IAs non Chart	MACHINE LEA	RNING	
Per Choic	e Based Credit Sy	stem (CBCS) schen	nel .
(Effective	arom the academi	c vear 2017 - 2010\	
Subject Code	SEMESTER -	- VII	
Number of Lecture Hours/Week	17CS73	IA Marks	40
Total Number of Lecture Hours	03	Exam Marks	60
or Secture Hours	50	Exam Hours	03
Module – 1	CREDITS -	04	03
			Teachir
Introduction: Well posed learning	ng problems D		Hours
Introduction: Well posed learning Perspective and Issues in Machine L.	earning	signing a Learning	system, 10 Hour
Concept Learning: Consent t			
algorithm, Version space, Candidate Text Book1, Sections: 1.1 – 1.3, 2.1	Elimination algorit	t learning as search	n, Find-S
Text Book1, Sections: 1.1 - 1 3 2 1	-2.5, 2.7	inm, Inductive Bias.	
widdie – Z			
Decision Tree Learning: Decision decision tree learning, Basic decision	tree representation	n A	
decision tree learning, Basic decision in decision tree learning, Inductive b	tree learning algor	ithm hymothesis	lems for 10 Hours
in decision tree learning, Inductive bare learning.	oias in decision tre	e learning James :	ce search
Cext Rook! Sant		o learning, issues in	decision
Text Book1, Sections: 3.1-3.7 Module – 3			
rtificial N			
Appropriate problems Page 1	troduction, Neura	1 Notes	
		1 Network represe	entation 00 mm
ext book 1. Sections: 4.1	ackpropagation alg	l Network represe	entation, 08 Hours
ext book 1, Sections: 4.1 - 46	ackpropagation alg	orithm.	entation, 08 Hours
ext book 1, Sections: 4.1 – 4.6 Iodule – 4 ayesian Learning: Introduction X	- Propugation ang	oritim.	
Yearning: Introduction, I arning. MI. and I S. arrent.	Bayes theorem, B	ayes theorem and	
Yearning: Introduction, I arning. MI. and I S. arrent.	Bayes theorem, B	ayes theorem and	
Introduction, Farming arning, ML and LS error hypothesinciple, Naive Bayes classifier. Bayes	Bayes theorem, B	ayes theorem and	
ext book 1, Sections: 4.1 – 4.6 Iodule – 4 ayesian Learning: Introduction, I arning, ML and LS error hypotherinciple, Naive Bayes classifier, Bayes ext book 1, Sections: 6.1 – 6.6, 6.9, 6.00 dule – 5	Bayes theorem, B esis, ML for presion belief network 6.11, 6.12	ayes theorem and dicting probabilities, s., EM algorithm	concept 10 Hours
And the sections: 4.1 – 4.6 Module – 4 And LS error hypothesis: Matientics And LS error hypothesis: Matientics Matientics Matientics Matientics Matientics Matientics Matientics	Bayes theorem, B esis, ML for presian belief network 5.11, 6.12	ayes theorem and odicting probabilities, s, EM algorithm	concept 10 Hours
A sections: 4.1 – 4.6 Iodule – 4 Ayesian Learning: Introduction, I arning, ML and LS error hypothesis inciple, Naive Bayes classifier, Bayes ext book 1, Sections: 6.1 – 6.6, 6.9, 6 odule – 5 Valuating Hypothesis: Motivation, mpling theorem. General approach 6.	Bayes theorem, B esis, ML for presian belief network 6.11, 6.12	ayes theorem and odicting probabilities, s, EM algorithm	concept 10 Hours
fodule – 4 ayesian Learning: Introduction, Hearning, ML and LS error hypothesis: Motivation, Module – 5 yaluating Hypothesis: Motivation, mpling theorem, General approach for of two hypothesis: Comparison.	Bayes theorem, Besis, ML for presian belief network 6.11, 6.12 Estimating hypotor deriving confider	ayes theorem and odicting probabilities, is, EM algorithm Thesis accuracy, Basince intervals, Difference	concept MDL 10 Hours sics of 12 Hours
A syesian Learning: Introduction, Framing, ML and LS error hypothesis: Motivation, Sext book 1, Sections: 6.1 – 6.6, 6.9, 6.0 dule – 5 Valuating Hypothesis: Motivation, mpling theorem, General approach for of two hypothesis, Comparing learning: Introductions	Bayes theorem, B esis, ML for pressian belief network 6.11, 6.12 Estimating hypotor deriving confiderning algorithms.	ayes theorem and odicting probabilities, is, EM algorithm thesis accuracy, Basince intervals, Different	concept MDL 10 Hours sics of 12 Hours
And the sections: 4.1 – 4.6 And the section of the section of two hypothesis, Comparing learning learning theorem, General approach for of two hypothesis, Comparing learning theorem, radial basis for extending theorem.	Bayes theorem, Besis, ML for presian belief network 6.11, 6.12 Estimating hypother deriving confidering algorithms.	ayes theorem and odicting probabilities, is, EM algorithm Thesis accuracy, Basince intervals, Differentials, accuracy, acidenses, acidenses	concept MDL 10 Hours sics of 12 Hours
Assertions: 4.1 – 4.6 Indule – 4 Ayesian Learning: Introduction, Internation, Introduction, Internation, Introduction, Internation, I	Bayes theorem, Besis, ML for presion belief network 6.11, 6.12 Estimating hypotor deriving confiderning algorithms. etion, k-nearest mon, cased-based rea	ayes theorem and odicting probabilities, is, EM algorithm Thesis accuracy, Basince intervals, Differentials, accuracy, acidenses, acidenses	concept MDL 10 Hours sics of 12 Hours
Introduction, Harring: Introduction, Harring, ML and LS error hypothesis: Motivation, Module – 5 Valuating Hypothesis: Motivation, appling theorem, General approach for of two hypothesis, Comparing learning: Introduction, applied regression, radial basis function inforcement Learning: Introduction at book 1, Sections: 5.1-5.6, 2.1.0.5	Bayes theorem, Besis, ML for presian belief network 6.11, 6.12 Estimating hypotor deriving confidering algorithms. Estion, k-nearest mon, cased-based rear, Learning Task, Q	ayes theorem and odicting probabilities, is, EM algorithm Thesis accuracy, Base accuracy, Different eighbor learning, Isoning, Learning	concept MDL 10 Hours sics of 12 Hours
Introduction, Farming: Introduction, Farming, ML and LS error hypothesis: Motivation, Ext book 1, Sections: 6.1 – 6.6, 6.9, 6.0 dule – 5 Valuating Hypothesis: Motivation, Ext book 1, Sections: General approach for of two hypothesis, Comparing learning theorem, General approach for of two hypothesis, Comparing learning: Introduction inforcement Learning: Introduction at book 1, Sections: 5.1-5.6, 8.1-8.5, surse Outcomes: After studying this contracts of the stu	Bayes theorem, Besis, ML for pressian belief network 6.11, 6.12 Estimating hypotor deriving confiderning algorithms. Estion, k-nearest mon, cased-based read, Learning Task, Q., 13.1-13.3	ayes theorem and of dicting probabilities, is, EM algorithm thesis accuracy, Basince intervals, Differentially beighbor learning, is soning, Learning	sics of ence in locally
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Assertions: 4.1 – 4.6 Indule – 4 Ayesian Learning: Introduction, It arning, ML and LS error hypothesis inciple, Naive Bayes classifier, Bayes ext book 1, Sections: 6.1 – 6.6, 6.9, 6 odule – 5 Valuating Hypothesis: Motivation, impling theorem, General approach for of two hypothesis, Comparing learning introduction inforcement Learning: Introduction inforcement Learning: Introduction inforcement Learning: Introduction inforcement Learning: Stance Sections: 5.1-5.6, 8.1-8.5, arrse Outcomes: After studying this control of the problems for machine or reinforcement learning.	Bayes theorem, Besis, ML for pressian belief network 6.11, 6.12 Estimating hypotor deriving confiderning algorithms. Estion, k-nearest mon, cased-based read, Learning Task, Q., 13.1-13.3 Ecourse, students will learning. And selections and selections will be a selection of the	ayes theorem and of dicting probabilities, is, EM algorithm Thesis accuracy, Basince intervals, Different eighbor learning, soning, Learning Il be able to ct the either supervise.	sics of locally locally
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Association in the state of two hypothesis: Association inforcement Learning: Introduction, and the state of two hypothesis: Motivation, and the state of two hypothesis: Motivation, and the state of two hypothesis; Comparing learning theorem, General approach for of two hypothesis, Comparing learning inforcement Learning: Introduction inforcement Learning: Associated or reinforcement learning. • Recall the problems for machine or reinforcement learning. • Understand theory of probability Illustrate concept learning, ANN, estion paper pattern:	Bayes theorem, Besis, ML for pressian belief network 6.11, 6.12 Estimating hypotor deriving confidering algorithms. Etion, k-nearest mon, cased-based read, Learning Task, Q. 13.1-13.3 Ecourse, students will learning. And selection and statistics related Bayes classifier, k	ayes theorem and of dicting probabilities, is, EM algorithm Thesis accuracy, Base	sics of ence in locally sed, unsupersvised
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Each question will have questions covering all the topics under a module.

The students will have to answer 5 full questions, selecting one full question from each module.

Text Books:

1. Tom M. Mitchell, Machine Learning, India Edition 2013, McGraw Hill Education.

Reference Books:

1. Trevor Hastie, Robert Tibshirani, Jerome Friedman, h The Elements of Statistical Learning, 2nd edition, springer series in statistics.

Ethem Alpaydın, Introduction to machine learning, second edition, MIT press.

Dept. Of Computer Science & Engineering Alva's Institute of Engg. & Tach............. Mijar, MOODSIDRI - 574 225