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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2022/2023**

COURSE NAME : OCCUPATIONAL SAFETY & HEALTH
COURSE CODE : DAT 20102
PROGRAMME CODE : DAG
EXAMINATION DATE : FEBRUARY 2023
DURATION : 2 HOURS
INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK**.
3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF SEVEN (7) PAGES

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SECTION A (20 MARKS)

- Q1** Which of the following would probably controlling the risk?
- A Introducing new technology.
 - B Looking at the possibility of injury.
 - C Reviewing steps and changing standard.
 - D Recognizing things that may cause injury or harm.
- Q2** Which of the other information considering a hazard analysis can be used to evaluate a potential hazard?
- A Injury report
 - B Statistical data
 - C Risk assessment
 - D Fatality investigation
- Q3** What are the **TWO(2)** main causes of incidents in the workplace?
- A Unsafe act and unsafe people.
 - B Unsafe act and unsafe conditions.
 - C Unsafe people and unsafe machines.
 - D Unsafe conditions and unsafe machines.
- Q4** What is Job Safety Analysis?
- A A document to record what had happened.
 - B A document to get feedback on the safety issues.
 - C A document to identify hazard and how to overcome it.
 - D. A document required by OSHA before conducting a work.
- Q5** What is meant by safety?
- A Relative exposure to hazard by physical, ergonomic, psychosocial, biological and chemical.
 - B The provision of facilities to maintain the health and well-being of individuals at workplace.
 - C Protection of bodies and minds of people from illness resulting from materials, processes or procedures used in workplace.
 - D Measures and practices undertaken to prevent and minimize the risk of loss of life, injury and damage to property and environment.
- Q6** What is a type of hazard where body is being pulled and trapped by rotating and tangentially moving parts?
- A Impact
 - B Contact
 - C Trapping
 - D Drawing-in

- Q7** When is personal hearing protection should be used?
- A As a temporary measure or as a last resort ion.
 - B Only when you hear ringing in the ears after a noisy activity.
 - C To allow you to concentrate on a work task without interruption.
 - D As the first measure adopted to control a noise hazard or to increase protect.
- Q8** Which of the following allowing flexibility in accommodating various size of stock by a type of safety guarding?
- A Fixed
 - B Interlock
 - C Adjustable
 - D Self-adjusting
- Q9** The following sentences mention about the Section 24 of OSHA **EXCEPT**
- A to wear or use all times PPE provided by the employer.
 - B to ensure safety, health and welfare at work for all employees.
 - C to comply with any instruction or measure on occupational safety and health.
 - D to take reasonable care for safety and health of himself and of other persons who may be affected at work.
- Q10** Risk of accidents due to electrical hazards depending on how and where materials or electrical wires are used. Act involved in electrical hazards are as below **EXCEPT**
- A Occupational Health and Safety Act, 1994
 - B The Factories and Machinery Act 1967
 - C Electricity Supply Act 1990
 - D Work Act 1955
- Q11** Education programs as well as effective training are an important factor in ensuring the controlled chemicals safely. The following stated are the impact of chemical to the Occupational Safety and Health **EXCEPT**
- A Acute effects - short-term effects have been common at high doses and as corrosive skin and cause irritation.
 - B Chronic - toxic to the respiratory system, liver, kidneys, reproductive or nervous.
 - C Blockage of sweat glands - causing prickly heat.
 - D Carcinogenic - May cause cancer.
- Q12** What is the effect of mechanical hazard risks to safety and health?
- A Loss of self-control and insane
 - B The body loses its ability to cool itself
 - C Resulting in minor injuries (such as scratches and sprains) or dire consequences (such as loss of limbs and death)
 - D Increased body temperature, a rapid pulse, loss of orientation, confusion, decreased blood pressure, not conscious and coma
- Q13** Working in a confined space or narrow space may be included in the main list of dangerous activities. The following are list of risks that may occur in the confined space **EXCEPT**
- A Toxicities
 - B Ergonomic
 - C Hypertension
 - D Fire and explosion

- Q14** Which of the following refers to the Part 4 in Act FMA 1967?
- A Safety, health and welfare
 - B Person-in-charge and certificates of competency
 - C Notice of occupation of factory and registration and use of machinery
 - D Notification of accidents, dangerous occurrence and dangerous diseases
- Q15** According to the National Safety Council, which is a system of machines to reduce the risk of machine guarding?
- A Machine and others equipment
 - B Operator and employer
 - C Workers and operators
 - D Operator and machine
- Q16** The following sentences tells about the employer and worker responsibilities under the Chemical Hazard Regulation **EXCEPT**
- A Control of sources of contamination in excess of the occupational exposure limits
 - B Due to the hazard which employee must be responsible to it
 - C Provide respiratory protective equipment.
 - D Participate in employee training.
- Q17** The hazards that related to poor housekeeping are
- I Fire hazard
 - II Falling from height
 - III Falling from same level
 - IV Hit or crushed by falling object
- A I, II and III
 - B I, II and IV
 - C I, III and IV
 - D II, III and IV
- Q18** Crushing occurs when the body is caught
- I Between two moving part of machine.
 - II Between a fixed and moving part of machine.
 - III Between a moving part of machine and fixed structure.
 - IV Between a rotating part of machine and human body.
- A I and II
 - B I, II and III
 - C II and III
 - D II, III and IV

Q19 There are **THREE (3)** phases of construction work which are

- I Execution
- II Pre-tender
- III Completion
- IV Contract management

- A I, II and III
- B II, III and IV
- C I, III and IV
- D I, II and IV

Q20 Which of the following control measures could be considered to be the least effective and used as a backup control measurement?

- I Isolation
- II Engineering control
- III Administrative control
- IV Personal protective equipment

- A I, II and IV
- B I, III and IV
- C III and IV
- D II, III and IV

SECTION B (80 MARKS)

Q1 Hazard Identification, Risk Assessment and Risk Control (HIRARC) is a process to identify all the factors that may cause harm to employees and others.

- (a) Identify **FOUR (4)** hazard identification techniques. (4 marks)
- (b) Give **THREE (3)** examples of hazard based on **Q1(a)**. (3 marks)
- (c) Discuss **THREE (3)** techniques used for hazard analysis. (3 marks)
- (d) Based on **Q1(c)**, create a risk assessment table and report it. (10 marks)

Q2 Physical injury is an injury that resulted by the exposure to hazards which generated from energy and matter, and the interrelationships between the two. Physical aspects to be considered include all constructed and naturally occurring structural and physical features of the workplace and its environs as well as their spatial relationships.

- (a) State **FOUR (4)** mechanical hazards which often occur in during work. (4 marks)
- (b) Identify **FOUR (4)** types of safety guarding used to prevent body part from contact with the dangerous part of machine. (4 marks)
- (c) Explain **FOUR (4)** types of safety guarding based on **Q2(b)**. (4 marks)
- (d) Risk assessment dealing with machine operation is the process of quantifying the level of risk associated with the operation of a given machine. It should be a structure systematic process that answers the specific questions. Discover **FOUR (4)** specific questions relevantly. (8 marks)

Q3 An accident has been defined as “any unplanned event that causes injury, illness, property damage or harmful disruption of work process”.

- (a) Identify **THREE (3)** basic types of accident. (3 marks)
- (b) Give an example of each type based on **Q3(a)**. (3 marks)

- (c) State **FOUR (4)** reasons to investigate an accident. (4 marks)

- (d) Azri works as a journalist where he writes and reports news stories about everything, from social issues and politics to sports and entertainment. His works need him to stay focus on the computer screen for a long period of time. Recently, he has difficulty in health. He suffers computer vision syndrome and back pain. As a safety officer please elaborate on how you will conduct the investigation so that their root causes and contributing factors can be identified (10 marks)

Q4 “Occupational Health is the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations by preventing departures from health, controlling risks and the adaptation of work to people, and people to their jobs.” [ILO/WHO 1995]

- (a) Discuss **FIVE (5)** principles of prevention and control in occupational health. (5 marks)

- (b) Malaysia has been experienced COVID-19 pandemic outbreak in 2020. Elaborate the action that have been taken by the government based on **Q4(a)**. (15 marks)

-END OF QUESTIONS-