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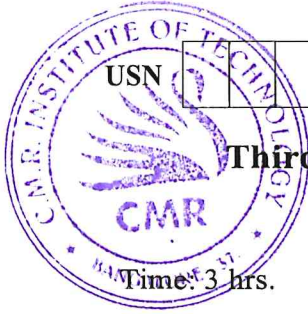**Third Semester MBA Degree Examination, July/August 2022**
Emerging Exponential Technologies

Time: 3 hrs.

Max. Marks:100

Note: 1. *Answer any FOUR full questions from Q.No.1 to Q.No.7.*
2. *Question No. 8 is compulsory.*

1	a.	Define Artificial Intelligence and give examples.	(03 Marks)
	b.	What are the Pros and Cons of Human Computer Interaction Technology?	(07 Marks)
	c.	Explain the Emerging Technologies in IR 4.0 and how it could shape the future of your business.	(10 Marks)
2	a.	Define Metadata.	(03 Marks)
	b.	What are the different types of Artificial Intelligence? Briefly explain each of them.	(07 Marks)
	c.	Explain the various steps in Data Value Chain.	(10 Marks)
3	a.	Define Data Science.	(03 Marks)
	b.	Discuss various types of data in Data Science and give at least one example for each types.	(07 Marks)
	c.	Briefly describe the applications of Artificial Intelligence in the field of Health and Education.	(10 Marks)
4	a.	What are the main challenges of an IOT?	(03 Marks)
	b.	Explain the difference between AR, VR and MR with examples.	(07 Marks)
	c.	What are the main parts of IOT system? Give examples of the impact of IOT on our lives.	(10 Marks)
5	a.	What are the application areas of Augmented reality?	(03 Marks)
	b.	Explain IOT based Smart home. What are the security concerns related to IOT?	(07 Marks)
	c.	What is the Impact of VR on Educational learning rather than games?	(10 Marks)
6	a.	What is Additive Manufacturing?	(03 Marks)
	b.	What are the importance of Ethics in Emerging Technologies?	(07 Marks)
	c.	What is Block Chain Technology? Briefly explain how it works.	(10 Marks)
7	a.	What is Digital Privacy?	(03 Marks)
	b.	Write down some risk in emerging technologies like driverless cars, drones and IOT.	(07 Marks)
	c.	Explain some of the cyber security measures taken to prevent cybercrimes.	(10 Marks)

8   CASE STUDY: (compulsory)

Transforming Agriculture with the Power of Data

Global robotics company FJD wants to transform traditional farming with the power of data. It has developed a range of smart machines to boost production and sustainability. For years, data has helped farmers decide when to plant, when to harvest, what types of crops to grow, how much fertilizer and chemicals to use and how often to irrigate. Even so, farming has remained a largely inexact pursuit. It's also a tough physical job for most of the farmers who works in the fields with tools and machinery.

FJD specializes in Artificial Intelligence (AI), advanced manufacturing and new energy. It is now using data, modeling and automation to augment the decision making and work farmers do. Utilizing data-powered smart vehicles also helps in risk management. Growing crops like rice requires farmers to follow strict schedules. Doing otherwise, say because of a labour shortage, can spell disaster for yields.

Smart machines can also take on some tasks that can be hazardous for people for example pesticides and herbicides can be sprayed automatically with more precision, reducing the amount of chemical needed.

The efficient and secured IOT platform, autonomous vehicles and machines with sensors collect, analyse and act on data. The farm's accurate data can be easily retrieved and used repeatedly. All the farmers need to do is download the application and Map to understand the farm.

It improves the lives of people around the world with technology as the farmers were struggling out in the harsh conditions of the field, so that the farmers can have better idea about the crops to be grown and get best results. With the smart technology, the productivity and working conditions in the agricultural sector can be improved.

Questions:

a. What are the various issues and challenges farmers and company has to face in the above situation.   (10 Marks)
b. What are the sources and types of data required to analyze the data in the field of agriculture?   (10 Marks)

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