

M.P.Ed. Examination-2016

Semester-III

Physical Education

Course- MPEC-301 (Elective)

(Sports Engineering)

Time: Three Hours

Full Marks: 70

Questions are of value as indicated in the margin.

Answer *one* question from each unit

UNIT-I

1. What does Sports Engineering mean? Write down the process to detect the human motion and recording and what equipments are required for this assessment. 2+8+4=14

or

How Instrumentation applied to athletes and equipment during competitions? Explain.

14

UNIT-II

2. Explain the terms external and internal force with suitable example. What are the different types of internal force? Explain from the sports engineering point of view.

6+8=14

or

Explain the mechanical principles of lifting a weight, throwing a ball and pushing against a wall.

14

UNIT-III

3. What do you mean by dynamics, kinematics and particles? Explain the rectilinear and curvilinear motion with suitable example from sports field.

6+8=14

or

What do you mean by dynamics, kinetics and particles? Explain in detail about basis of rigid body dynamics.

6+8=14

UNIT-IV

4. What is the necessity of the foundation plan? Draw the foundation plan of the ground floor for a New Building of Department of Physical Education or foundation plan of a standard swimming pool.

5+4+5=14

or

How will you plan Sports facility for a University? Explain.

14

UNIT-V

5. What is Life-Cycle Cost Analysis (LCCA)? Write down the Importance of Life-Cycle Cost Analysis? How will you estimate energy cost? Explain.

3+3+8=14

or

Explain in detail about the calculating process of Life-Cycle Cost.

14