University of Mumbai
Examinations Summer 2022
(Revised Set May 2022)

Time: 2 Hr 30 Mins   Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	VoLTE Stands for
Option A:	Voice over Long Term Evolution
Option B:	Voice Over Local Telecommunication Equipment
Option C:	Video Over Long Term Evolution
Option D:	Volume Over Long Term Evolution
2.	UTRAN stands for
Option A:	Universal Transmission Radio Networks
Option B:	Universal Terrestrial Radio Access Network
Option C:	Unified Transmission Area Network
Option D:	Universal Time Radio Access Network
3.	Which of the following Stores the User Related Data That is also relevant to GSM Mobile Systems?
Option A:	VLR
Option B:	HMR
Option C:	GMR
Option D:	SIM
4.	Generic Routing Encapsulation allows the encapsulation of packet of One protocol suite into payload portion of a packet of another Protocol suite is nothing but
Option A:	GRE
Option B:	IP Tunneling
Option C:	Protocol Synchronization
Option D:	Minimal Encapsulation
5.	Two or more antennas can also be combined to Improove the reception by counteracting the negative effects of multi path propagation, these antennas are also termed as
Option A:	multi element antenna Array
Option B:	Smart Antenna
Option C:	Sectored antenna
Option D:	Isotropic Radiator
6.	What is an Access Point
Option A:	An entity that provides access to LLC layer
Option B:	An entity that provides access to MAC layer
Option C:	An entity that provides access to the Destination System
Option D:	An entity that provides access to Basic Service Set

Option B:	John McCarthy
Option C:	Russel Stuart
Option D:	Andrew Ng

Q2. (20 Marks)	Solve any Four out of Six 5 marks each
A	Explain WUMPUS world environment giving its PEAS description. Explain how percept sequence is generated.
B	Write a short note on conditional probability and its role in AI.
C	What are the limitations of Hill Climbing Search and how that can be overcome?
D	Explain the concept of Supervised Learning.
E	Convert the following statements into predicate logic 1. All kings are persons. 2. Every city in Maharashtra has temple. 3. An Apple a day keeps doctor away. 4. Anything anyone eats and is not killed by is food. 5. Square of 3 is 9.
F	Explain the steps involved in Natural Language Processing.

Q3. (20 Marks)	Solve any Two Questions out of Three 10 marks each
A	Consider the following facts: 1. Steve only likes easy courses. 2. Science courses are hard. 3. All the courses in the basket_weaving department are easy. 4. BK301 is a basket_weaving course. Find by resolution that "What course would steve like?"
B	List down all agent types. Explain each with block diagram.
C	Apply A* algorithm on the following graph. Heuristic values are h(S) = 15, h(A) = 14, h(D) = 12, h(B) = 10, h(E) = 10, h(C) = 8 , h(F) = 10 , h(G) = 0. S is the start node and G is the goal node.

Q4. (20 Marks)		
A	Solve any Two	5 marks each
i.	Give types of parsing and generate the parse tree for a sentence *"The cat ate the fish"*.	
ii.	Explain Simulated Annealing with suitable example.	
iii.	Differentiate between Informed search and uninformed search Algorithms.	
B	Solve any One	10 marks each