

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI  
SCHOOL OF HEALTH TECHNOLOGY  
DEPARTMENT OF BIOMEDICAL TECHNOLOGY  
2015/2016 HARMATTAN SEMESTER EXAMINATION

FRIDAY 24<sup>TH</sup> APRIL, 2016.

TIME ALLOWED: 3hrs

BMT 421 ERGONOMICS AND OCCUPATIONAL SAFETY

3UNITS

Instruction: Answer three questions from each section. Use separate booklet for each section.

SECTION A: ERGONOMICS

1. Ergonomic principles provide possibilities for optimizing tasks in Workplace. List and explain the Ergonomic principles that contribute to a good workplace design. (10marks)
2. a. Cumulative Trauma Disorder (CTD) is one of the factors to consider in workplace design. Explain this. (5marks).
- b. List and explain 6 common CTDs you know. (5marks)
3. Explain in detail, the factors to consider in workplace design (10marks)
4. a. What are the common Ergonomic risk factors and how will you avoid/tackle them? (5marks)
- b. What are the possible risks that can arise from poor ergonomic consideration in workplace design? (5marks).

SECTION B (OCCUPATIONAL SAFETY)

- 1a. Define occupational safety (3Mks)
- b. What is the goal of occupational safety? (2Mks)
- c. Outline 5 aims/objectives of occupational safety (7<sup>1</sup>/<sub>2</sub>Mks)
- d. Mention 5 ways occupational deafness can be prevented (7<sup>1</sup>/<sub>2</sub> mks)
  
- 2a When does electric shock occur? (2 marks)
- b. Outline 3 ways electrical accidents can be prevented (6 marks)
- c. Mention 3 effects of ionizing radiation on the body (6 marks)
- d Write a short note on workers compensation. (6 marks)
  
- 3a Explain each of these 3 norms of radiation protection
  - i Time (4 marks)
  - ii Distance (5marks)
  - iii Shielding (9 marks)
- b list any two sourced of radioactive pollution (2marks)
  
- 4.a List two (2) clinical features of lead poisoning (4 marks)
- b Outline three (3) preventive measures of lead poisoning (6 marks)
- c Write out two (2) ways chemical poisoning (like insenticide) can be prevented (4 marks)
  
- d. Mention three (3) ways the effects of biological agent (eg. Mycobacterium bovis or hepatitis B virus or any one you know can be prevented)