



**UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA**  
**SECOND SEMESTER EXAMINATIONS, MAY 2019**

**COURSE NO: ES 276**

**COURSE NAME: OCCUPATIONAL HEALTH MANAGEMENT**

**CLASS: ES 2                      TIME: 3 HOURS**

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Name: \_\_\_\_\_ Index Number: \_\_\_\_\_

*Attempt all questions in Section A, B and C*

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**Section A [15 Marks]**

1. Which of the following subject (s) is or are related to “Ergonomics”?
  - a. Anthropology
  - b. Physiology
  - c. Psychology
  - d. All of the above
  
2. Which of the following can contribute to Carpal Tunnel Syndrome?
  - a. Incorrect typing technique
  - b. Poor posture
  - c. Striking the keys too hard.
  - d. All of the Above
  
3. State the type of occupational hazard that frustrated workers, complaining about being shifted around various activities without due consideration as to their abilities, may be exposed to reports to your office.
  - a. Ergonomic hazards
  - b. Physical hazards
  - c. Psychosocial hazards
  - d. Chemical hazards
  
4. What is the time duration for short-term exposure limit?
  - a. 30 minutes
  - b. 8 hours
  - c. 4 hours
  - d. 15 minutes

5. The instrument designed to measure the specific noise exposure of an individual during his working period is called \_\_\_\_\_.
  - a. Sound level meter
  - b. Noise level meter
  - c. Dosimeter
  - d. Noise dose level
6. Sudden or short -term high exposure to chemicals may result in which of the following?
  - a. Chronic toxicity
  - b. Acute toxicity
  - c. Synergistic effect
  - d. Addictive effect
7. Chemicals that may destroy living tissues on contact are classified as?
  - a. Carcinogens
  - b. Mutagens
  - c. Irritants
  - d. Corrosive
8. The main steps of the risk management process are:
  - a. Identifying hazards, assessing and controlling risks, monitoring and reviewing control measures
  - b. Consultation, training and information management
  - c. Workplace inspections, checklists, records and information
  - d. Monitoring hazardous levels, health surveillance, training and recording
9. The national lower exposure limit for noise is:
  - a. 80 db
  - b. 65 db
  - c. 60 db
  - d. 85 db
10. Sound is carried to our ears through \_\_\_\_\_.
  - a. Pressure
  - b. Vibration

- c. Temperature effect
  - d. Humidity effect
11. Another name for the unit Hertz is \_\_\_\_\_
- a. Cycles per second
  - b. Seconds per cycle
  - c. Meters per second
  - d. Decibels
12. The basic definition of Ergonomics is \_\_\_\_\_.
- a. Using relaxed posture
  - b. Fitting the employee to the workstation
  - c. Fitting the workstation to the employee
  - d. None of the above
13. Which of the following is not a main class of harmful biological agents?
- a. Virus
  - b. Bacteria
  - c. Fungi
  - d. Protozoa
14. Chemicals that induce heritable genetic defects or increase their incidence are classified as \_\_\_\_\_
- a. Mutagens
  - b. Corrosive
  - c. Carcinogens
  - d. Irritants
15. The toxic effect of a chemical compound on an individual may depends on which of the following?
- a. Duration of exposure
  - b. Susceptibility of individual
  - c. Concentration of the chemical
  - d. All of the above

### **Section B [10 Marks]**

**Indicate whether the statements in this section is True or False**

1. Threshold dose is the concentration of a chemical beyond which toxic effect occurs.
2. Injuries from falls, impacts and similar accident can be termed as MSDs.
3. Hair cells in the ear are only damaged by unprotected exposure to hazardous noise
4. As long as the substance is the same, existing in different forms poses the same hazard.
5. Lifting a control lever on a machine come under the definition of manual handling.
6. The concept of ergonomics was devised in the industrial boom of the 1980's.
7. The Root Mean Square acceleration helps to determine the roughness of a particular vibration.
8. The idea of permissible limit is not applicable to chemical hazards unlike biological hazards.
9. The various organs in the human body system have the same resonance frequency.
10. Vibration white fingers may be as a result of whole-body vibration.

### **Section C [25 Marks]**

**Answer All Questions From this Section**

- 1) After working in a factory for almost a decade, Mr Krampah has been diagnosed of lower back pain. The company doctor believed Mr Krampah has been exposed to multiple risk factors that might have caused or exacerbated the musculoskeletal disorders (MSDs).
  - a. What are musculoskeletal disorders? [2 Marks]
  - b. Explain the term risk factor. [2 Marks]
  - c. Outline the three main categories of MSDs risk factors and give two examples each. [6 Marks]
  - d. Outline any four examples of MSDs other than lower back pain. [2 Marks]
  
- 2) An occupational health nurse for a large manufacturer has to undertake health surveillance of all the employees within the factory.

- a. Explain why health surveillance is undertaken in the factory. [**2 Marks**]
  
- b. Some of the raw materials and chemicals are hazardous. Outline where the nurse would find details of these substances. [**3 Marks**]
  
- c. Identify four different types of information contained in an SDS, AND for EACH, outline how the information could contribute to the assessment of risk or control of exposure. [**8 Marks**]

**Examiners: Mr Francis Krampah**