



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE
(OCCUPATIONAL HEALTH AND SAFETY)

PEO 801: OCCUPATIONAL HYGIENE AND DISEASES

DATE: Tuesday, 16th May 2017

TIME: 9.00 a.m. - 12.00 p.m.

INSTRUCTIONS:

Answer ALL Questions in Section A. Answer any other THREE Questions in Section B.

SECTION A

1. a) Explain briefly the factors that may influence the risk perception of a worker at workplace. (10 Marks)
- b) Describe briefly the main routes of entry of xenobiotics and two factors that influence the entry through each route. (10 Marks)
- c) Citing three major pneumoconiosis conditions, state the main causive agent and the key clinical symptoms the conditions are manifested among the affected workers. (10 Marks)
- d) Explain the various states of matter that are likely to be encountered in work environment. (10 Marks)
- e) The normal concentration of Oxygen in air is 20.8%. A coal mine was found to contain 13.2% of Oxygen. How many ppm of Oxygen had been displaced. (5 Marks)
- f) Two moles of oxygen are held at STP. What is their volume if oxygen behaves as an ideal gas? (5 Marks)

Section B: Answer THREE Questions in this Section

2. Workers at workplaces are not exposed to one specific Xenobiotic but a mixture of them. Discuss giving specific examples the various exposure effects expected after exposure to multiple substances. (30 marks)

3. Two of the main methods of biological hazards control are isolation and biological hazards control. Discuss how
- i) Isolation of hazardous work areas, reservoirs or carriers of the microbiological agents
 - ii) The standard control techniques that should be considered essential in susceptible work practices. (30 Marks)
4. a) Gases are notorious pollutants in various work environments. Discuss how named gasses encountered in workplaces are categorized. (20 Marks)
- b) Explain the sources of carbon dioxide in work environment and its probable effects among workers. (10 Marks)
5. Heat in work environment is an important aspect in job performance and workers' health. Discuss the possible health effects of workers from exposure to extremes of heat and the environmental and physiological methods for assessing the risk of heat-induced illness. (30 marks)
6. Workers health is adversely affected when they are exposed to work related dusts. Citing specific examples, discuss the major specific health effects likely to be encountered from such exposures. (30 marks)