

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2025		
B. Tech Program: Information Technology	Scheme: IIB / II	
Regular Examination: LY Semester: VII		
Course Code: ITC701 and Course Name: Artificial Intelligence and Data Science-II		
Date of Exam: 25/11/2025	Duration: 02.5 Hours	Max. Marks: 60

Instructions:

- (1) All questions are compulsory.
- (2) Draw neat diagrams wherever applicable.
- (3) Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Discuss content based recommendation with suitable case study.		CO6	U
b)	Explain key factors of data visualization and also explain application of area chart with suitable example.		CO2	U
c)	Explain design of a Cognitive System.		CO4	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Explain the trends in AI and DS with suitable example.		CO1	U
b)	Discuss the advantages of Google Chart and d3.js library.		CO3	U
c)	Formulate and discuss fuzzy membership functions for washing machine case study.		CO5	An
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Explain the process of applying advanced analytics to cognitive computing with the help of suitable case study.		CO4	U
b)	Investigate the shortcomings of hard computing approach, tackled using soft computing approach with suitable example.		CO5	An
c)	Formulate collaborative filtering-based recommendation system for the recommendation of books as per the choice given by the user. Draw suitable diagram.		CO6	C
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	Demonstrate chart animations for the Covid-19 application case study. Draw suitable dashboard and highlight the derived insights.		CO3	A
b)	Design and explain time series forecasting for suitable case study in detail. Also explain various methods of time-series forecasting.		CO6	C

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c)	Differentiate between static charts and dynamic charts with suitable example. Also discuss pros and cons of using static charts and dynamic charts in a dashboard.		CO2	An
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