(2½ Hours)   **[Total Marks: 75]**

N. B.: (1) **All** questions are **compulsory**.
(2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(3) Answers to the **same question** must be **written together**.
(4) Numbers to the **right** indicate **marks**.
(5) Draw **neat labeled diagrams** wherever **necessary**.
(6) Use of **Non-programmable** calculators is **allowed**.

1.   **Attempt *any three* of the following:**   **15**

a.   Explain Sachin Tendulkar's performance. Give basic analyses.

b.   Elaborate Sachin Tendulkar's Contribution to won and lost matches.

c.   How to Check Batsman In-Form or Out-of-Form?

d.   How to Predict Runs given Balls Faced and Minutes at Crease?

e.   How to calculate Relative Mean Strike Rate and Runs Frequency Percentage?

f.   How to do analysis of bowlers with Wicket Frequency percentage and Wickets Runs plot?

2.   **Attempt *any three* of the following:**   **15**

a.   In Analyses of Batsmen, How to get Plot of 4s, 6s and the scoring rate in ODIs?

b.   Write short information regarding performance of Twenty 20 batsmen and Twenty20 bowlers.

c.   Explain the functionality of 5 tabs available in App 'Sixer'.

d.   Brief in detail about R package cricketr.

e.   How to calculate average runs of a batsman? Explain with examples.

f.   Explain the demonstration of performance of a batsman at home and overseas.

3.   **Attempt *any three* of the following:**   **15**

a.   Write a short note on performance analysis of all-rounder players. Give an example.

b.   How to predicting Runs given Balls Faced and Minutes at Crease by All Rounder Player?

c.   Explain Performance of a batsman against a host Country in the host country.

d.   Write short note on Relative performances of international batsmen against Australia in Australia.

e.   How to show Performance and contribution of batsmen against different Opposition?

f.   With cricktr Package, how to predicting runs scored for the ODI batsmen? Give a example.

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4. **Attempt *any three* of the following:**   **15**

a. Write a short note on cricpy: A python package to analyze performances of cricketers.

b. How to get the player data for a player using the function getPlayerData() in cricpy?

c. How to get Contribution to won and lost matches and Performance at home and overseas using cricpy?

d. How to analyse Relative Batsman Cumulative Average Runs and Relative Batsman Strike Rate using cricpy?

e. Write a short note on Analysis of Top 3 wicket takers using cricpy.

f. Explain the use of getPlayerDataOD() function of cricpy for getting the ODI player data with basic analysis example.

5. **Attempt *any three* of the following:**   **15**

a. Write a short note on Analysis of Top 3 wicket takers using cricpy.

b. How to Plot the time line of wins vs losses of Test and ODI teams against opposition at different venues using cricpy?

c. Give the analysis Rahul Dravid at 3 different stages of his career with the help of cricpy.

d. Using cricpy compare the performances of Ganguly, Dravid and VVS Laxman against opposition in 'away' matches in Tests.

e. Compute the performances of Anil Kumble, Muralitharan and Warne in 'away' test matches using cricpy.

f. How to draw Future Runs forecast Plot and Relative Mean Strike Rate plot using cricpy?

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