

UGANDA MARTYRS UNIVERSITY
FACULTY OF HEALTH SCIENCES
BACHELOR OF SCIENCE IN PUBLIC HEALTH
ACADEMIC YEAR: 2021/2022 BSPH2021
MODULE: OCCUPATIONAL HEALTH AND SAFETY
COURSE CODE: BSPH1205

Date: JULY, 22ND 2022

Time: 9:00am-12:00pm

Time allowed: Three hours

INSTRUCTIONS:

1. The examination paper is divided into two sections (A and B).
2. Answer all questions in sections A (50 Marks) and B (50 marks)
3. Further instructions are provided at the beginning of each question.
4. Your answers should correctly correspond to the sections and question numbers as indicated on the question paper

Section A (50 marks)

Answer as instructed

1. *The definition of Occupational and Safety includes the following, except:*

Answer one or more that apply

- A. The science for designing measures for impaired health and well-being at the workplace
- B. The anticipation, recognition, evaluation, and control of hazards arising in or from the workplace
- C. The prevention of departures from health, controlling risks, and the adaptation of work to people, and people to their jobs
- D. The promotion and maintenance of the highest standard of physical, mental, and social well-being of workers in all occupations

2. *The following are key components of a health and safety program, except:*

Answer one or more that apply

- A. Assessment of hazards
- B. Determination of the appropriate controls
- C. Procurement of PPE
- D. Penalty for not following the SOPs

3. *In occupational Health and safety, social well-being means except:*

Answer one or more that apply

- A. Free from all social dangers in occupations
- B. Supporting an array of values and norms within the work environment influences the health and wellbeing of individuals in occupations
- C. Being cautious of diversity
- D. Safety, good working relationships

4. *In occupational Health and safety, the following are examples of strategies to promote mental health in occupations:*

Answer one or more that apply

- A. Allowing workers health breaks when at work
- B. Acknowledging that workers also make mistakes, which are simply lessons to be learned

- C. Workers need to know the parameters of the box in which they are empowered to make decisions
- D. Improving team processes

5. *The prevention and protection of workers from the risks resulting from factors caused by their working conditions mean except:*

Answer one or more that apply.

- A. Complete removal of all forms of hazards from the workplace
- B. Substituting the dangerous work processes with less dangerous ones
- C. Depending on physical changes to the workplace itself, rather than relying on the workers' behavior
- D. Adaptation of the worker to the task as a standalone strategy

6. *In occupational Health and safety, which of the following are examples of engineering controls?*

Answer one or more that apply

- A. Examining workplace designs
- B. Enclosure
- C. Isolation
- D. A dangerous work process can be changed to a shift when fewer people are exposed

7. *In occupational Health and safety, which of the following are examples of administrative controls*

Answer one or more that apply

- A. Changing work schedules
- B. Giving workers shorter shifts to reduce exposure time
- C. Changing a work process to a shift when fewer people are working
- D. Supporting the industrial relations

8. *Personal protective equipment (PPE) in occupations;*

Answer one or more that apply

- A. Is extended to some parts of high way code that defines clothing to wear at night
- B. Is very effective where other control measures are unattainable
- C. Offers sufficient reduction of most risks in the workplace
- D. Can only be effective when included in the OHS program

9. *In occupational Health and safety, adapting the work to physiological capabilities requires;*

Answer one or more that apply

- A. changing work schedules
- B. Formulation of conditioning programs for workers
- C. Allowing optimal rest between duty schedules
- D. Recognizing the human body is fully adaptable

10. *In occupational Health and safety, adapting the work to psychological capabilities requires*

Answer one or more that apply

- A. Changing work schedules
- B. Formulation of conditioning programs for workers
- C. introduction of the good orientation program
- D. Recognizing and valuing diversity

11. *When considering the chemical hazards in the occupation, the likelihood that the exposure will result in an adverse effect will depend on a variety of factors including:*

Answer one or more that apply

- A. The length of the work shift
- B. The age of the worker
- C. Design of the work environment
- D. The nature of the exposure

12. Why should you care about OHS in Public Health and Health Promotion?

Answer one or more that apply

- A. Because occupational health injuries and accidents are caused by preventable factors that can be eliminated
- B. Because all risks in occupations can be completely eliminated
- C. Because the methods of control and elimination of Hazards easily change with changing economic priorities
- D. Overuse of PPE modifies the risk perception of workers in occupations

13. *A material safety data sheet provides information on the following:*

Answer one or more that apply

- A. Health effects of exposure to the product
- B. Hazard evaluation related to the product's handling, storage, and use
- C. Measures to protect the workers at risk of exposure
- D. Emergency procedures

14. *The following are effects of work on humans:*

Answer one or more that apply

- A. Work allows exercise
- B. Always makes humans sick
- C. Work conditions human under defined situations
- D. Work can result in unhealthy isolation

15. *The following are positive effects of occupations on humans except;*

Answer true or false that apply to each of the responses given

- A. Many occupations can make people sick
- B. Many of the undesirable effects of work are not reported
- C. Work conditions human
- D. Work environment can lead to disabilities

16. *The following observations helped Percival Pott (1713-1788) to make the relationship between disease and occupations:*

Answer true or false that apply to each of the responses given

- A. He observed a certain type of disease that was common among chimney worker
- B. He observed the atypical occurrence of cancer
- C. He observed the relationship between the type of wear and the commonality of the condition
- D. He observed that workers were dying younger than expected

17. *In the evolution of Occupational Health and Safety Alice Hamilton*

Answer true or false that apply to each of the responses given

- A. Interviewed workers in their homes and at their dangerous jobs
- B. Observed that all substances are poisons
- C. Observed the unnatural postures of the body as a cause of illnesses
- D. Championed social responsibility

18. *The following early practices in occupational Health still exist up to day:*

Answer one or more that apply

- A. Advocating for social responsibility

- B. Following up workers even after they have ceased to work for a given occupation
- C. Employers to bear the sole responsibility for the safety of workers
- D. Interviewing the workers employed in dangerous occupations from their homes

19. *During the evolution of occupational health and safety, the following were associated with increased work-related injuries:*

Answer one or more that apply

- A. Increase in the number of untrained workers
- B. Technological improvement
- C. Quantitative overload
- D. Absence of workplace policies

20. *The following are early manifestations of OSH laws:*

Answer one or more that apply

- A. United Nations Universal declaration of Human Rights that outlines the rights of workers
- B. United Nations Universal declaration of Human Rights that outlines the code of conduct of the Employees in occupations
- C. The Uganda OSH legislation that originated from the British law when Uganda was under British rule
- D. The United Nations International Covenant on economic, social and cultural rights, 1976, reaffirms this right the rights of workers

21. *The following is the most common causes of back injuries except:*

Answer only one that apply

- A. Working at heights
- B. Sitting or standing for so long
- C. Lifting objects with awkward shapes
- D. None of the above

22. *If the occupational health and safety program existed at Uganda Martyrs University, the program elements would be:*

Answer only one that applies:

- A. Worker's responsibility

- B. Workplace inspection
- C. Training
- D. Procurement of PPE

23. *In many occupations in developing economies like Uganda OSH services do exist:*

Answer only one that apply

- A. Due to legal requirements
- B. For correction of unsafe acts and unsafe conditions
- C. For reporting and investigating accidents and incidents
- D. For supporting supervisors in their health and safety activities

24. *The earlier scope of OSH comprised of mainly safety issues services but is now continuously evolving in response to:*

Answer only one that apply

- A. Changes in the world of work
- B. Size of occupations
- C. Rapid technological progress
- D. Gender issues

25. *The economic costs of occupational injuries and death include*

Answer only one that apply

- A. Compensation
- B. Lost working time
- C. Rapid technological progress
- D. Increased commuting time

26. Benchmarks used to measure risk include the following except:

Answer only one that apply

- A. Threshold Level Values
- B. Recommended Exposure Level
- C. Lethal Exposure Value
- D. Permissible Exposure Limits

27. is the most common Occupational Disability

Answer one or more that apply

- A. Noise Induced Hearing Loss for noisy environment
- B. Head Injury for people in building industry
- C. Back Injury for men and women exposed to UV rays
- D. Respiratory problems for food processing industry

28. *The following are the long-term effects of vibration exposure among women except:*

Answer only one that applies:

- A. Hemorrhoids
- B. Increased risk of abortion
- C. Menstrual disturbances
- D. Loss of sight

29. *Illuminance refers to:*

Answer only one that applies:

- A. Brightness of an object
- B. Amount of light that falls on a surface
- C. Flickering of an object
- D. Ability of an object to reflect light

30. *It is very important to update the list of occupational diseases because:*

Answer only one that apply

- A. Diseases keep emerging
- B. There are new risk factors
- C. There is continuous change in diagnostic technology
- D. All the above

31. *The following are factors associated with worker's susceptibility to occupational related diseases except:*

Answer only one that apply

- A. Lifestyle
- B. Medical history
- C. Age
- D. Duration of exposure

32. *The following are work-related factors that influence occupational related diseases except:*

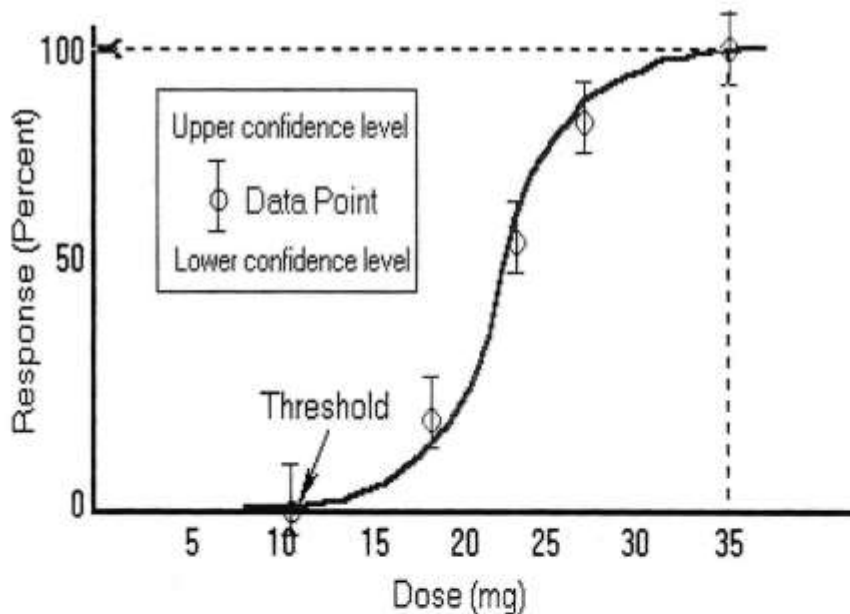
Answer only one that apply

- A. Work place policies
- B. The nature of work shift
- C. Timing of the exposure
- D. Physical properties

23. The following are important human body organs for occupational hazard monitoring except:

Answer only one that apply

- A. Urine
- B. Lungs
- C. Skin
- D. Nails
- E. Exhalation
- F. Gastrointestinal Tract



34. In the monitoring of chemical hazard in the work place, the point labeled *Threshold* indicates the following except:

Answer only one that apply

- A. A point before that is the maximum allowable exposure limit
- B. Point at which toxicity first appears
- C. Maximum allowable exposure limit
- D. Occurs at the point where the body's ability to detoxify or repair toxic injury has been exceeded

- E. The point is not does consider an eight-hour working day or forty-hour working week throughout a working lifetime

35. *The following risks have been associated with chemical hazards in occupations*

Answer with true or false where it applies

- A. Blood diseases are associated with lead smelting
- B. Atherosclerosis may be related to dry cleaning
- C. Arrhythmias in solvent workers
- D. Liver cancer has often been associated with degreasing

36. *..... is the greatest cause of occupational injuries*

Answer only one that apply

- E. Acts of God
- F. Unsafe conditions
- G. Unsafe acts
- H. None of the above

37. *Musculoskeletal disorders are caused by the following except*

Answer only one that apply

- A. Repetitive motions
- B. Awkward postures
- C. Heat exposure
- D. Excessive reaching

38. *..... is a collective term for syndromes characterized by discomfort, impairment, disability, or persistent pain of joints, tendons, muscles, or soft tissue due to occupational vibrations*

Answer only one that applies:

- A. Insomnia
- B. Cumulative trauma disorders
- C. Fibrosis
- D. None of the above

39. *In the systematic approach to hazard assessment arrange the following steps in order:*

- i. Communicate the hazard assessments and required controls to all workers who perform the tasks.
- ii. Identify the controls that will eliminate or reduce the risk
- iii. Implement the controls for each hazard.

- iv. List all work-related tasks and activities
- v. Evaluate the controls periodically to ensure they are effective.
- vi. Assess the risk of the hazard by considering the severity of consequences of exposure, the probability that the exposure will occur and the frequency the task is done.
- vii. Identify potential biological, chemical, physical, ergonomic or psychological hazards associated with each task.

Space for the answer

- i.
- ii.
- iii.
- iv.
- v.
- vi.
- vii.

40. Under the Occupational Health and Safety Act of 2006, it is a requirement of the employer to provide an alternative suitable employment:

Answer one or more that apply

- A. Where an assignment involves continuous exposure to dangerous emissions and the employee cannot medically continue
- B. To a suitable member of the deceased family if he dies while at work
- C. If the employee becomes permanently incapacitated
- D. On medical recommendation

41. Under the Employment Act of 2012, "hazardous work" means work

Answer one or more that apply

- A. A child is exposed to harassment

- B. Light work in excess of fourteen hours per week
- C. Participation in forced vocational training
- D. A 10-year-old carries a 15L containers

42. *Under the Employment Act of 2012, a child under the age of fourteen years shall not be employed in the business except*

Answer one or more that apply

- A. Cleaning toilets and bathrooms
- B. Sweeping, cleaning the floor and organizing the house even beyond 7.00 p.m
- C. Where work does not exceed fourteen hour per week
- D. If a child is working to pay off a loan for the family between 7.00am-7.00 p.m

Section B (50 marks)

Question One: Occupational

Read and connect with the information provided to answer the questions that follow;

Rawlance Ndejjo, et al, carried out a study in 2015 and collected data from 8 major health facilities in Kampala using a quantitative cross-sectional study. The study was premised on the available information that indicated that healthcare workers operate in an environment that is considered to be one of the most hazardous occupational settings. In addition to the usual workplace related exposures, healthcare workers encounter diverse hazards due to their work-related activities. The table below summarizes their findings of their study.

Table of summary findings on occupational health from 8 major health facilities in Kampala

Hazards experienced by health workers	Frequency (%)
Sharp-related injuries (such as needle sticks)	43 (21.5)
Cuts and wounds	34 (17)
Direct contact with contaminated specimens/biohazardous materials	21(10.5)
Airborne diseases	18(9.0)
Infectious diseases and/or infections	15(7.5)
Others (bloodborne pathogens, vector-borne diseases, and bioterrorism)	15 (7.5)
Stress	43 (21.5)
Physical, psychological, sexual, and/or verbal abuse	21(10.5)
Musculoskeletal injuries	21 (10.5)
Slips, trips, and/or falls	12 (6.0)
Fractures	10 (5.0)
Others (chemical spills, noise, burns, and radiations)	20 (10.0)

- Using the summary of their findings make a statement of the researcher's definition of occupation health and safety. (2 marks)
- Describe researchers' main and sub-categorization of occupation health hazards in their study. (3 marks)
- Describe the control measures that are employed in such a setting. (5 marks)
- Discuss the relationship between the two commonest hazards in the study. What would be taken to be the most appropriate measure for reducing the risks of exposure to two hazards? (5 marks)
- You have been requested to set up occupational health surveillance in one of the health facilities in the study area to include the new and emerging occupational health hazards. Describe the steps you will use for such an assignment. (10 marks)

Question 2

Describe how the knowledge of the following concept can be used in the improvement of occupational health and safety environments and processes.

- | | | |
|------|------------------------------|-----------|
| i. | The Ergonomic Triad | (5 marks) |
| ii. | A Material Safety Data Sheet | (5 marks) |
| iii. | The reach angle | (5 marks) |
| iv. | The Near-miss Concept | (5 marks) |

Good luck