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SF—51—2022

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Third Year) (Fifth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS/Revised Pattern)

DATA SCIENCE

Paper (BCS-503)

(Wednesday, 6-7-2022)

Time : 9.30 a.m. to 1.15 p.m.

Time— 3.45 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Draw neat labelled diagram wherever necessary.

1. Attempt the any *five* of the following (3 marks each) : 15

(i) What are the assumptions required for linear regression ?

(ii) What is statistical interaction ?

(iii) Explain use of data structure in Data Science.

(iv) Explain various applications of data science.

(v) What do you mean by data acquisition ?

(vi) What is data mining ?

(vii) Explain the importance of research methodology.

2. Attempt the any *two* of the following (5 marks each) : 10

(i) Explain various software engineering trends.

(ii) What are the benefits of data visualization ?

(iii) How data mining differ from data science ?

3. Attempt the any *two* of the following (5 marks each) : 10

(i) Explain the concept of data warehousing.

(ii) Explain how AI is useful in data science.

(iii) Explain different hypothesis techniques.

4. Attempt any *two* of the following (5 marks each) : 10
- (i) Explain difference between conventional and modern computational techniques.
 - (ii) Explain the concept of Big Data.
 - (iii) Explain parallel computing concept in detail.
5. Attempt any *two* of the following (5 marks each) : 10
- (i) Explain the importance of data science in future.
 - (ii) Explain important data structure. Which can be used in Data Science.
 - (iii) Explain various applications of data science.
6. Attempt any *two* of the following (5 marks each) : 10
- (i) Explain various project deployment tools.
 - (ii) Explain the concept of clustering in detail.
 - (iii) What is exploratory data analysis ?
7. Attempt any *two* of the following (5 marks each) : 10
- (i) Explain the role of data scientist.
 - (ii) Explain Data science life cycle in detail.
 - (iii) Explain advantages of using R programming language.