



**SURPRISE TEST**  
**VII-SEMESTER (CSE Core)**  
**MACHINE-LEARNING (CSE\_4054)**

**Duration: 30-minutes**

Student name	Reg no.	Section	Semester

Q NO.	Questions	Marks
Q1	A crop disease detection system is trained using synthetic aerial generated by drones in simulation and later evaluated on real drone images collected from farms during harvest season, Identify T, P, and E.	1M
Q2	Compare how a high-bias model (underfitting) and a high variance model (overfitting) differ in their generalization ability.	0.5M
Q3	A Naive Bayes sentiment classifier has class priors:  $P(\text{Pos})=0.5$ , $P(\text{Neg}) = 0.5$ .  Likelihoods:  $P(\text{"good"}   \text{Pos})=0.8$ .  $P(\text{"good"}   \text{Neg}) = 0.2$ .  If a review contains the word "good", compute the evidence $P(\text{"good"})$ .	0.5M
Q4.	According to Occam's Razor in machine learning, why is a simpler hypothesis preferred over a complex one when both fit the data equally well?	1M

Questions.	1	2	3	4	5	6	7	8	9	10
Answers.	Hint: T : Task P: Performance E: Experience		0.5			Error	Error	Error	Error	Error