



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR**

**THIRD YEAR SECOND TRIMESTER EXAMINATIONS**

**FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN OCCUPATIONAL HEALTH AND  
SAFETY**

**COURSE CODE:** NCO 321

**COURSE TITLE:** OCCUPATIONAL AND HEALTH RELATED  
DISEASES

**DATE:** Monday 8<sup>th</sup> April, 2023

**TIME:** 8.00a.m. – 11.00am.

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**INSTRUCTIONS TO CANDIDATES**

Answer ALL questions in this paper.

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.



**MULTIPLE CHOICE QUESTIONS (20 MARKS)**

1. What is byssinosis caused by?

- I. Flax dust
  - II. Cotton dust
  - III. Aluminum dust
- A. I and II only
  - B. I, II, and III
  - C. III only
  - D. I and III only

2. Which of the following individuals is MOST likely to be affected by byssinosis?

- A. A textile worker
- B. A plumber
- C. A sandblaster
- D. A coal miner

3. A patient comes to your clinic complaining of soreness in her shoulder. She is a tennis athlete and has been having trouble raising her arm overhead. The pain is a dull ache and is slightly relieved when she lowers her arm. Which of the following is the most likely diagnosis for this patient?

- A. Rotator cuff tendonitis
- B. Carpal tunnel syndrome
- C. Hip bursitis
- D. Achilles tendonitis

4. Which of the following patients would be at the greatest risk for carpal tunnel syndrome?

- A. A baseball player that plays the position of pitcher on a college team
- B. A painter that has their arms overhead for multiple hours each day
- C. A long distance runner that does long runs multiple times a week
- D. A seamstress that sews zippers on dozens of sweaters in a factory each day

5. The physiologic response that occurs when the body is injured or ill that creates pain, redness, swelling and disruption of function is known as what?

- A. Hypertrophic cardiomyopathy
- B. Phagocytosis
- C. Inflammation
- D. Kernicterus

6. Management of rheumatic heart disease (RHD) may include a treatment that can help decrease blood volume and blood pressure. Which of the following is a treatment that can decrease blood volume and blood pressure?

- A. Angiography
- B. Open heart surgery
- C. Diuretics
- D. Percutaneous balloon mitral valvuloplasty

7. What is pneumoconiosis caused by?

- A. The inhalation of nonliving foreign matter
- B. A toxic drug reaction
- C. A bacterial infection
- D. A viral infection

8. Which of the following people would be MOST likely to develop silicosis?
- A. John, who has been a sandblaster all his life
  - B. Rick, who worked as a mason for a couple of months
  - C. Amy, who lives near the dam site
  - D. Peter, who works in a cotton farm
9. What does asbestos lead to?
- A. Interstitial pulmonary fibrosis
  - B. Gastrointestinal ulceration
  - C. Coronary artery diseases
  - D. Hemorrhagic stroke
10. Which of the following is true regarding asbestosis?
- a. It can be cured with medications, such as corticosteroids.
  - b. It can be cured with medications such as antibiotics.
  - c. It is best managed by smoking, as smoke helps remove asbestos fibers when they cough.
  - d. There is no cure.
11. Which of the following is one of the best treatments for hypersensitivity pneumonitis?
- A. Lung surgery
  - B. Avoiding the allergen
  - C. Blood tests
  - D. Radiation therapy
12. Hypersensitivity pneumonitis can happen to people who are repeatedly exposed to breathing in bacteria, mold, or chemicals in the environment. These harmful substances may be found in the following Devices EXCEPT:
- A. Air conditioners,
  - B. Nebulizers
  - C. Humidifiers,
  - D. Ventilation systems.
13. Occupational medical examination that is done at the exit of an employee is done for the following purpose:
- A. To ensure that work at the workplace will not lead to a negative development of the worker's state of health
  - B. To find out and record such changes in the health status of the employee, which can reasonably be assumed to have arisen in connection with the work performed.
  - C. Suspicion that the employee's medical fitness to work has changed
  - D. To assess the health of the employee for recording in his/her health records
14. An audiometric examination helps to determine all of the following except
- A. The effectiveness of ear protection and
  - B. The degree of hearing loss related to exposure to noise.
  - C. The degree to which a worker's ears have been damaged
  - D. Noise exposure history

15. A technician conducts testing at ----- frequencies at various decibel levels.
- A. 4
  - B. 6
  - C. 2
  - D. 5

Match the following decibels for the amount of noise indicated

- |                                                    |          |
|----------------------------------------------------|----------|
| 16. A whisper                                      | A. 60dB  |
| 17. Normal conversation                            | B. 70dB  |
| 18. Motor cycle engine running                     | C. 95 dB |
| 19. Noise above ----- that can damage your hearing | D. 30dB  |
20. A health and safety management system constitutes of all of the following except:
- A. Policy
  - B. Risk assessment
  - C. Control of hazards
  - D. Refusing to work in a risky environment

#### **SHORT ANSWER QUESTIONS (40 MARKS)**

1. Highlight 6 (psycho-social) **issues** at the workplace that may cause ill health to workers (6 Marks)
2. Explain the relationship between work and health (12 Marks)
3. Describe any five occupational related diseases of workers (10 Marks)
4. Describe any 4 (four) strategies used to review the identified hazards for a workplace to remain safe for its workers (12 Marks).

#### **LONG ANSWER QUESTIONS (40 MARKS)**

1. Discuss any 4 (four) best practices that managers should do to ensure a safe and healthy environment for the employees? (20 Marks)
2. Explain the hierarchy of control of hazards, example of a hazard in each control measure, and the likely workplace where the hazard can be found. You are free to use a table (20 Marks)

