



Regulation R17

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 1P7EC

B.Tech IV Year I Semester Supplementary Examinations, January 2023

MACHINE LEARNING
(Computer Science and Engineering)

Maximum Marks: 70

Duration: 3 Hours

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Supervised learning and unsupervised clustering both require at least one
- 2 The most general hypothesis is represented by
- 3 What is the approach of basic algorithm for decision tree induction?
- 4 Formula to compute entropy is
- 5 Bayes theorem provides a direct method for calculating
- 6 The posterior probability of a hypothesis inconsistent with data is
- 7 LEARN-ONE-RULE performs a general-to-specific search through the space of possible rules in search of a rule with
- 8 The SEQUENTIAL-COVERING algorithm, together with the LEARN-ONE-RULE algorithm, learns a set of
- 9 Reinforcement learning is closely related to
- 10 List any one Inductive method

Part-B

Answer all the questions

(10MX 5=50Marks)

- 11 State and explain the Find-S algorithm. Consider the dataset. [10]

Example	Sky	AirTemp	Humidity	Wind	Water	Forecast	EnjoySport
1	Sunny	Warm	Normal	Strong	Warm	Same	Yes
2	Sunny	Warm	High	Strong	Warm	Same	Yes
3	Rainy	Cold	High	Strong	Warm	Change	No
4	Sunny	Warm	High	Strong	Cool	Change	Yes

OR

- 12 With suitable examples explain learning task in machine learning. [10]

- 13 Highlights the appropriate problems for decision tree learning. [10]

OR

- 14 Discuss the problems for Neural network learning. [10]

- 15 Explain Bayes theorem. [10]

OR

- 16 Explain k- Nearest neighbour learning systems. [10]
- 17 State and explain sequential covering algorithms. [10]
OR
- 18 Discuss learning first order rules. [10]
- 19 Discuss reinforcement learning. [10]
OR
- 20 Explain Q-learning with an algorithm and suitable example. [10]