

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: MBA  
BRANCH: MANAGEMENT

SEMESTER : III  
SESSION : MO/2022

SUBJECT: MT551 DATA SCIENCE WITH R

TIME: 3:00 Hours

FULL MARKS: 50

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Define Data Science and cite some recent business Applications. What are the components of Data Science? [2+3]
- Q.1(b) Discuss how data science works ( stepwise Process flow). [5]
- Q.2(a) Explain some basic libraries used in Data Science. [4]
- Q.2(b) Discuss ( any Two): [2x3]
1. Data types and objects in R;
  2. Control structure (functions) in R;
  3. Useful R packages
- Q.3(a) Take (describe) any suitable real-life situation where the Predictive modelling (Business Forecasting) technique may be used suitably using R. [5]
- Q.3(b) Write the Technique with Steps, Flow Diagram, or Algorithm, or Code in R for the solution. (AnyOne) [5]
- Q.4(a) Describe any suitable real-life situation where for Predictive modelling, '*Regression will be your best choice for a solution using the R platform*'. [5]
- Q.4(b) Write the Steps or Flow Diagram, or Algorithm, or Code in R for the solution. (AnyOne) [5]
- Q.5 Discuss Any TWO with a Data Science perspective and highlight its application. [5x2]
1. Random Forest for Predictive Modelling
  2. Decision Tree Algorithm for Predictive Modelling
  3. Data Manipulation in R

:::22/11/2022:::E