**Tutorial 4 : Expert system characteristics and Development Life Cycle**

**1. Analysis Expert system characters ( 5 Points) .**

1. High-level expertise.

The most useful characteristic of an expert system.

2. Good Reliability.

The system must be reliable and not prone to crashesν because it will not be used

3. Flexibility.

Because of the large amount of knowledge that anν expert system may have, it is important to have an efficient mechanism for modifying the knowledge base.

4. Makes Mistakes

Expert systems can make mistakes

5. Thrives on Reasonable Complexity

The problem should be reasonably complex, not too easy or too difficult.

**2. Explain Expert system development Life cycle ( 5 Points).**

1. Assessment

Determine feasibilityν & justification of the problem

Define overall goal and scope of the project

Resources requirement

Sources of knowledge

2. Knowledge Acquisition

Acquire the knowledge of the problem

Involves meetings with expert

Bottleneck in ES development

3. Design

Selecting knowledge representations approach and problem solving strategies

Defined overall structure and organization of systemν knowledge

Selection of software tools

4. Documentation

A documentν for the user and developers of the system such as:

User manual

diagrams

Knowledge dictionary

5. Maintenance

Refined and update system knowledge to meet current needs