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**UTHM**  
Universiti Tun Hussein Onn Malaysia

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

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

COURSE NAME : OCCUPATIONAL SAFETY AND HEALTH  
COURSE CODE : BEE 12202  
PROGRAMME CODE : BEJ  
EXAMINATION DATE : JULY 2021  
DURATION : 2 HOURS  
INSTRUCTION : ANSWER *ALL* QUESTIONS (*PART A AND PART B*)

THIS QUESTION PAPER CONSISTS OF **TWELVE (12)** PAGES

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**PART A – Multiple choice (50 marks)**

**Q1** State the philosophy of OSHA 1994. (1 mark)

- (a) Zero accidents at workplace.
- (b) Self-regulation.
- (c) As far as practicable.
- (d) Responsibilities for OSH lie with those WHO CREATE THE RISK and those WHO WORK WITH THE RISK.

**Q2** One of the requirements to establish Safety and Health Committee according to OSHA 1994 is when the number of employers on that organization is more than 40 people. Under certain condition, the establishment is still mandatory even the numbers of workers are below 40 people. Identify that condition. (2 marks)

- (a) When accident occurred.
- (b) OSH audit recommendation.
- (c) According to HIRARC recommendation.
- (d) Director General of DOSH directs the establishment.

**Q3** Determine the correct statements on the frequency of the Safety and Health Committee Meeting:

- I. At least once a month for high risk workplace.
- II. Once in three months for other workplaces.
- III. Depends on nature of risk at workplace.
- IV. Depends on the consultation and agreement between the employer and employee.

(2 marks)

- (a) I and II only.
- (b) I, II and III.
- (c) II, III and IV.
- (d) I, II, III and IV.

**Q4** State the duration for the minutes of meeting of the Safety and Health Committee meeting should be kept according to OSHA 1994. (1 mark)

- (a) One year.
- (b) Seven years.
- (c) Three years.
- (d) Should be kept until the issues solved.

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**Q5** Estimate the appropriate frequency of workplace inspection for a bakery factory. (2 marks)

- (a) At least once in every three months. (b) At least once in a month.  
(c) As frequent as practical based on the risk assessment. (d) At least once in a week.

**Q6** State the main objective of Environmental Quality Act 1974. (2 marks)

- (a) To secure the safety, health, and welfare of persons at work.  
(b) To provide prevention, abatement, control of pollution and enhancement of the environment.  
(c) To provide a legislative framework to promote environmental friendly system at work.  
(d) To control of factories operations with respect to safety, health and welfare of persons.

**Q7** Identify which machinery is not required to hold a valid Certificate of Fitness (CF) to be operated according to the Regulation 10(1), Factories and Machinery (Notification, Certificate of Fitness and Inspection) Regulations, 1970. (1 mark)

- (a) Sky lift. (b) Autoclave.  
(c) Grinding machine. (d) Air receiver tank.

**Q8** Identify the conditions in which Occupational Safety and Health Committee Meeting become invalid:

- I. Discussing safety and security issues of the company.  
II. Discussing the workplace inspection and accident investigation findings.  
III. The meeting is chaired by the Safety and Health Officer as a representative for the Chairman of Safety and Health Committee.  
IV. Inviting non committee members of the Occupational Safety and Health Committee.

(2 marks)

- (a) I and III only. (b) III and IV only.  
(c) I and IV only. (d) I, II and III.

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**Q9** One worker died in an accident occurred at construction site due to falling from height. The initial investigation found that the cause of accident was due to the worker did not wear the personal protective equipment (PPE) provided by the company. Discover the possible root causes of this accident:

- I. The failure of the company to provide proper training on PPE to the worker.
- II. The failure of the company to conduct risk assessment.
- III. The lack of supervision for the company.
- IV. The ignorance of the worker to follow safety precautions.

(2 marks)

- (a) I and II only.
- (b) I, II and III.
- (c) II, III and IV.
- (d) I, II, III and IV.

**Q10** Identify the main role of the Department of Environment (DOE).

(2 marks)

- (a) Provides policy guidance to the DOE the formulation of policies and strategies towards a more holistic approach to the environmental management.
- (b) Assist in raising the level of public awareness on the importance of environmental conservation efforts.
- (c) Prevention, control and abatement of pollution through the enforcement of the Environmental Quality Act 1974 and its subsidiary legislations.
- (d) Advise the Ministry on matters pertaining to the Environmental Quality Act 1974.

**Q11** Determine and justify the validity of the frequency of Occupational Safety and Health Committee Meeting of UTHM if the meetings were conducted on January, Mac, May, October, 2020.

(2 marks)

- (a) Valid. The meeting was conducted 4 times annually.
- (b) Invalid. The meeting must be done at least once for every three months.
- (c) Invalid. The meeting must be conducted more than 4 times annually.
- (b) Valid. UTHM is not classified as a high risk workplace. The meeting can be conducted based on the preferences of the top management.

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**Q12** Express the appropriate action in the event of any conflict or inconsistency between the provisions of OSHA 1994 and any other written laws pertaining to occupational safety and health.

(2 marks)

- (a) Comply all acts.
- (b) Choose the most practical provision.
- (c) Comply with OSHA 1994 only.
- (d) Choose the most complicated provision.

**Q13** OSHA 1994 is introduced as a complimentary to FMA 1967. Determine the shortfalls of FMA 1967.

- I. Too stringent and too prescriptive.
- II. Too dependent on enforcement agency.
- III. Cover only certain industries or workforces.
- IV. Obsolete or outdated.

(2 marks)

- (a) I, II and III.
- (b) II, III and IV.
- (c) I, II and IV.
- (d) I, II, III and IV.

**Q14** Permit to work is one of the techniques that can be employed as a risk control. Determine the type of the risk control.

(1 mark)

- (a) Engineering control.
- (b) Administrative control.
- (c) Standard operating procedure.
- (d) Risk management control.

**Q15** Determine the significance of conducting risk assessment.

- I. OSHA 1994 requirements.
- II. OSH management system standards requirements.
- III. To give organisations a more effective way of managing hazards.
- IV. To reduce the cost of safety management by choosing the cheapest control measure.

- (a) I, II and III.
- (b) II, III and IV.
- (c) I, II and IV.
- (d) I, II, III and IV.

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**Q16** Determine the applicable methods to classify the likelihood of occurrence of hazard.

- I. Statistic data of incidents.
- II. Professional judgement.
- III. Experience.
- IV. Safety data sheet.

(2 marks)

- (a) I, II and III.                      (b) II, III and IV.  
 (c) I, II and IV.                      (d) I, II, III and IV.

**Q17** Determine the factors that require to review the risk assessment of occupational safety and health.

- I. When accident/incident occurred in the workplace.
- II. Changes or introduction of new materials, machinery or processes, and working procedures.
- III. Amendments of national laws and regulations.
- IV. Developments in OSH knowledge and technology.

(2 marks)

- (a) I, II and III.                      (b) II, III and IV.  
 (c) I, II and IV.                      (d) I, II, III and IV.

**Q18** Choose the correct definition of health hazard.

- I. Any agent that can cause illness to an individual.
- II. Any agent that can cause injury to an individual.
- III. It may produce serious and immediate (acute) affects.
- IV. It may cause long-term (chronic) problems.

(2 marks)

- (a) I, II and III.                      (b) I, III and IV.  
 (c) I, II and IV.                      (d) I, II, III and IV.

**Q19** State the frequency range that can affect hand and arm after month of years of exposure.

(1 mark)

- (a) 10 Hz to 500 Hz.                      (b) 1 kHz to 1.5 kHz.  
 (c) 20 Hz to 20 kHz.                      (d) 200 Hz to 20 kHz.

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**Q20** Classify the main category of hazard according to HIRARC Guidelines 2017.

- I. Clinical hazard.
- II. Safety hazard.
- III. Environmental hazard.
- IV. Health hazard.

(1 mark)

- (a) I, II and III.
- (b) II, III and IV.
- (c) I, III and IV.
- (d) I, II, III and IV.

**Q21** Identify ergonomic risk factors from the list.

- I. Awkward posture.
- II. Contact stress.
- III. Repetitive motion.
- IV. Prolonged sitting.

(1 mark)

- (a) I, II and III.
- (b) II, III and IV.
- (c) I, III and IV.
- (d) I, II, III and IV.

**Q22** Express the characteristics of positive stress at work.

- I. Motivates, focuses energy.
- II. Is short-term.
- III. Is perceived as within our coping abilities.
- IV. Improves performance.

(1 mark)

- (a) I, II and III.
- (b) II, III and IV.
- (c) I, III and IV.
- (d) I, II, III and IV.

**Q23** State the permissible limit of noise exposure in the workplace according to Noise Exposure Regulation 2019.

(1 mark)

- (a) 82 dB(A).
- (b) 60 dB(A).
- (c) 90 dB(A).
- (d) 70 dB(A).

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**Q24** Identify the correct sequence of hierarchy of control.

(1 mark)

- (a) Isolation, elimination, substitution, administrative control, engineering control, and personal protective equipment.
- (b) Elimination, substitution, engineering control, administrative control, and personal protective equipment.
- (c) Engineering control, elimination, substitution, engineering control, administrative control, and personal protective equipment.
- (d) Elimination, substitution, administrative control, engineering control, and personal protective equipment.

**Q25** Classify a scenario that the decision for action is considered as intolerable, matching under the As Low as Reasonably Practicable (ALARP) method.

(2 marks)

- (a) The level of risk is not present on any ground.
- (b) The level of risk is moderately justified on any ground.
- (c) The level of risk cannot be justified on any ground.
- (d) The level of risk is justified with some control measure present on any ground.

**Q26** Determine why the record of medical health surveillance shall be preserved, maintained and kept for 30 years.

- I. Chemical Hazard Risk Assessment (CHRA) report requirements.
- II. Safety Data Sheet (SDS) requirements.
- III. As an evidence when occupational poisoning and disease occurred in the place of work.
- IV. To assist Occupational Health Doctor (OHD) to make diagnosis and identify work-related diseases.

(2 marks)

- (a) I, II and III.
- (b) I, III and IV.
- (c) I, II and IV.
- (d) I, II, III and IV.

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**Q29** Determine the correct facts regarding the appointment of Site Safety Supervisor (SSS).

- I. Complying the requirements of the Regulations 25, Factories and Machinery (Building Operations and Works of Engineering Construction) (Safety) Regulations 1986 and is appointed by the main contractor.
- II. Helps the main contractor to meet the requirements of FMA and any Regulations made thereunder and promote the safe conduct of work generally within the worksite.
- III. Complying the requirements of Subsection 29(2), Occupational Safety and Health (OSHA) and is appointed by occupier/ employer if the total contract price of the project exceeds RM20 million.
- IV. Helps the occupier / employer to meet the requirements of OSHA and any Regulations made thereunder and the promotion of safe conduct of work at the place of work.

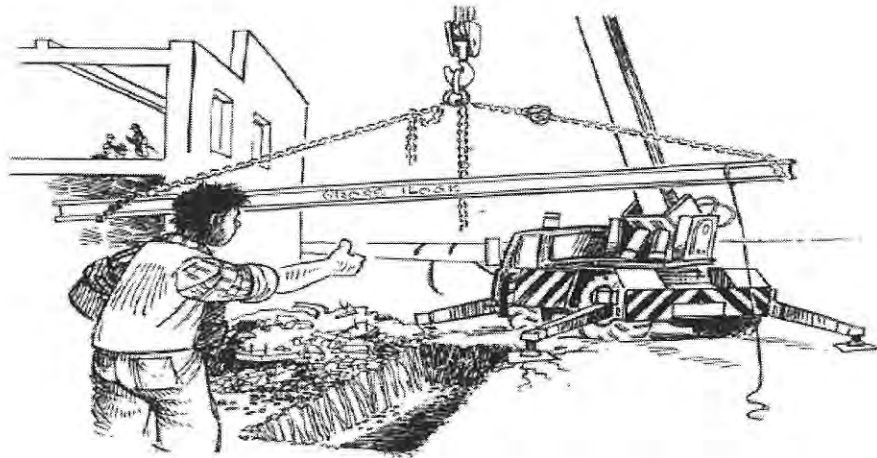
(2 marks)

- |                      |                        |
|----------------------|------------------------|
| (a) I and II only.   | (b) II and III only.   |
| (c) III and IV only. | (d) I, II, III and IV. |

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**Q30** Identify **INCORRECT** methods used in the crane lifting operation as shown in **Figure Q30**.

- I. No safety clips on crane hook.
- II. Signal man is not wearing safety helmet.
- III. The crane lifts the steel rods too high.
- IV. Only one crane used in the lifting operation.



**Figure Q30:** Lifting operation in construction site

(2 marks)

- (a) I and II only.
- (b) I, II and III.
- (c) II, III and IV.
- (d) I, II, III and IV.

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**PART B – Subjective (50 marks)**

- Q1**
- (a) Explain how an employer can manage a better occupational safety and health in terms of handling risks in the work place.  
(2 marks)
- (b) Imagine that you have been appointed as a Safety Site Supervisor (SSS) in a construction site at Selangor. At this moment, Selangor is still under Conditional Movement Control Order (CMCO) amid COVID-19 surged. Based on this condition, you are required to conduct Hazard Identification, Risk Assessment and Risk Control (HIRARC) by identifying **THREE (3)** safety hazards and **TWO (2)** health hazards (**ONE (1)** of the health hazards must be related to COVID-19). You should use HIRARC form (HIRARC Guidelines 2017) to complete the task.  
(20 marks)
- (c) Discuss why personal protective equipment (PPE) is classified as the least effective method in the hierarchy of control.  
(3 marks)
- Q2**
- (a) Define physical injury in the context of occupational safety and health.  
(2 marks)
- (b) List **THREE (3)** major significant reasons the importance of properly managing the safety and health at workplace.  
(3 marks)
- (c) Determine the significance of preventing accident in the workplace in perspective of humanitarian arguments and economic arguments.  
(6 marks)
- (d) Compare the differences between direct and indirect cost of an accident.  
(6 marks)
- (e) Predict the negative implications (morale and reputation) on a company following fatal accidents involving the staff of the company occurred in the workplace.  
(6 marks)
- (f) List **FOUR (4)** documents that can be used in controlling chemical hazards.  
(2 marks)

- END OF QUESTIONS -

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