Exam. Code: 0937
Sub. Code: 6685

2123

B.E. (Electrical and Electronics Engineering)
Seventh Semester
OE-EE-704: Artificial Intelligence

Time allowed: 3 Hours

Max. Marks: 50

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Answer the following:-

a) Define Artificial Intelligence.

b) List two levels of knowledge representation.

c) List the significance of Alpha Beta pruning.

d) What is Bayes theorem?

e) What are the components of an expert system? (5x2)

UNIT - I

II. a) Write the algorithm far steepest ascent hill climbing.

b) State the characteristics of an AI problem. (2x5)

III. Explain in detail the forward and backward chaining with algorithms.

IV. How are frames used in Knowledge representation? Give the structure of the general frame. (2x5)

UNIT - II

V. Construct a Bayesian network and define the necessary CPTs for given case. A bag has three biased coins A, B and C with probability of coming heads as 20%, 40% and 60% respectively. Randomly, one coin is taken from the bag (with equal likelihood of drawing each of three coins) and then coin is flipped three times to generate outcomes X1, X2 and X3. (10)

VI. a) Write the resolution procedure for prepositional logic.

b) What is continuous and multi agent planning? (2x5)

VII. a) What are the characteristics of expert systems?

b) Explain with neat diagram the architecture of expert system and mention its features and applications. (2x5)

x-x-x