



**UTHM**

Universiti Tun Hussein Onn Malaysia

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

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

COURSE NAME : ENVIRONMENTAL AND OCCUPATIONAL SAFETY  
COURSE CODE : BPK 30702  
PROGRAMME CODE : BIT  
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020  
DURATION : 2 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

**TERBUKA**

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

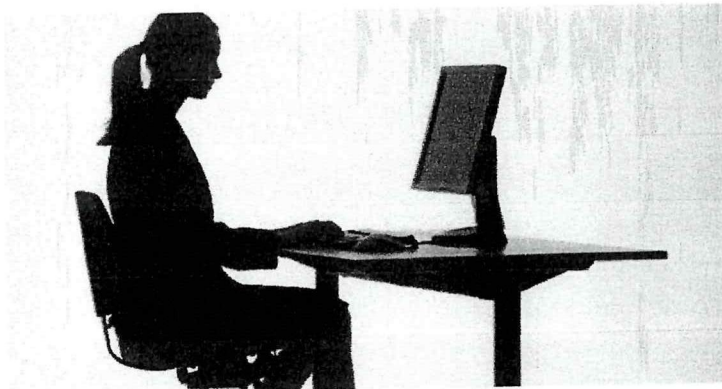
**Q1** (a) Define for the following terms:

- (i) Hazard (2 marks)
- (ii) Acute effect (2 marks)
- (iii) Chronic effect (2 marks)

(b) Identify **FIVE (5)** hazards with examples that might be encountered in a busy kitchen restaurant. (10 marks)

(c) Describe the preventive measures that could be implemented to reduce risk for each hazard stated in **Q1(b)**. (10 marks)

**Q2**



**Figure Q2: Deskwork sitting posture**

- (a) Explain the type of hazard related to the above picture. Include the name of the diseases associate with it. (6 marks)
- (b) Elaborate **THREE (3)** methods of identifying the above occupational hazard. (9 marks)
- (c) Discuss **FIVE (5)** preventive measures to prevent the above occupational hazard based on the hierarchy of risk control. (10 marks)

**TERBUKA**

**Q3** Due to rapid growth in sales, the ABC company had decided to add more workers and engineers, and approving unlimited overtime for workers and engineers. Shortly after the upturn in production, ABC began to experience a disturbing increase in accidents and injuries.

Accident investigations were carried out by the ABC's safety manager. He identified several reasons causing accidents. The project management was in rush to complete the project within the time frame to avoid penalty, and this means that workers were pushed to produce beyond their personal limits and their capabilities. Stress and fatigue all contributed to the overload. In some accidents, the safety manager found that safeguards were removed from rebar cutter and table saw. Based on interviews, workers removed the safeguards because they have to finish the job as soon as possible. In addition, he found that most of the new workers are unskilled; they worked as farmers and never attended any job training before. He also found out that some accidents happen to the new workers.

- (a) Elaborate **THREE (3)** causes of accidents based on the above scenario. (9 marks)
- (b) Classify the accident causation based on your answer in **Q3(a)** according to human factor theory. (6 marks)
- (c) Prepare **FIVE (5)** preventive and controls measures that can be implemented to avoid such accidents in the future. (10 marks)

**Q4** Excessive noise is known as one of the most common occupational hazards. Thus most countries have legislation to limit workplace noise exposure which generally 85 dB(A) to 90 dB(A) over an eight-hour workday.

- (a) Define sound, noise and hazardous noise. (3 marks)
- (b) List **FOUR (4)** types of sound. (4 marks)
- (c) Describe **FOUR (4)** methods in identifying and assessing hazardous noise at the workplace. (8 marks)
- (d) Determine **THREE (3)** control actions to reduce noise at noise source, noise path and noise receiver. (9 marks)

-END OF QUESTIONS-