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B. Tech.

(SEM. VII) THEORY EXAMINATION 2011-12

ARTIFICIAL INTELLIGENCE IN MANUFACTURING

Time : 3 Hours   *Total Marks : 100*

Note :– Answer **all** the questions.

1. Answer any **two** from the following :   **(10×2=20)**

    (a) Explain the term Artificial Intelligence and list the application areas of AI.

    (b) With a block diagram explain the components of Expert System.

    (c) Discuss the attributes of intelligent behaviour.

2. Answer any **two** from the following :   **(10×2=20)**

    (a) Define Expert System and explain the structure and characteristics of Expert System.

    (b) With an example explain the Goal-Driven-Reasoning in Expert System.

    (c) Explain the different methods of acquiring the knowledge.

3. Answer any **two** from the following : (10×2=20)

    (a) What do you mean by Knowledge Representation ? Explain the different methods of representation.

    (b) With a block diagram explain the components of Expert System Shell.

    (c) Explain the role of expert system in computer aided Process Planning.

4. Answer any **two** from the following : (10×2=20)

    (a) What are the factors to be considered in Process Control ? Explain.

    (b) Explain the method of using Expert System in Management Information System.

    (c) Explain an Expert System for generating process plans.

5. Write short notes on any **four** of the following : (5×4=20)

    (a) Working memory

    (b) Explanations

    (c) Fault diagnosis

    (d) Expert system languages

    (e) Failure analysis.