

# UNIVERSITY OF SWAZILAND

## Faculty of Health Sciences

### Department of Environmental Health Science

### 2021 Main Examination

Title of paper: Principles of Ergonomics  
Course code: EHS 415  
Time allowed: 2 hours  
Marks allocation: 100 Marks

#### Instructions:

- 1) Read the questions and instructions carefully
- 2) Answer any 4 questions
- 3) Each question is weighted 25 marks
- 4) Write neatly and clearly

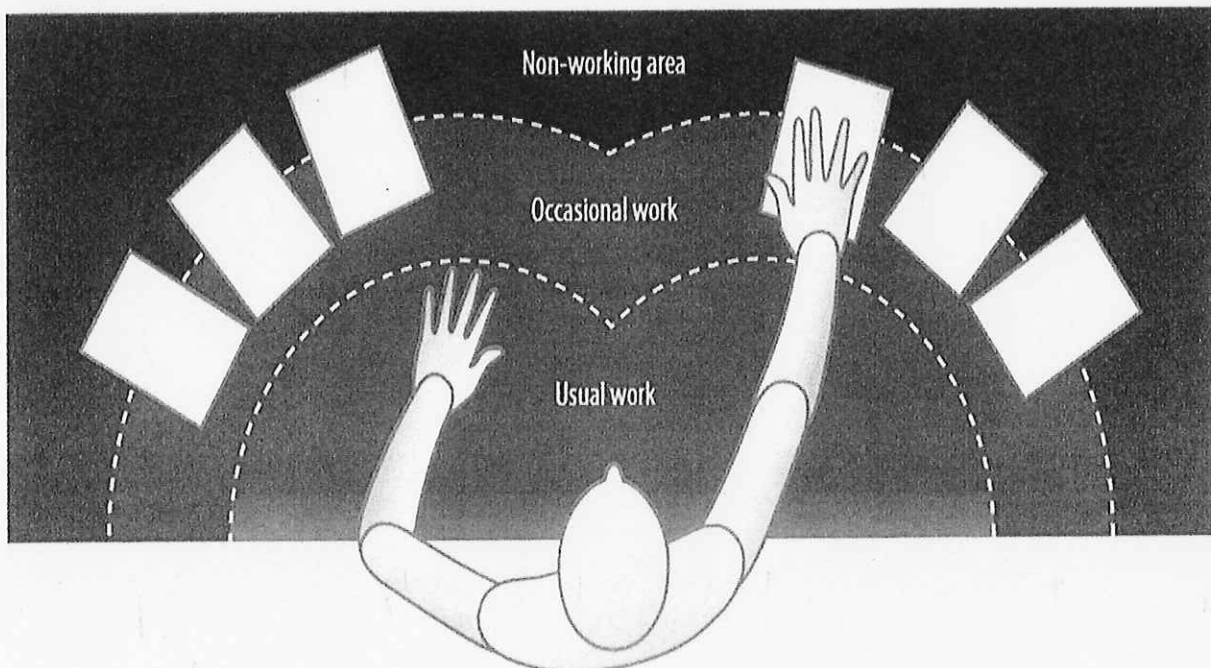
This paper is not to be opened until the invigilator has granted permission

**QUESTION 1**

- a) Define Ergonomics. [5 Marks]
- b) By definition: Occupational health is the promotion and maintenance of the highest degree of **physical, mental** and **social-wellbeing** of all workers in all occupations.
- Analyze this definition and give examples. [15 Marks]
- c) Discuss the risks inherent in the worker. [5 Marks]

**QUESTION 2**

- a) Discuss in details the relationship between the worker and the workplace. [10 Marks]
- b) Discuss in details the 3 working areas shown below:

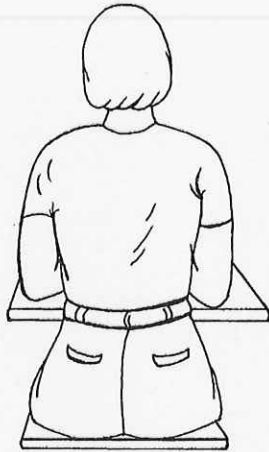


[15 Marks]

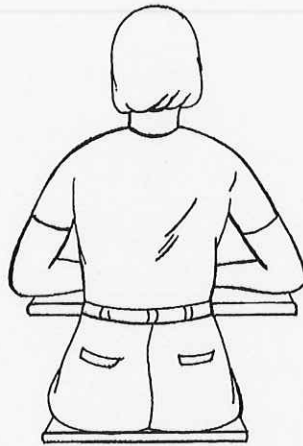
**QUESTION 3**

- a) With reference to the 4 pictures below. State which are good or bad postures; state possible health effects. Apply the ergonomic principles.

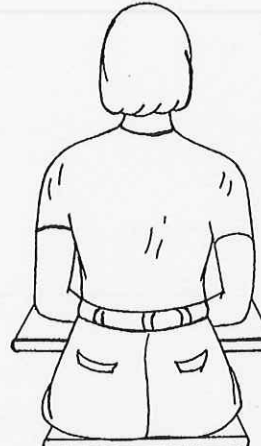
[10 Marks]



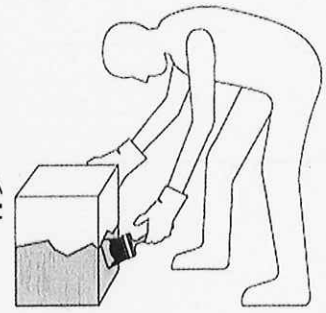
(Picture 1)



(Picture 2)



(Picture 3)



(Picture 4)

- b) With reference to the picture below. State if posture is good or bad; state possible health effects. Suggest possible corrective measures. Apply the ergonomic principles.

[15 Marks]



**QUESTION 4**

Manual material handling contributes a high rate of injuries at the workplace. As a safety officer discuss five (5) points you would advise supervisors to consider before assigning manual material handling tasks to workers.

[25 Marks]

**QUESTION 5**

- a) Alcohol consumption affects different parts of the body. Discuss five (5) adverse effects of alcohol abuse.

[15 Marks]

- b) Discuss how abuse of alcohol and substance intake (smoking) by workers affect health and safety as well as work performance and production?

[10 Marks]