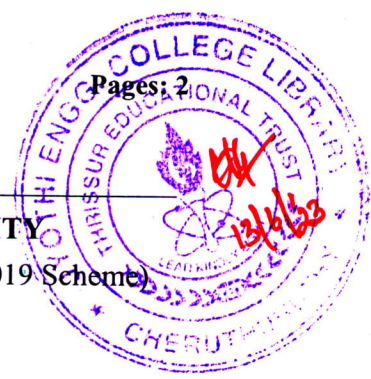


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Eighth Semester B.Tech Degree Regular Examination June 2023 (2019 Scheme)

**Course Code: MRT456****Course Name: ERGONOMICS****Max. Marks: 100****Duration: 3 Hours****PART A***Answer all questions, each carries 3 marks.*

Marks

- | | | |
|----|---|-----|
| 1 | Explain the sources of human variability? | (3) |
| 2 | Write a short note on anthropometry and personal space? | (3) |
| 3 | Explain in short about work surface design? | (3) |
| 4 | List out the false assumptions about manual handling safety? | (3) |
| 5 | What are the methods of worker protection in extreme climates? | (3) |
| 6 | Write a short note on building design and the indoor climate? | (3) |
| 7 | Explain the significance of virtual environments? | (3) |
| 8 | List out the various approaches to control noise in worksite? | (3) |
| 9 | Write the advantages and disadvantages of human centred design process for interactive systems? | (3) |
| 10 | Write a short note on human computer dialogue? | (3) |

PART B*Answer any one full question from each module, each carries 14 marks.***Module I**

- 11 a) Explain in detail about the causes and preventive measures of low back pain with suitable sketches and graphs? (14)

OR

- 12 a) Describe about musculoskeletal disorders in workplace? Explain? (6)
- b) Explain the basic body mechanics with help of tent analogy? (8)

Module II

- 13 a) Compile a detailed note on Visual display terminal design? (14)

OR

- 14 a) Explain the design of standing and sitting? (14)

Module III

- 15 a) Classify the factors affecting the physical work capacity; explain each one separately? (14)

OR

- 16 a) How can we make the indoor climate of a work space more comfortable; Give your suggestions? (14)

Module IV

- 17 a) List out and explain in detail about the various factors to be considered to meet visual comfort in a work place? (14)

OR

- 18 a) Sketch the link analysis diagram, explain the concept of combining displays and controls? (14)

Module V

- 19 a) Explain the concept of cross cultural considerations in ergonomic design? (14)

OR

- 20 a) Describe the six steps needed for an ergonomic approach to system design? (14)
