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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
(ONLINE)  
SEMESTER I  
SESSION 2020/2021**

COURSE NAME : ENVIRONMENTAL AND  
OCCUPATIONAL SAFETY

COURSE CODE : BPK 30702

PROGRAMME CODE : BIT

EXAMINATION DATE : JANUARY / FEBRUARY 2021

DURATION : 2 HOURS

INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES



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

(i) Hazard

(1 marks)

(ii) Acute effect

(2 marks)

(iii) Chronic effect

(2 marks)

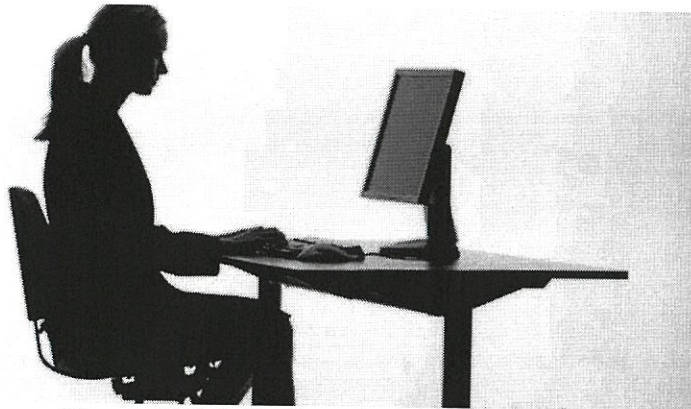
(b) Explain **FIVE (5)** hazards with examples for each hazard, that might be encountered in a busy kitchen restaurant.

(10 marks)

(c) Discuss **SIX (6)** elements in the hierarchy of risk control.

(12 marks)

**Q2** (a) Explain **ONE (1)** type of hazard related to the activity in **Figure Q2(a)**.



**Figure Q2(a): Deskwork sitting posture**

(2 marks)

(b) List **FOUR (4)** diseases or health effects associate with the activity in **Figure Q2(a)**.

(4 marks)

(c) Elaborate **THREE (3)** methods of identifying the occupational hazard as in the answer **Q2(a)**.

(9 marks)

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- (d) Indicate **FIVE (5)** preventive measures to prevent the occupational hazard as in the answer **Q2(a)**.

(10 marks)

- 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, the company 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 the answer in **Q3(a)** according to human factor theory.

(6 marks)

- (c) Propose **THREE (3)** preventive and control measures that can be implemented to avoid such accidents in the future.

(9 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 the following terms :

- (i) Sound

(1 mark)

- (ii) Noise

(1 mark)

- (iii) Hazardous noise (1 mark)
- (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) Explain **THREE (3)** control actions to reduce noise at noise source, noise path and noise receiver. (9 marks)

**-END OF QUESTIONS-**

