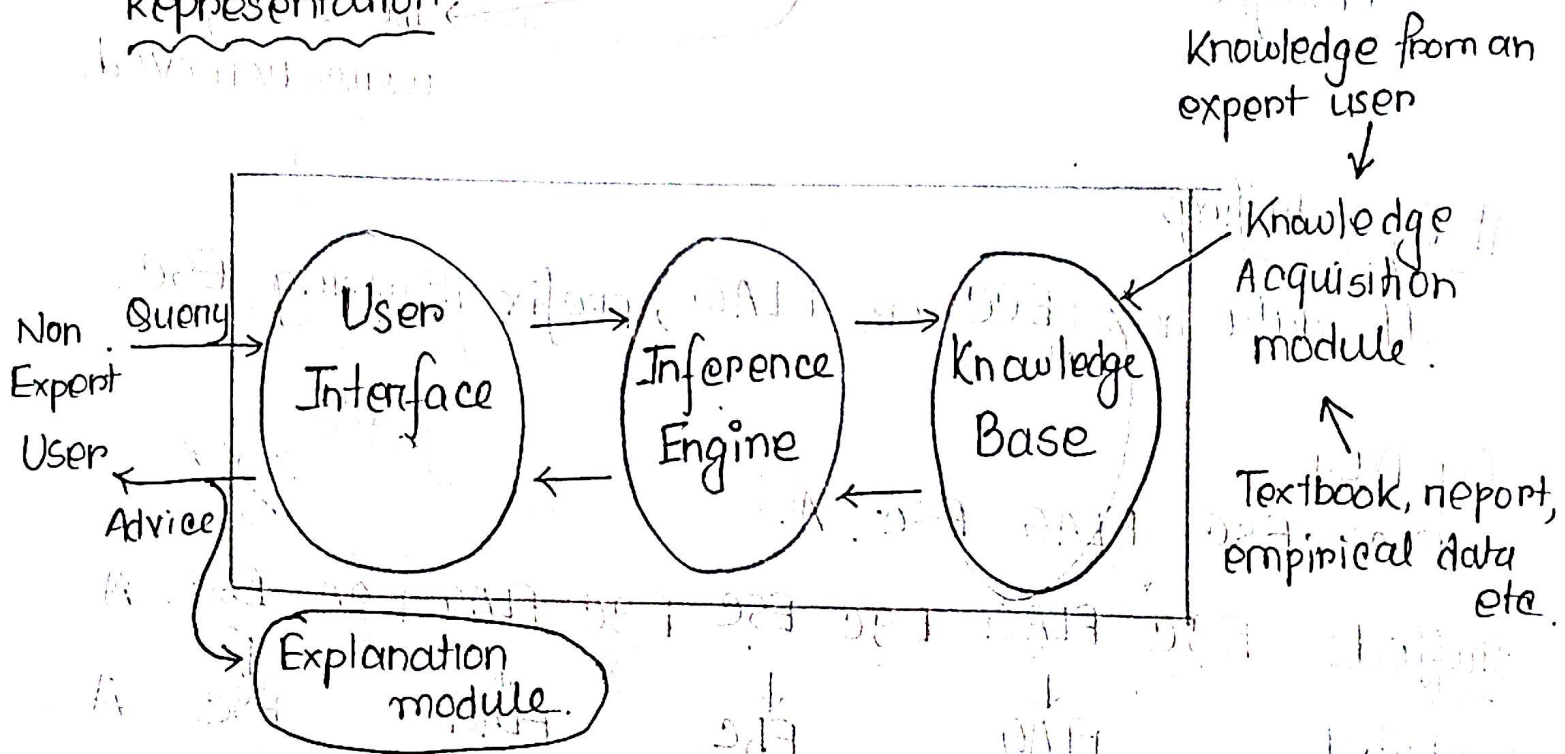


Segment - 6

① What is an expert system?

Ans: Expert system is a crucial subset of artificial intelligence (AI) that simulates the decision making ability of a human expert. Eg: Financial Expert System.

② Architecture/Characteristics/Components/Expert System Shell/Representation.



What is an expert system shell?

Ans: An expert system shell in AI refers to the software / framework that provides the infrastructure for building and running expert systems.

4) Why are expert systems important?

Ans: (i) Preserving expertise

(ii) Improving decision-making

(iii) Saving time and money.

(iv) Accessibility.

5) Reasoning strategies used by inference engine

Ans: There are two fundamental methods, namely:

(i) Forward Chaining

(ii) Backward chaining

6) Types of expert system in AI

Ans: (i) Rule-based expert system.

(ii) Frame-based expert system.

↳ It organizes knowledge using frames (similar to 'objects' in programming)

- (iii) Fuzzy-logic systems
- (iv) Neural network-based expert system.
- (v) Neuro-fuzzy expert systems.

[7] Application areas of expert systems.

Ans: (i) Medical diagnosis.

Eg: MYCIN (identified bacterial infections and prescribed anti-biotics).

(ii) Financial Services.

(iii) Technical Support.

(iv) Manufacturing.

[8] Benefits and limitations of expert system.

Ans: The benefits are:-

(i) Consistency.

(ii) Availability.

(iii) Cost-effectiveness.

(iv) Knowledge-preservation.

The limitations are:

(i) Knowledge-limitation

(ii) Lack of flexibility.

(iii) Maintainence.