



(University of Choice)

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

SCHOOL OF NURSING, MIDWIFERY AND PARAMEDICAL SCIENCES

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

THIRD YEAR SECOND SEMESTER EXAMINATIONS

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

COURSE CODE: NCO 326:

COURSE TITLE: OCCUPATIONAL SURVEILLANCE

DATE: 8TH APRIL 2024 TIME: 3.00 PM – 6.00 PM

INSTRUCTIONS TO CANDIDATES

All Questions Are Compulsory

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

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

KEY

Section A: MULTIPLE CHOICE QUESTIONS MCQ (20 MARKS)

1. Which one of the following forms the main focus of occupational surveillance?
 - A. Information about workplace management and hazards
 - B. Information about conditions in the working environment and the health of workers.
 - C. Information about workers and safety committees
 - D. Information about risk assessment and compliance
2. Occupational health checks can be used for the following reasons:
 - A. To screen employees for illegal drug use
 - B. To clear an employee to return to work after a health-related leave of absence
 - C. To establish that a candidate is able to meet the physical requirements of the job prior to starting work
 - D. All of the answers are correct
3. What is health monitoring?
 - A. It is used detect changes in worker's health due to exposure of occupational hazards
 - B. It is routine medical test of workers
 - C. It is health monitoring of workers including physical fitness
 - D. It is scheduled medical checkup for blood pressure and urine test
4. A _____ is an exam usually performed by a health care professional to determine if an employee is medically fit for the job and the specific duties required
 - A. Pre-employment health screening
 - B. Physical ability tests
 - C. Occupational health check
 - D. Blood test
5. The purpose of a walkthrough survey is to:
 - A. Assess the production processes and rectify machine inefficiencies
 - B. Investigate workers complaints and get their feedback on safety
 - C. Recognize and identify potential health and safety hazards in the workplace.
 - D. fulfill legal requirements of workplace inspections
6. Which of the following statement is **true** of exposure monitoring?
 - A. Exposure monitoring depend on state worker's health
 - B. Exposure monitoring is carried out to check on the effectiveness of controls in place.
 - C. Exposure monitoring is carried out only when government authorities require reports
 - D. Exposure monitoring frequency increases when previous surveys show good control of exposure.

7. Whether health monitoring is substitute of existing control measures?
 - A. Yes, it can be a substitute of existing health risk control measures
 - B. Yes, it can be, to eliminate or minimize risk to occupational health
 - C. No, it cannot be substitute to eliminate or minimize the risks to occupational health
 - D. None of the above
8. Frequency of monitoring of workplace hazard is influenced by the following **except**?
 - A. Type of hazard to be monitored
 - B. The law
 - C. External consultants
 - D. Successful control during previous survey
9. What can be included in health monitoring?
 - A. Consultation with a registered medical practitioner
 - B. Lung function, spirometry test
 - C. Clinical tests, for example urine or blood test, X-rays
 - D. All of the above
10. Which of the following is an advantage of biological monitoring?
 - A. It is effective for monitoring hazards that cause upper airway irritation.
 - B. It is easy to correlate a health risk with exposure once the exposure information is known.
 - C. It is ideal for identifying hazards affecting the skin.
 - D. It offers an assessment of all routes of exposure.
11. In the medical examination rules, legal notice number 24 of 2005, medical examination means?
 - A. Examination of works exposed to specified occupational hazards for the purpose of prevention and control of a disease.
 - B. Examination of workers exposed to disease for purposes of employment.
 - C. Examination of workers not exposed to occupational hazards for purposes of recruitment.
 - D. Examination of workers exposed to various hazards for purposes of retirement on medical grounds.
12. What is the frequency of health monitoring?
 - A. Before a worker starts work with a hazardous chemical to establish a baseline from which changes can be detected.
 - B. The frequency of ongoing monitoring varies with each hazardous chemical and the individuals who may be exposed
 - C. Should be decided in consultation with the supervising medical practitioner
 - D. All of the above

13. Volatile _____ materials should be used in a well-ventilated area, preferably a fume hood, to reduce the potential of exposure.
- A. Vapour
 - B. Hazardous
 - C. Non-hazardous
 - D. Infective
14. Who is authorized to perform health monitoring under medical examination rules of 2005?
- A. Company health care officer
 - B. Designated Health Practitioner
 - C. Industrial hygiene officer
 - D. Government medical officer
15. In a sugar industry, what group of workers might be as susceptible to "bagassosis" 'lung disease'?
- A. Office clerks,
 - B. Boiler attendants.
 - C. Accountants
 - D. Tractor Drivers.
16. What type of health monitoring is recommended for Lead exposure?
- A. Demographic, medical, occupational history, physical examination and Biological monitoring
 - B. Standardized respiratory function test for example, lung diffusing capacity test
 - C. Chest X-ray full size view to ensure proper detection and diagnosis of lead
 - D. All of the above
17. When is health monitoring recommended?
- A. When workers are exposed or have potential exposure to hazardous chemicals or substances in their workplace.
 - B. All workers need to be examined for their health annually
 - C. It is part of periodic medical test and all
 - D. It is legal requirement worker must be tested for their health irrespective of exposure to test the health of all workers in all type of industries
18. What is STEL?
- A. long term exposure limit
 - B. short term exposure limit
 - C. safety term experience loss
 - D. None of above
19. Threshold Limit Values and Biological Exposure Indices are developed as guidelines to assist in the control of _____ hazards

- A. Health
- B. Worker
- C. Operator
- D. Consumer

20. What type of health monitoring is recommended for crystalline silica exposure?
- A. Standardized respiratory function test, including lung diffusing capacity test
 - B. Chest X-ray full size view to ensure proper detection and diagnosis of silicosis
 - C. Demographic, medical, occupational history and records of personal exposure
 - D. All of the above

Section B: SHORT ANSWER QUESTIONS, SAQs (40 marks)

1. Explain any four procedures entailed in the assessment of workers for detection and identification of any abnormalities during workers health surveillance. (8 marks)
2. (a) State the precautionary principle as regards innovation with potential of causing harm to workers.(2marks)
(b) Explain any three components of precautionary principle (6 marks)
3. Explain four quality assurance (QA) requirements to ensure that monitoring results meet defined standard of quality and reliability (8 marks)
4. In the statutory medical examination rules legal notice number 24/2005, Employees and employers each have duties. Explain the duties of each:
(a) Employers (4 marks)
(b) Employees (4 marks)
5. Describe eight occupations requiring medical examination as per the legal notice No. 24 of 2005 statutory medical exam rules.(8 marks)

Section C: LONG ANSWER QUESTIONS, LAQs (40 m)

- 1) Explain how hazard surveillance is used to identify and assess the environmental factors that may affect workers health (20marks)
- 2) Biashara Plus bank is a financial institution offering banking services to its customers in Webuye. It employs twenty employees who spent long sitting hours in the bank to serve all customers. There have developed concerns about employee health following work /lifestyle balance. You have been appointed to come up with a program to improve the health and wellbeing of staff. You are required to come up with suitable parameters for inclusion in the health assessment of each staff and advise on measures required to ensure health of the staff.(20 marks)

