Total No. of Printed Pages:1

SUBJECT CODE NO:- E-8142
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E. (Comp.Sci. & Engg.) Examination Nov/Dec 2017
Machine Learning
(Revised)

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B i) Solve any two questions from each section
ii) Assume suitable data if necessary

Section A

Q.1 (a) Explain find – S algorithm with given example. Give its application 10

Instance	V_1	V_2	V_3	V_4	Outcome
1	a	b	b	a	+
2	b	b	b	b	+
3	a	b	b	b	+
4	a	b	a	a	-

(b) Explain – (i) Version space (ii) Inductive bias 10

Q.2 (a) What are the appropriate problem to be solved by 10
(i) Artificial Neural Network
(ii) Decision Tree Algorithm
(b) Why a multilayer network is required? Explain algorithm use to train multilayer network. 10

Q.3 (a) How to estimate difference in error between two hypothesis using error $D^{(h)}$ and error $S^{(h)}$? 10
(b) What is recurrent network and Error minimization procedure in Artificial neural network. 10

Section – B

Q.4 (a) Explain cross –over and mutation operations in genetic algorithm and state their significance. 10
(b) Explain following terms with reference to computational learning. 10
(i) Training error
(ii) True error
(iii) Sample complexity

Q.5 (a) What is instance – based learning. Explain K-nearest neighbor algorithm. 10
(b) Describe the Genetic algorithm steps using population, Fitness function, other necessary data and hypothesis it returns. 10

Q.6 (a) Explain Bayesian Belief nets with example. Give its application 10
(b) Describe in brief: 10
(i) EM Algorithm
(ii) Lazy and Eager learning.

2017