**SEAT No. :**

**P7483**

[Total No. of Pages : 2

**[5860]-416**

**S.Y.M.B.A.**

**SC-BA-06 : ARTIFICIAL INTELLIGENCE IN**
**BUSINESS APPLICATIONS**
**(404BA)**
**(2019 Pattern) (Semester-IV)**

*Time : 2½ Hours]*　　　　　　　　　　　　　　　　　　　　*[Max. Marks : 50*

*Instructions to the candidates:*

*1)　All questions are compulsory.*

*2)　Neat diagrams must be drawn wherever necessary.*

*3)　Assume suitable data, if necessary.*

*Q1)* Answer any 5 out of 8 :　　　　　　　　　　　　　　**[2 Marks each]**

　a)　Define Artificial intelligence?

　b)　Define first order logic.

　c)　State Breadth-First search.

　d)　Define machine learning.

　e)　Define Hierarchical clustering.

　f)　Define Artificial Neural Networks.

　g)　Define terms 'Fact' and 'Rule'.

　h)　State uniform-cost search.

*Q2)* Answer any 2 out of 3 :　　　　　　　　　　　　　　　　　**[10]**

　a)　Distinguish between forward and backward chaining.

　b)　What is the common way to represent and parse grammars for natural language processing?

　c)　Explain state space approach for solving any AI problem.

*Q3)* Answer 3 (a) or 3 (b) :　　　　　　　　　　　　　　　　　　**[10]**

　a)　Discuss the role of reasoning in AI. How prediate logic is used in AI to represent knowledge?

　b)　Explain A * searching technique in detail with example. Discuss conditions for the optimality of this technique.

*P.T.O.*

*Q4)* Answer 4 (a) or 4 (b)                                                      **[10]**

   a)   What are steps involved in natural language processing (NLP) of an English sentence? Explain with an example sentence.

   b)   Give an example of a problem for which breadth first search would work better than depth-first search.

*Q5)* Answer 5(a) or 5(b) :                                                      **[10]**

   a)   Write in detail about any two informed search strategies.

   b)   Distinguish ambiguity and disambiguation in AI.

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