(3 Hours)   **Total Marks:80**

N.B.   : (1) Question No. 1 is compulsory.
          (2) Attempt any three questions out of the remaining five.
          (3) Assume suitable data if necessary.
          (4) Figures to the right indicate full marks.

1.   (a)   List down examples of AI in healthcare sector?   **5**
     (b)   Explain what you understand by Electronic Health Record (EHR) and its   **5**
           benefits?
     (c)   Discuss the challenges of AI in healthcare?   **5**
     (d)   Explain the need of NLP in healthcare?   **5**

2.   (a)   Explain Evolutionary Algorithms and the general pseudo-code for an   **10**
           evolutionary algorithm.
     (b)   What is an Ensemble? Explain its techniques in detail.   **10**

3.   (a)   What is Association Rule Mining? Explain FP-Growth algorithm in detail.   **10**
     (b)   What are hyper parameters? Differentiate hyper parameters and model   **10**
           parameters.

4.   (a)   Explain various evaluation metrics used in healthcare.   **10**
     (b)   Explain in detail the key components of an NLP model.   **10**

5.   (a)   Explain Genetic Algorithm. How GA can be used for genetic research?   **10**
     (b)   Explain dimension reduction techniques in detail.   **10**

6.   Write a short note on   **20**
     (a)   Ethics while applying AI in healthcare domain.
     (b)   Connected Medicines

_____

X525Y37563DX525Y37563DX525Y37563DX525Y37563D