K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Supplementary Exam (Feb/Mar 2024)

Program: B.Tech	Scheme: II
Examination: LY	Semester: VII
Course Code: HAIMLC701	Course Name: AI&ML in Healthcare
Date of Exam: 23-02-2024	Duration: 2.5 Hours / Max. Marks: 60

Instructions:
(1)All questions are compulsory.
(2)Draw neat diagrams wherever applicable.
(3)Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	**Solve any six questions out of eight.**	**12**		
i)	Explain the potential of ML in clinical practice?	2	1	U
ii)	Describe tasks in Data mining.	2	1	U
iii)	Enlist Hyper parameters for different Machine learning models.	2	2	R
iv)	Differentiate between NLP and clinical NLP in terms of working?	2	2	U
v)	Explain the necessity of Continuous monitoring?	2	3	U
vi)	Explain the importance of personalized medicine in healthcare?	2	3	U
vii)	Explain the Cognitive modeling approach and the ways to determine how humans think.	2	4	U
viii)	Explain the advantages of conversational AI?	2	5	U
Q.2	**Solve any four questions out of six.**	**16**		
i)	Explain digital therapeutics and its key principles.	4	1	U
ii)	Explain the advantages and disadvantages of applying dimensionality reduction.	4	2	U
iii)	Explain Drug discovery in Machine learning in healthcare use cases.	4	3	U
iv)	Explain the NLP challenges & tasks in medicine.	4	4	U

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v)	Explain Guided Search for Disease Information	4	5	
vi)	Explain the concept of evidence hierarchy	4	6	U
Q.3	**Solve any two questions out of three.**	**16**		
i)	Explain working of multi classifier decision fusion and analyze it for Detection of Skin cancer as Malignant or Benign.	8	2	AP
ii)	Explain Dependency parsing with diagram	8	4	U
iii)	Explain AI based Personal Health Record System.	8	5	U
Q.4	**Solve any two questions out of three.**	**16**		
i)	Explain Genetic algorithm with the help of example.	8	1	U
ii)	Which hyperparameter tuning search method is better? Justify it with the detail explanation.	8	3	Ap
iii)	Explain PICO framework and illustrates ways in which problems, interventions, comparisons and outcomes vary depending on the type (domain) of your question.	8	6	U

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