

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2021

Course: AI & ML Applications in Healthcare
Program: B. Sc. (Food, Nutrition and Dietetics)
Course Code: HSCC2012

Semester: IV
Time: 03 hrs.
Max. Marks: 100

- Instructions:**
1. Use A4 Size loose sheets with Black Gel pen for Section B & C . Write you're SAPID & Answer No. on Top of A4 Sheet.
 2. Section A answer need to write by Keyboard, and confirm that your answer is saved and status of question is dark green.
 3. Use both Mobile & Laptop for giving smooth online exam. Go to www.upes.codetantra.com only to register.
 4. In Section B & C, keep showing your question in laptop, and use "Scan question" option in Mobile to upload written answer. After scan & uploading answer by mobile, press "Sync" at laptop and confirm your answer uploaded successfully.
 5. If your answer is in multiple page or containing multiple parts i.e. (a), (b) & (c) etc., use "next page option" during scan by mobile and confirm in "Preview" that whole multiple page answer upload in one shot. Press "Sync" button in laptop and confirm preview in laptop also, that your answer saved in Codetantra Database successfully, then only move to next question.
 6. Upload question answer simultaneously, as you complete writing each answer to avoid any technical glitches.
 7. Don't wait for last minutes to upload all answers at once, this practice can put you in danger due to bandwidth/internet issue.

SECTION A (Choose the best option/fill the blank/True or False)

S. No.	Question	Marks	CO
Q1	The use of artificial intelligence is incorporated into healthcare to help providers _____ (a) see more patients in an efficient manner by using overlap systems, (b) make informed decisions, (c) make the best decisions for their patients, (d) bypass the attempt to stay current in practice,	1.5	CO1
Q2	Artificial Intelligence is about _____? (a) Playing a game on Computer (b) Making a machine Intelligent (c) Programming on Machine with your Own Intelligence (d) Putting your intelligence in Machine.	1.5	CO1
Q3	Which language is most preferred in AI & ML applications: (a) Java (b) Perl (c) Python (d) LISP.	1.5	CO1
Q4	Which AI technique enables the computers to understand the associations and relationships between objects and events? (a) Heuristic Processing (b) Cognitive Science (c) Relative Symbolism (d) Pattern Matching	1.5	CO1
Q5	Ways to achieve AI in real-life are _____ (a) Machine Learning (b) Deep Learning (c) Both a & b (d) None of the above	1.5	CO1
Q6	The main tasks of an AI agent are _____: (a) Input and Output (b) Moment and Humanly Actions (c) Perceiving, thinking, and acting on the environment (d) None of the above	1.5	CO1
Q7	An expert system mainly consists of _____ components: (a) User Interface (b) Interface Engine (c) Knowledge Base (d) All Mentioned	1.5	CO1
Q8	An expert system is a computer program that is designed to solve complex problems and to provide decision-making ability like a human expert. (True/False)	1.5	CO1
Q9	With the help of a _____, the expert system interacts with the user, take queries as an input in a readable format, and passes it to the interface engine. (Fill the blank)	1.5	CO1

Q10	The inference engine is known as the _____ of the expert system: (a) Heart (b) Brain (c) Pumping Station (d) Eyes	1.5	CO1
Q11	_____ are a set of values of qualitative or quantitative variables about one or more persons or objects (Fill the blank:)	1.5	CO2
Q12	Types of Data are: (a) Structured (b) Semi-Structured (c) Unstructured (d) All mentioned	1.5	CO2
Q13	A _____ is an organized collection of data, generally stored and accessed electronically from a computer system. Where databases are more complex they are often developed using formal design & modelling techniques. (Fill the blank:)	1.5	CO2
Q14	The database management system (DBMS) is the _____, that interacts with end users, applications, and the database itself to capture and analyze the data. (Fill the Blank:)	1.5	CO2
Q15	Computer scientists may classify DBMS according to the database models that they support. Relational database became dominant since 1980s. These model data as rows and columns in a series of tables, and the vast majority use SQL for writing and querying data. _____, is world most leading & dominating RDBMS. (Fill the Blanks:)	1.5	CO2
Q16	_____ is a high-performance language for technical computing. It integrates computation, visualization, and programming in an easy-to-use environment where problems and solutions are expressed in familiar mathematical notation. (Fill the blank:)	1.5	CO2
Q17	_____ Analytics, uses many techniques from data mining, statistics, modeling, machine learning, and artificial intelligence to analyze current data to make predictions about future: (a) Descriptive (b) Predictive (c) Prescriptive (d) Futuristic	1.5	CO2
Q18	What is Machine learning? (a) The autonomous acquisition of knowledge through the use of computer programs (b) The autonomous acquisition of knowledge through the use of manual programs (c) The selective acquisition of knowledge through the use of computer programs (d) The selective acquisition of knowledge through the use of manual programs	1.5	CO2
Q19	Different learning methods does not include? (a) Memorization (b) Analogy (c) Deduction (d) Introduction	1.5	CO2
Q20	What is the primary interactive method of communication used by humans? (a) Reading (b) Writing (c) Speaking (d) All Mentioned	1.5	CO2

SECTION B (Total 20 Marks, 5 marks each), Answer limit 200 words

S. No.		Marks	CO
Q1	Discuss the role of Data Science in AI & ML.	5	CO1
Q2	Co-relate Deep Learning, Machine Learning & Artificial Intelligence..	5	CO1
Q3	“Mobile Application & Web Applications with the help of Cloud technology, today having reach and affordable to startups, entrepreneurs and young professionals”. Give one examples of such a Mobile healthcare application, which can be taken to justify mentioned statement.	5	CO3
Q4.	Explain how technology giants, like IBM, Microsoft, Google, Dell and Oracle etc. find huge potential in AI & ML use in healthcare and their contribution.	5	CO3

SECTION C (Total 30 Marks, 15 marks each)

S. No.		Marks	CO
Q1	<p>Case Study 1</p> <p>As a young professional, after completing your graduation in Food, Nutrition and Dietetics, Suppose you choose self-practice. Please explain in details with reason:</p> <ol style="list-style-type: none"> 1. As a sole practitioner, which type of AI & ML applications would you like to use at your clinic. (5 Marks) 2. How your record management system with the help of AI & ML application can help in your profession? (5 Marks) 3. Explain how these AI & ML applications can help you to achieve tremendous customer base and why customer will prefer you? (5 marks) 	15	CO4
Q2	<p>Case Study 2</p> <p>As a young professional, after completing your graduation in Food, Nutrition and Dietetics, Suppose you choose working with an organization. Please explain in details with reason:</p> <ol style="list-style-type: none"> 1. As a technology savvy and pro-innovative employee at your great healthcare organization, which type of AI & ML applications, would you like to suggest to your organization to use to gain market lead and competitive edge. (10 Marks) 2. As an industry expert, how you can help AI & ML domain expert, during making journey of AI & ML dedicated Applications. (5 Marks) 3. What challenges, you may face during new innovation of AI & ML applications or devices. Which type of approach and steps may take you to further milestones? (5Marks) 	15	CO4

SECTION D (Total 20 Marks, 10 marks each), Answer limit 500 words

S. No.		Marks	CO
Q1	<p>“AI & ML application today become essential part of Healthcare industry”, Justify this statement by five major domains in healthcare, where AI & ML applications are used and done tremendous evolution.</p>	10	CO2
Q2	<p>What do you understand by Mobile Applications? Mention by at least two examples, how Mobile applications based on AI & ML are helpful in Food, Nutrition and Dietetics domain.</p>	10	CO2