

UNIVERSITY OF SWAZILAND

Faculty of Health Sciences

Department of Environmental Health Science

December 2017 Examination

Title of paper: Principles of Ergonomics
Course code: EHM420
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

Occupational exposure can have adverse effects on the worker. In each of the following, discuss how the worker's health is affected by?

- a) Poultry farming [5 Marks]
- b) Brick laying [5 Marks]
- c) Factors inherent in the worker [5 Marks]
- d) Crop farming [5 Marks]
- e) Welding and electric wiring [5 Marks]

Question 2

Applying ergonomics principles is said to enhance certain desirable human values including (a) increased comfort, (b) greater acceptance, (c) increased job satisfaction and (d) improved quality of life.

Explain fully how the above statement is true using the sub themes given. Give examples. [25 Marks]

Question 3

- (i) As a safety and health officer you need to train and supervise workers. Discuss 5 factors that influence communication. Give examples. [15 Marks]
- (ii) When preparing a presentation, why is it important to set objectives? [5 Marks]
- (iii) What is visual aid and how should it be used? [5 Marks]

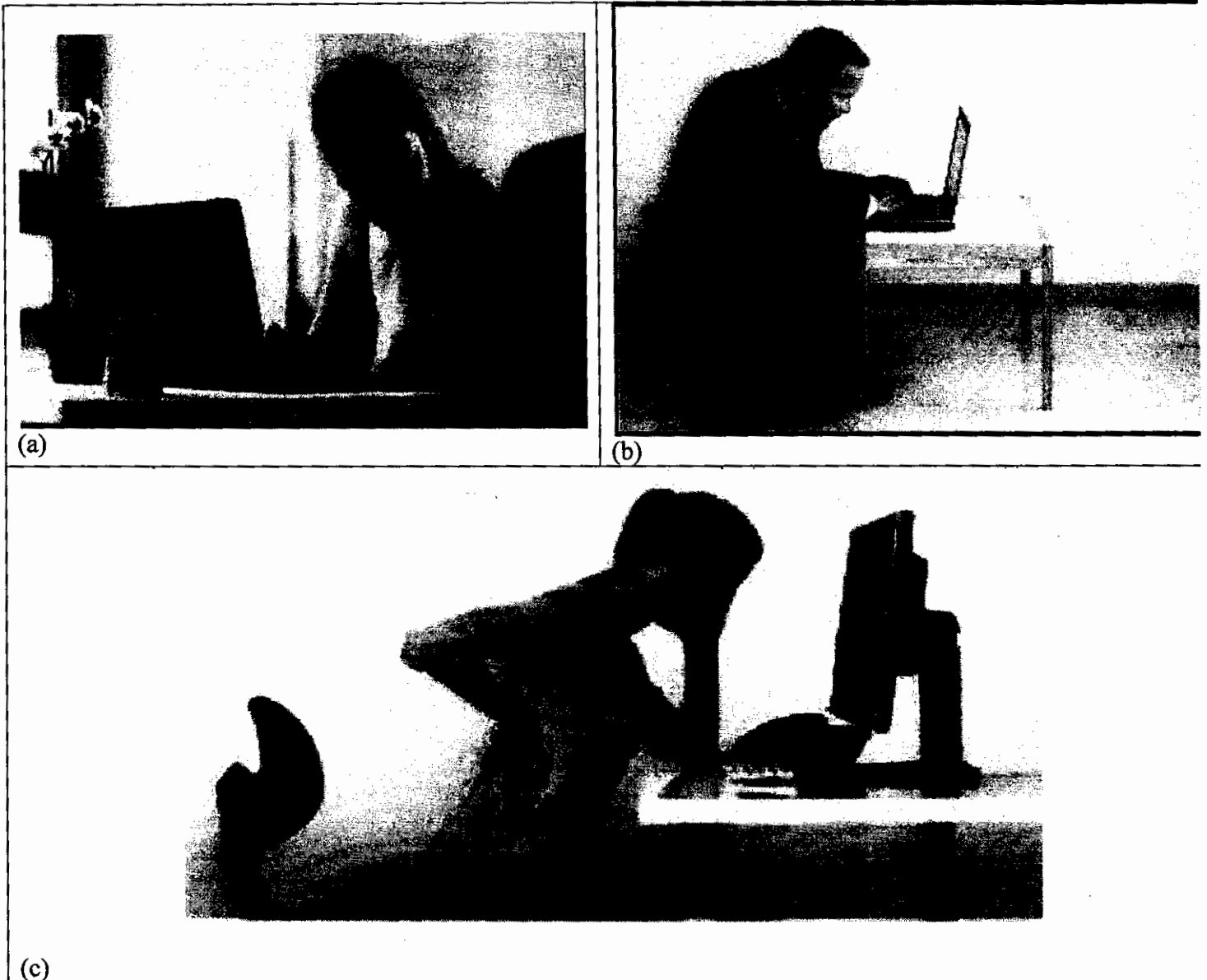
Question 4

The International Labour Organisation (ILO) developed 10 ergonomics check points. Discuss how you will ensure safety of workers in the following check points:

- (i) Welfare facilities [5 Marks]
- (ii) Workstation design [5 Marks]
- (iii) Machine safety [5 Marks]
- (iv) Lighting [5 Marks]
- (v) Hand tools [5 Marks]

Question 5

- (i) Critically looking at the pictures below (a), (b) and (c): For each describe fully the risk factors. [15 Marks]



- (ii) Describe in detail how a sitting computer station should be. [10 Marks]