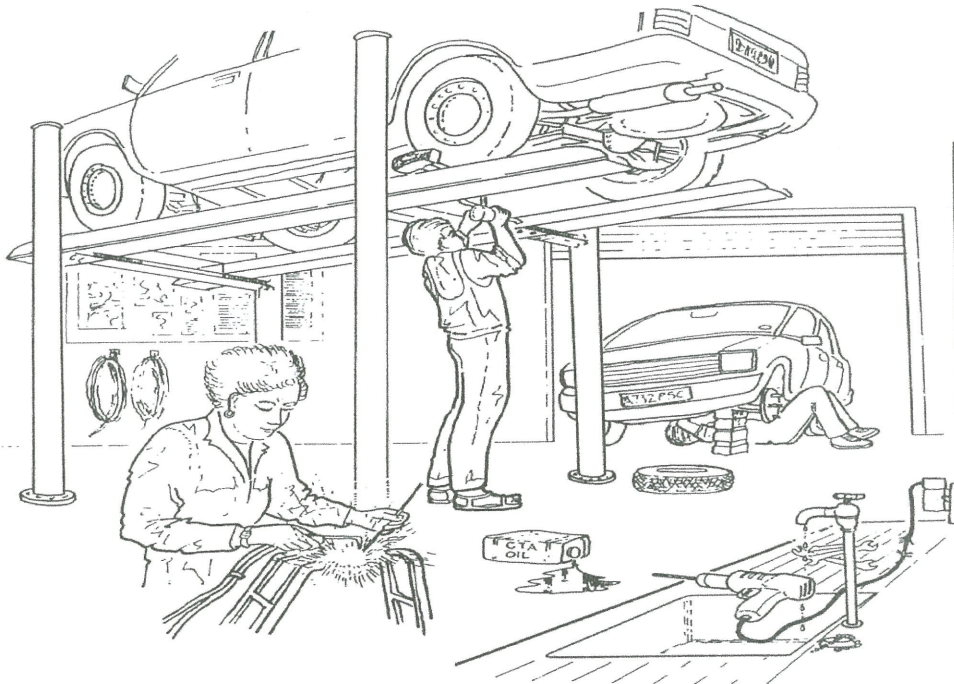


FIGURE Q2(a) / GAMBAR S2(a)

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GUIDELINES FOR QUESTION 2(a)

a) Criteria for evaluating the likelihood and severity of risk:

Likelihood	Description
1	Very unlikely to occur (Negligible)
2	Could occur at some time but less possible (once a year)
3	Could occur once in 6 months
4	Might occur once a month
5	Expected to occur frequently once a week or more

Severity	Description
1	Minor Injury – Reversible injury or damage to health
2	Major Injury – Irreversible injury, non permanent disability
3	Diseases / Illness – Irreversible damage to health, disability
4	Fatality
5	Catastrophe, more than one fatality

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PANDUAN UNTUK SOALAN 2(a)

b) Kriteria untuk menilai kemungkinan dan tahap risiko:

Kemungkinan	Penerangan
1	Sangat tidak mungkin berlaku (Diabaikan)
2	Boleh berlaku dalam suatu masa tetapi mungkin sekali setahun
3	Boleh berlaku dalam masa 6 bulan sekali
4	Mungkin berlaku sekali dalam sebulan
5	Dijangka sering berlaku sekali dalam seminggu atau lebih

Tahap	Penerangan
1	Kecederaan kecil – Kecederaan berulang atau kemudaratan berulang pada kesihatan
2	Kecederaan besar – Kecederaan tak berulang, kecacatan tidak kekal
3	Penyakit – Kemudaratan pada kesihatan, kecacatan kekal
4	Kematian
5	Malapetaka, lebih daripada satu kematian

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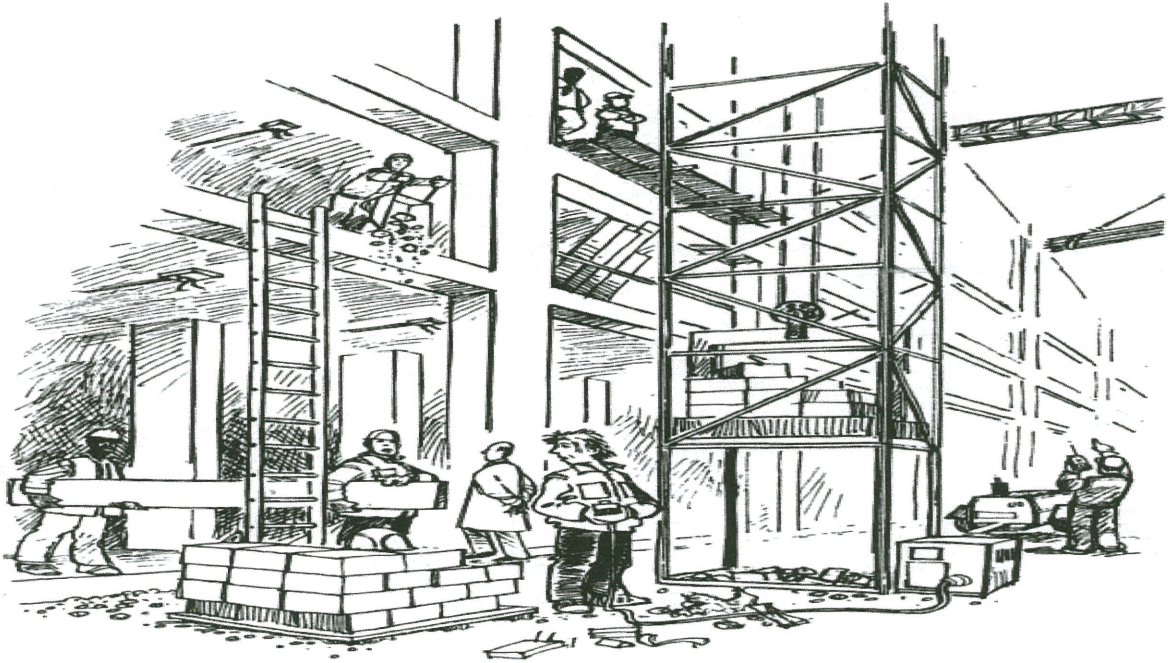


FIGURE Q3 (b) / GAMBAR S3 (b)