



THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY
DEPARTMENT OF COMMUNICATION AND DEVELOPMENT STUDIES

2022 SEMESTER TWO EXAMINATIONS

CD 328 WORKPLACE SAFETY AND RISK MANAGEMENT

GENERAL INSTRUCTIONS

This examination is out of ninety-four (94) marks. There are 26 questions categorized into five (5) parts. It is a three-hour examination.

SECTION: 1 – MULTIPLE CHOICE QUESTIONS (15 marks)

SECTION: 2 – MATCHING/DEFINITIONS QUESTIONS (15 marks)

SECTION: 3 – READING AND COMPREHENSION QUESTIONS (15 marks)

SECTION: 4 – SHORT ANSWER QUESTIONS (27 marks)

SECTION: 5 – APPLICATION QUESTIONS (22 marks)

TOTAL = 94 MARKS

WEIGHTING = 50%

SPECIFIC INSTRUCTIONS TO CANDIDATES:

1. Write your Name, Student ID, subject Code, Course of Study and Year on the Answer Booklet.
2. You have ten (10) minutes to read this Examination Paper.
3. Check the Question Paper to ensure there are eight pages to it.
4. Answer ALL questions even if you are not sure about an answer.
5. Do not write your answers on the Question Paper
6. Write all your answers in the Answer Booklet.
7. Keep your books, notebooks and mobile phones away from the exam room.
8. Do not open the papers and do not start until your supervisor tells you to do so.

EXAMINATION TIME: THREE HOURS

DO NOT WRITE UNTIL YOU ARE TOLD TO START

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SECTION 1: MULTIPLE CHOICE**(15 MARKS)**

For questions 1–15 choose the correct answer by writing the letter of your choice.

QUESTION 1

Which of the following definitions below explains Safety?

- A. The state of being safe from undergoing or causing hurt, injury, or loss.
- B. Promotion of health and social wellbeing of people.
- C. It concerns with the health and safety of workers.
- D. Promotion of physical, mental and social wellbeing of the workers.

QUESTION 2

Which of the following best defines the workplace health?

- A. Maintenance of mental and social wellbeing of the workers in the industry.
- B. Promotion of physical, mental and social wellbeing of the workers in all occupations.
- C. Promotion of health and social wellbeing of people.
- D. It concerns with the health and safety of workers.

QUESTION 3

Which of the following definitions explains physical hazards?

- A. Are poorly designed workplaces or processes.
- B. Produced by living things, working with animals or people.
- C. Unsafe machines and environmental conditions such as noise.
- D. Social factors such as stress and violence can cause problems.

QUESTION 4

A safety and health management system are likely to be ineffective if:

- A. Safety committees have regular meetings and provide advice.
- B. Employees identify and report hazards in the workplace.
- C. There is effective safety training for its employees.
- D. Top management does not prioritize workplace health and safety.

QUESTION 5

Identify the statement that is not an element of a safety management system.

- A. Management Commitment.
- B. Hazard Identification and Control.
- C. Incident/Accident Investigation.
- D. Safety Committee operations.

QUESTION 6

Which list contains the structure of the safety management system?

- A. Safety Advisor, Human Resource Coordinator, Safety Committee.
- B. Safety Manager, Safety Engineer, Management, Safety Committee.
- C. Safety Manager, Safety Engineer, Training Coordinator, Safety Committee.
- D. Safety Manager, Safety Engineer, Human Resource Coordinator, Safety Committee.

QUESTION 7

What order does the hierarchy of control measures follow?

- A. Engineering control, Eliminate, substitute, PPE, Admin and training.
- B. Eliminate, PPE, Engineering control, substitute, Admin and training.
- C. Eliminate, substitute, Engineering control, Admin and training, PPE.
- D. Admin and training, Eliminate, substitute, Engineering control, PPE.

QUESTION 8

What are the three factors that lead to human error in the human factors' theory?

- A. Overload, inappropriate activities, and inappropriate response.
- B. Carelessness, training, and management.
- C. Carelessness, overload, and training.
- D. Pressure, motivation, and fatigue.

QUESTION 9

Who has developed the original Domino Theory of accident causation in the late 1920s?

- A. H.W. Heinrich.
- B. Bird and Loftus.
- C. C. E. Marcum.
- D. Y. Adeniran.

QUESTION 10

Which of the following is the correct definition of a hazardous material?

- A. Any chemical found in the workplace.
- B. Any chemical that is a physical or health hazard.
- C. Any chemical listed by OSHA.
- D. Any mixture that is a known cancer-causing agent.

QUESTION 11

In hazard communication, which of the following labels is not required?

- A. Complete chemical name.
- B. Appropriate hazard warnings.
- C. Keep the MSDS in a locked file.
- D. Name of manufacturer.

QUESTION 12

A supervisor plays an important role in managing health and safety in the workplace. Which of the following is not a supervisor accountability in an organization?

- A. Maintain a safe and healthful workplace.
- B. Provide effective safety training.
- C. Oversee work operations.
- D. Discipline workers based on feelings.

QUESTION 13

Which of the following is not captured in the Organization's Strategic Plan?

- A. Vision.
- B. Mission Statement.
- C. Strategic Goals.
- D. Quarterly budget plan.

QUESTION 14

Which of the following list contains the steps of On-the-job training (OJT)?

- A. Introduction, instructor shows and tells, trainee tells.
- B. Periodic safety and health training.
- C. Introduction, health training, worker induction.
- D. New employment orientation, education and training.

QUESTION 15

Which statement contains the root cause of an incident/accident?

- A. Always the harmful transfer of energy.
- B. Unsafe behavior of the operator.
- C. Failure to carry out safety policies and programs.
- D. Involves the victim and possibly others.

SECTION 2: MATCHING/DEFINITION QUESTIONS

(15 MARKS)

Match the terms on the left to the definitions on the right by writing a letter that represents the correct definition on the blank spaces next to each term. **(1 mark each)**

QUESTION 16

Term	Definition/Phrase
1. ___ Workplace Safety	A. Probability that damage will occur for a given situation.
2. ___ Risk	B. Designs to eliminate or reduce the hazards that are identified in the workplaces.
3. ___ Hazard	C. Protecting employees from injuries /accidents associated with the work.
4. ___ Direct cause of injury	D. The likelihood or possibility that a person may be harmed or suffers adverse health effects if exposed to a hazard.
5. ___ Accident	E. Anything in the workplace that has potential to harm people or damage to property.
6. ___ Likelihood	F. They act as the internal consultant team to the company.
7. ___ Safety Engineer	G. How close are you to the danger zone?
8. ___ Exposure	H. It needs meaningful participation of workers and their representatives in safety & health program.
9. ___ Job Hazard Analysis	I. Development and delivery of information that people will actually use.
10. ___ Training	J. An unexpected and undesirable event, especially one resulting in damage or harm.
11. ___ Safety Committee	K. The likelihood that an injury or accident will occur if an employee is exposed to the hazard.
12. ___ Employee Involvement	L. Not following procedures and taking short-cuts
13. ___ Psychological Hazard	M. A harmful transfer of energy that produces injury or illness.
14. ___ Unsafe acts	N. Break a job or task into specific steps.
15. ___ Probability	O. Psychological or social factors can cause problems.

SECTION 3: READING AND COMPHRENSION (15 MARKS)

Read the passages below on “The power of Safety Teams” and select the correct words from the given list at the top to fill in the blank spaces. Each word is to be used once only. Write your answers on the Answer Booklet.

QUESTION 17.

The Power of Safety Teams in an Organization

leadership, dedication, culture, safety, health, goals, leader, management, results, team, representatives, authority, workers, organization, members

Having a ___1___ team is beneficial for several reasons. It helps protect an organization's most important asset – its workers. Everyone deserves to go home from work each day just as safe as when they arrived. It takes passion and ___2___ to help make that happen.

Safety teams are a way to show how much an organization and ___3___ values environment, ___4___ and safety. It is also a great way to involve ___5___ at every level to work together to build a true ___6___ of safety. However, to be effective the group needs to have focus and structure.

A safety team, ideally should be a high functioning team. This ___7___ should be supported and empowered by top levels of ___8___. It should be activity centered and results driven. It should act under the advice of safety professional(s), but extend the role of being a safety ___9___ to others. Lastly, it should function on an ongoing basis and be aligned with your organization's overall ___10___ and mission.

To get started, determine the purpose of the group, the scope of what the team will address and what decision-making ___11___ the group has. Next, select team ___12___ and outline roles and responsibilities. Identify how many ___13___ are needed on the team and who might make the best fit. Draft those who will be the most enthusiastic. It's also good to have representation from across the entire ___14___. Having a variety of perspectives will help produce the most meaningful ___15___. If the organization is large, create a minimum of one team at each location/ facility/department.

SECTION 4: SHORT ANSWERS

(26 MARKS)

Read through the questions and answer them correctly.

QUESTION 18

Name the three components of the safety management system and explain them briefly. **(4 marks)**

- a) _____
- b) _____
- c) _____

QUESTION 19

Write at least three (3) accountabilities of employees in an organization. **(3 marks)**

- a) _____
- b) _____
- c) _____

QUESTION 20

There are three reasons that safety management system is important in any organization. Name the three reasons and explain them briefly. **(4 marks)**

- a) _____
- b) _____
- c) _____

QUESTION 21

Write the difference between education and training?

(4 marks)

QUESTION 22

Name at least two (2) possible routes of chemical entry to our body.

(2 marks)

a) _____ b) _____

QUESTION 23

Explain the difference between proactive and reactive safety programs? Provide example to each program.

(4marks)

QUESTION 24

Write the four important processes (methods) to identify and analyse hazards in the workplace. **(4 marks)**

a) _____ c) _____
b) _____ d) _____

QUESTION 25

What are the two important functions of a written safety plan?

(2 marks)

a) _____
b) _____

SECTION 5: APPLICATION QUESTIONS.

(22 MARKS)

QUESTION 26

Read the scenario on an incident at Unitech below and answer the questions that follow.

Scenario

A fire nearly erupted when overflown bathroom water ran through the fitted electrical wirings in a staff house.

On Wednesday the 13th September, 2022 at around 12.50 pm a newly repaired staff house at Bagana Manare Drive, Unitech campus almost got on fire when water from the bathroom basin overflow and got in touch with the fitted electrical wirings.

The Grounds and Maintenances team had shut down the water at the mains tap in area 5 earlier around 9.00 am. However, without realizing it, the occupant's little daughter entered the bathroom at around 10.00 am to have a shower. However, to her surprise, the water flow had stopped when she turned on the tap. She waited for a few minutes with no success therefore suddenly got frustrated and left at around 10.15 without even thinking about turning off the tap. Being controlled by anger or emotions, she did not realize that her shirt fell on the floor of the bathroom dish. She walked directly to the living room, turned on the TV and got stuck into a movie for almost 2 hours.

At around 12.15 pm the water was turned on; thus, the speed flow had forced the tap to dispense too much volumes of water onto the bathroom basin. Unfortunately, the shirt got stuck in the outlet; thereby causing the falling volumes of water to swell up above the basin and forced and overflow to the tiled floor.

Consequently, the water could find its way out through a narrow crack. But unfortunately, it bathed the mounted electrical wirings and all of sudden created an electrical heat wave that almost burst into a fire.

However, at around 12.20 pm, one of the occupant's sons who saw the water massively dripping through the main switch raced across to his father's office at the CDS Department and reported the matter at 12.30 pm. His father was not in his office so son walked out of the department. Fortunately, his father walked towards the CDS department from the meeting in the Council room and son approached him in front of the Sandover building at 12:35 pm. Then his father quickly rang the Housing Manager at 12:40 pm. Suddenly, the Electricians and plumbing team arrived at the staff's house at 12:45 pm, and closed the water tap and switch off the main power supply at 12:50 pm.

Therefore, the staff family was advised to live without electricity for 5 days to dry up the internal walls of the house. This is to avoid electrical hazards and fire causing the house to burn.

Instruction

Imagine that you and your team are investigating this accident. The team consists of the Senior Security officer, Housing Manager, Housing Supervisor, Senior Electrician, Senior Plumber and a Safety Advisor at Unitech to carry out this investigation.

Read the accident scenario above and answer the following questions appropriately.

A. Write the incident event in the chronological order from the beginning to the end. Time and Events. (10 marks)

B. Describe the incident process.

(4 mark)

C. Identify the root causes of this incident. This includes both the Tenant and Housing Team at Unitech.
(4 marks)

D. Write at least four corrective actions to prevent similar incidents might happen in the future for both
Tenant and Housing team. (4 marks)

..... END OF EXAMINATION.....