

Registration No:

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Total Number of Pages: 01

Course: MPT

SUBJECT: Physiotherapy in Clinical Assessment & Diagnosis of Biomechanics

SUB_CODE: 23MPT2B3

(2st Year MPO) Examination: 2023-24 (Admitted Batch)

BRANCH: Physiotherapy

Q. CODE: A394

Max Time: 3 Hours

Max Marks: 80

Sitting: 1st, 10.00 AM to 1.00 PM

Any Question having parts should be answered as whole at one place only.

Illustrate answer with diagrams wherever relevant / required if any)

The figures in the right-hand margin indicate marks.

Answer any 5 out of 7. Q8 is compulsory

- Q 1 Describe psychosocial factors and counselling methods that influence exercise behavior (1 x 15 Marks)
- Q 2 Describe how 3D biomechanical models improve the understanding of joint loading, muscle forces, and spinal stress during work-related activities (1 x 15 Marks)
- Q 3 Enumerate the various testing methods to assess static and dynamic muscle strength (1 x 15 Marks)
- Q 4 Design a basic biomechanical assessment framework for an industrial task incorporating appropriate anthropometric and inertial parameters to improve ergonomic safety. (1 x 15 Marks)
- Q 5 Describe the working principle of the force platform system (1 x 15 Marks)
- Q 6 Explain the assessment methods of Vibration in humans (1 x 15 Marks)
- Q 7 Propose a framework integrating cognitive ergonomics principles into workplace system design (1 x 15 Marks)
- Q 8 Answer all the questions below (5 x 1 Marks)
- a) Principles of ergonomics
 - b) Mention any 2 personal protective equipment
 - c) List the 3-D human motion capture software
 - d) State two applications of 3-D static strength modelling in occupational biomechanics.
 - e) List the personal factors affecting the strength
