

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. IV Year I Semester Regular & Supplementary Examinations December-2024
RECOMMENDATION SYSTEM

CSE(Artificial Intelligence & DataScience)

Time: 3 Hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|---|---|-----|----|----|
| 1 | a | Describe the Rule formation in KRR. | CO3 | L2 | 6M |
| | b | Explain the methods of specifying Goal Order. | CO3 | L2 | 6M |

OR

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|---|---|--|-----|----|----|
| 2 | a | Discuss the Back Track controlling in KRR. | CO3 | L2 | 6M |
| | b | Analyse the types of Rules in KRR. | CO3 | L4 | 6M |

UNIT-II

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|---|---|--|-----|----|----|
| 3 | a | Describe model-based approaches in collaborative filtering and how they are applied in recommendation systems. | CO2 | L3 | 6M |
| | b | Explain the application of the User-Based Nearest Neighbour (UBNN) recommendation in real-world systems. | CO2 | L2 | 6M |

OR

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|---|---|--|-----|----|----|
| 4 | a | How does IBNN differ from UBNN? Provide a mathematical example to illustrate your explanation. | CO2 | L5 | 6M |
| | b | Distinguish different similarity measures such as Pearson correlation, cosine similarity, and Jaccard index. | CO2 | L4 | 6M |

UNIT-III

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|---|---|--|-----|----|----|
| 5 | a | Describe the process of discovering features of documents for content-based recommendations. | CO3 | L3 | 6M |
| | b | How can item features be obtained from tags? | CO3 | L2 | 6M |

OR

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|---|---|---|-----|----|----|
| 6 | a | Explain the high-level architecture of a content-based recommendation system. | CO3 | L2 | 6M |
| | b | Explain the challenges associated with content-based filtering when dealing with multimedia data, such as images and audio. | CO3 | L2 | 6M |

UNIT-IV

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|---|---|--|-----|----|----|
| 7 | a | Describe different methods used to represent knowledge. | CO4 | L2 | 6M |
| | b | Explain the opportunities for hybridization in recommender systems and how they can improve recommendations. | CO5 | L2 | 6M |

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|---|---|--|-----|----|----|
| 8 | a | Describe how cascade hybridization works. | CO5 | L2 | 6M |
| | b | Discuss how the hybrid approach enhanced the system's performance. | CO5 | L2 | 6M |

UNIT-V

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|---|---|--|-----|----|----|
| 9 | a | Why is evaluation crucial for the development and deployment of recommender systems. | CO6 | L1 | 6M |
| | b | Describe the advantages and limitations of using historical datasets for evaluating recommender systems. | CO6 | L3 | 6M |

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|----|---|---|-----|----|----|
| 10 | a | Discuss the importance of A/B testing in evaluating recommender systems. | CO6 | L2 | 6M |
| | b | How can cross-validation be leveraged to enhance the generalization capability of a predictive model? | CO6 | L6 | 6M |

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