



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2019/2020**

COURSE NAME : OCCUPATIONAL SAFETY AND HEALTH
COURSE CODE : BNR 22502
PROGRAMME CODE : BND / BNE / BNF
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF SEVEN (7) PAGES

- Q1**
- (a) Describe the term “employer” based on Occupational Safety and Health Act definition. Explain the **TWO (2)** types of employer.

(4 marks)

 - (b) Based on **OSHA Part IV** Section **FIFTEEN (15)**, describe **FIVE (5)** general duties of employers and self-employed persons to their employees. State the penalty for not complying to this requirement.

(6 marks)

 - (c) Explain the definition of “as far as practicable” and provide a situational example to further elaborate the meaning.

(3 marks)

 - (d) You were just hired and appointed as a committee member for safety at a newly setup company. The company is producing solar powered equipment for agriculture and has a total of 50 employees. Based on your knowledge on Occupational Safety and Health, make a proposal to your management on what are the needs for the company to setup in order to comply to the Occupational Safety and Health (OSHA) and Factory and Machinery Act (FMA).

(7 marks)
- Q2**
- (a) Debate with a situational example of knife to explain hazard, danger, and risk.

(3 marks)

 - (b) Compare the differences between hazard identification, risk assessment and risk control.

(3 marks)

 - (b) **Figure Q2(b)** shows the scenario taken place at the construction area by local contractor called ABC Construction. Perform HIRARC analysis and identify **THREE (3)** hazards and complete the HIRARC form in **Appendix A**. Please submit **Appendix A** together with your answer script.

(8 marks)

 - (c) List and explain the steps of the Job Safety Analysis (JSA) in risk management techniques.

(6 marks)

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- Q3** (a) Give a description of what a physical injury is. (3 marks)
- (b) The term “ergonomics” was established after World War II by a group of physical and biological scientists in the United Kingdom to describe their interdisciplinary activities which had emerged to meet the problems created by wartime technology.
- i. Give the definition of ergonomic. (3 marks)
- ii. List **FOUR (4)** types of ergonomic problems. (4 marks)
- (c) There were numerous major industrial accidents that have contributed significant to the evolution of occupational safety and health. Lesson learnt from those incidents have initiated more stringent precautionary and preventive measures. Determine the **implication** and **contributing factors** of each tragedy as listed in **Table Q3 (c)**. (10 marks)
- Q4** (a) Differentiate acute and chronic diseases. Give **ONE (1)** example scenario for each type of disease. (4 marks)
- (b) Identify **FIVE (5)** classification of occupational hazards and provide **ONE (1)** example for each group of occupational hazard. (5 marks)
- (c) Based on the Industrial Hygiene Checks statistics as shown in **Table Q4 (c)**, propose **FOUR (4)** things that can improve the quality of hygiene, related with OSHA and Industrial Hygiene? (6 marks)
- (d) A welder fell from a roof while welding a metal beam. A ladder was used instead of scaffold. The supervisor instructed the worker to use the ladder. The assistant to the welder is on leave. Determine **FIVE (5)** control measures to prevent recurrence. (5 marks)

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- Q5** (a) List **SIX (6)** of risk control hierarchies from less effective to more effective. Provide an example of each control measure. (6 marks)
- (b) Describe the difference between accident and incident. (4 marks)
- (c) Based on Guidelines on Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulations 2004 (NADOPOD), determine **FIVE (5)** steps in deciding whether a case should be notified and recorded. (5 marks)
- (d) Identify in detail the technique to prevent and control the occupational disease and occupational poisoning based on the DOSH reported data as tabulated in **Table Q5 (d)**. (5 marks)

- END OF QUESTIONS -

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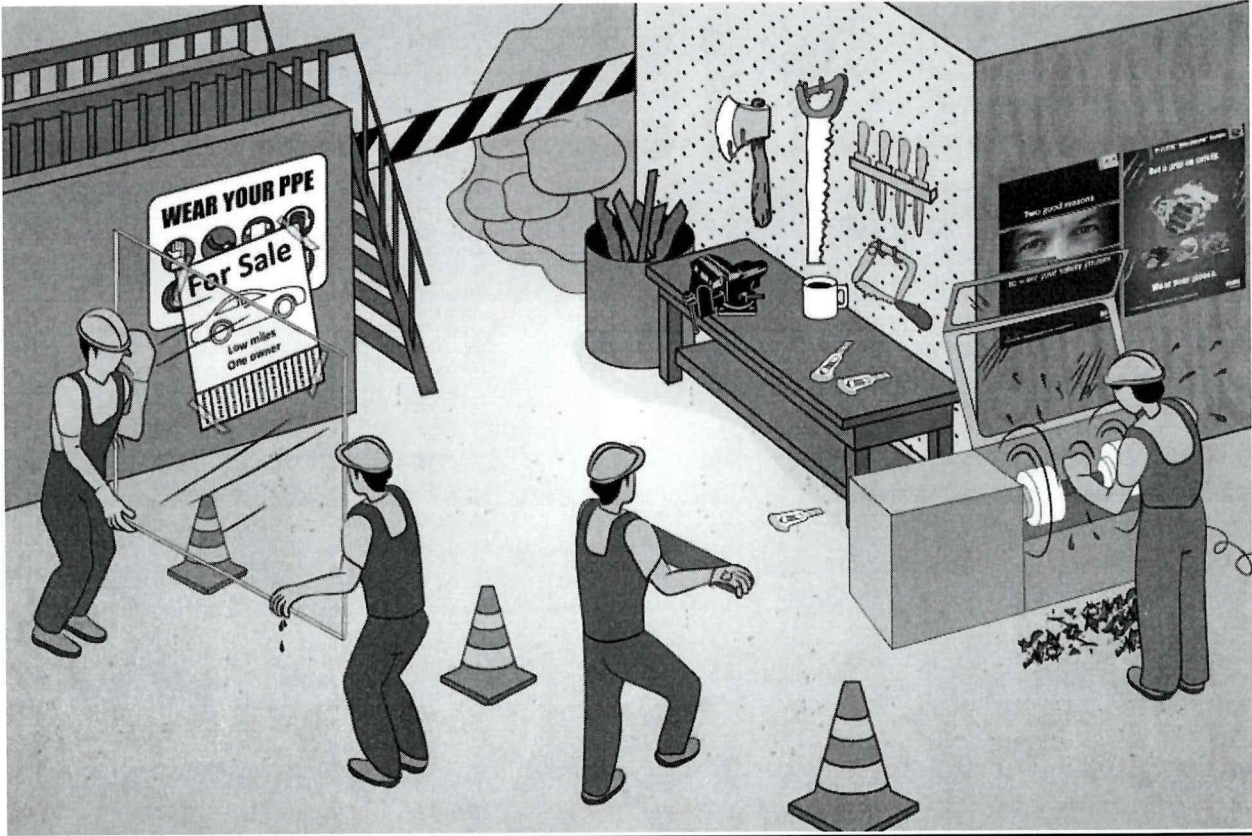


Figure Q2(b)

Table Q3 (c)

No	Tragedy	Implications	Contributing Factors
1	Bhopal Tragedy		
2	Bright Sparkles		
3	Highland Tower		
4	Chernobyl Disasters		
5	Piper Alpha Tragedy		

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Table Q4(c)

Year	IH Inspection
2005	328
2006	312
2007	444
2008	436
2009	469

Year	IH Inspection
2010	533
2011	596
2012	1533
2013	2621
2014	2545

Table Q5(d)

No.	Types of Disease	2005	2006	2007	2008	2009
1	Occupational Lung disease (OLD)	51	38	50	56	57
2	Occupational Skin Disease (OSD)	57	30	192	70	53
3	Occupational Noise Hearing Loss (NIHL)	190	106	120	169	427

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APPENDIX A

NAME: _____ MATRIC NO. : _____

HIRARC FORM											
Company:				Conducted by:							
Process / Location:				(Name, designation)							
Approved by:(Name, designation)				Date:(from... to...)							
Date:				Review Date:				Review 1:		Review 2:	
				Next Review Date:							
1. Hazard Identification				2. Risk Analysis				3. Risk Control			
No.	Work activity	Hazard	Which can cause / effect	Existing Risk Control (if any)	Likelihood	Severity	Risk	Recommended Control Measures	PIC	Due Date	Status
1											
2											
3											