| O.P.Code: 20CS1117 | R20 | H.T.No. | | | | | | | | | |
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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**
(AUTONOMOUS)
**B.Tech. IV Year I Semester Regular & Supplementary Examinations October/November-2025**
**RECOMMENDATION SYATEM**
(Common to CAI & CAD)

**Time: 3 Hours** **Max. Marks: 60**

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

| | | | | | |
|---|---|---|---|---|---|
| | | **UNIT-I** | | | |
| 1 | a | Describe the Rule formation in KRR. | CO3 | L2 | 6M |
| | b | Analyse the types of Rules in KRR. | CO3 | L4 | 6M |
| | | **OR** | | | |
| 2 | | Identify key challenges in Algorithm design in KRR. | CO3 | L3 | 12M |
| | | **UNIT-II** | | | |
| 3 | a | Describe the working principle of the User-Based Nearest Neighbour (UBNN) recommendation. | CO2 | L2 | 6M |
| | b | Explain the application of the User-Based Nearest Neighbour (UBNN) recommendation in real-world systems. | CO2 | L2 | 6M |
| | | **OR** | | | |
| 4 | a | Describe model-based approaches in collaborative filtering and how they are applied in recommendation systems. | CO2 | L3 | 6M |
| | b | Discuss one popular model-based approach in detail, including its mathematical foundation. | CO2 | L2 | 6M |
| | | **UNIT-III** | | | |
| 5 | a | Describe how item profiles are used in content-based recommendation systems to make recommendations. | CO3 | L3 | 6M |
| | b | How are item profiles generated and used in making recommendations? | CO3 | L2 | 6M |
| | | **OR** | | | |
| 6 | a | How can item features be obtained from tags? | CO3 | L2 | 6M |
| | b | Discuss the methodologies involved in leveraging tags for content-based recommendations. | CO3 | L5 | 6M |
| | | **UNIT-IV** | | | |
| 7 | a | Explain how constraint-based recommenders work. | CO4 | L2 | 6M |
| | b | Provide an example of a system that uses constraint-based recommendations. | CO4 | L3 | 6M |
| | | **OR** | | | |
| 8 | a | Explain the concept of monolithic hybridization design. | CO5 | L2 | 6M |
| | b | How do feature combination and feature augmentation techniques contribute to hybrid systems? | CO5 | L2 | 6M |
| | | **UNIT-V** | | | |
| 9 | a | Explain the general properties of evaluation research in recommender systems. | CO6 | L2 | 6M |
| | b | Why is evaluation crucial for the development and deployment of recommender systems? | CO6 | L1 | 6M |
| | | **OR** | | | |
| 10 | a | Describe the different error metrics used to evaluate the accuracy of recommender systems. | CO6 | L2 | 6M |
| | b | Explain metrics such as RMSE, MAE, and precision/recall. | CO6 | L2 | 6M |

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