

TILAK MAHARASHTRA VIDYAPEETH, PUNE
BACHELOR OF BUSINESS ADMINISTRATION
B.Sc Sports Science (613)
EXAMINATION : DECEMBER - 2025
SEMESTER -V

Sub: Sports Performance Analysis & Analytics (BSC23-514)

Date: 22/12/2025	Total marks: 60	Time: 10.00 am To 12.30 pm
-------------------------	------------------------	-----------------------------------

Q. 1. Answer in Detail (30)

1. What is Machine learning, explain Supervised and Unsupervised learning
2. What is Reinforcement learning and how it's being used in AI today.
3. What are Key performance indicators, Construct an Analytic model for football using 5 major KPIs used for Attacking and Defending.

Q. 2. Write Short Notes(Any Two) (10)

1. What is big data and what kind of different data is gathered for Analysis in sports.
2. Explain Decision tree algorithm using an example.
3. What are the different libraries that can be imported in Python.
4. What is the difference between Machine learning and Deep learning.

Q. 3. Answer in Short (10)

1. What is the role of data Analytics in Sports, and how is it used to improve team performance?
2. What are predictive analytics, and how is it used in sports to forecast future outcome?
3. How does Sports analytics contribute to player evaluation and recruitment decisions?
4. Which metrics measures a player's performance in a specific area?
5. Which method is used to visualize complex sports data.

Q. 4. Case Study (10)

You have joined a National second division multisport community club for Cricket, Football and Basketball having participants in three age groups of 12-14, 14- 18 and 18-22. Create a separate High performance Analytic model for each age group mentioning

- a. Different sources of data
- b. Means/ ways of data collection and process
- c. General KPIs to monitor for long term development (same for all sports)
- d. Monitoring processes and feedback reporting