



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION SEMESTER II SESSION 2023/2024

COURSE NAME	:	ERGONOMICS & ANTHROPOMETRIC
COURSE CODE	:	BPP 10202
PROGRAMME CODE	:	BPP
EXAMINATION DATE	:	JULY 2024
DURATION	:	2 HOURS
INSTRUCTION	:	1. ANSWER ALL QUESTIONS. 2. THIS FINAL EXAMINATION IS CONDUCTED VIA <input type="checkbox"/> Open book <input checked="" type="checkbox"/> Closed book 3. STUDENTS ARE PROHIBITED TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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- Q1**
- (a) Define anthropometrics. (2 marks)
 - (b) Explain **ONE (1)** measurement device for anthropometry and its method. (4 marks)
 - (c) Discuss with example **TWO (2)** types of anthropometries. (8 marks)
 - (d) Explain **FOUR (4)** usage of anthropometric data in design. (8 marks)

Q2 **Figure Q2.1** represent the working areas that are involved in standing work areas for task that involve frequent movements, handling heavy objects and exerting large forces with the hands.

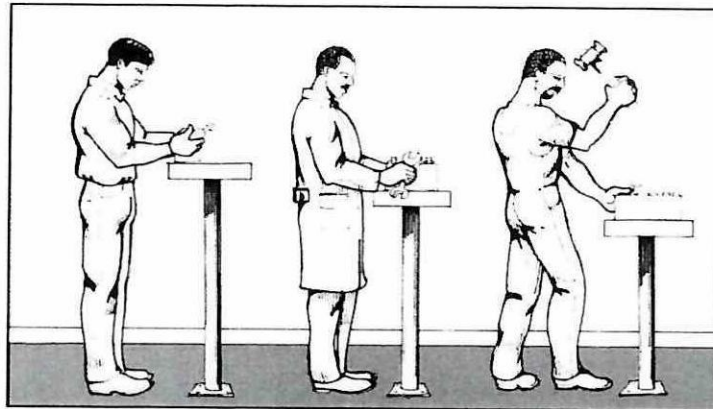


Figure Q2.1 : Working area.

- (a) Describe the ergonomic considerations and design principles involved in creating effective standing work areas as shown in **Figure Q2.1**. (4 marks)
- (b) Explain **TWO (2)** ways to enhance the comfort and safety for
 - (i) Seated workers. (4 marks)
 - (ii) Standing workers. (4 marks)
- (c) Describe **THREE (3)** ways that workers can implement to eliminate or minimize the injuries based on three different work surface heights. (9 marks)

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- Q3** Designing an appropriate and ergonomic workstation is essential.
- (a) State **THREE (3)** main classifications of office workplaces. (3 marks)
 - (b) Explain **FOUR (4)** optimal conditions for utilizing sitting workspaces in various occupational settings. (8 marks)
 - (c) Discuss **FOUR (4)** conditions under which standing workspaces are the preferred option in various occupational settings. (8 marks)
 - (d) Illustrate **EIGHT (8)** label basic parameter of visual display terminal for Workstation. (10 marks)
- Q4**
- (a) Define manual material handling (MMH). (2 marks)
 - (b) Elaborate **FOUR (4)** immediate health effects of manual material handling (MMH) on workers. (8 marks)
 - (c) Elaborate **FOUR (4)** long-term health effects of manual material handling (MMH) on workers. (8 marks)
 - (d) Illustrate **THREE (3)** steps of proper manual lifting method by showing the correct force when bending, lifting and standing while carrying heavy loads. (10 marks)

- END OF QUESTIONS -

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