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IV Semester M.B.A (Day and Eve.) Degree Examination, Sept./Oct.- 2022

MANAGEMENT

Emerging Technologies and Future Skills For Businessleaders

(CBCS Scheme 2019-2020 Onwards)

Paper : 4.7.3

Time : 3 Hours

Maximum Marks : 70

SECTION - A

Answer any five questions, each carries 5 marks.

(5×5=25)

1. Explain the importance of Neural Network.
2. What is Natural Language Processing ? Write its importance.
3. What are the components of a Cloud Computing? Explain
4. What are the advantages of 3D Printing?
5. What is a Robot Control System?
6. Explain the impatience of Block Chain Technology
7. What are Cyber Security Breaches ? Explain.

SECTION - B

Answer any three questions, each carries 10 marks.

(3×10=30)

8. Explain the types and process of Machine Learning
9. Differentiate among Public Cloud, Private Cloud and Hybrid Cloud.
10. Differentiate Between Additive and Conventional Manufacturing processes.
11. Discuss the applications of CryptoCurrencies and Blockchain technology.

[P.T.O.]



SECTION - C

12. Compulsory Case Study:

(1×15=15)

Microsoft — Machine learning for tumour detection and genome research

Microsoft's Project InnerEye developed machine learning techniques for the automatic delineation of tumours as well as healthy anatomy in 3D radiological images. This technology helps to enable fast radiotherapy planning and precise surgery planning and navigation. Project InnerEye builds upon many years of research in computer vision and machine learning. The software learned how to mark organs and tumours up by training on a robust data set of images for patients that had been seen by experienced consultants.

The current process of marking organs and tumours on radiological images is done by medical practitioners and is very time consuming and expensive. Further, the process is a bottleneck to treatment — the tumour and healthy tissues must be delineated before treatment can begin. The InnerEye technology performs this task much more quickly than when done by hand by clinicians, reducing burdens on personnel and speeding up treatment.

The technology, however, does not replace the expertise of medical practitioners; it is designed to assist them and reduce the time needed for the task. The delineation provided by the technology is designed to be readily refined and adjusted by expert clinicians until completely satisfied with the results. Doctors maintain full control of the results at all times.

Further, Microsoft has partnered with St. Jude Children's Research Hospital and DNANexus to develop a genomics platform that provides a database to enable researchers to identify how genomes differ. Researchers can inspect the data by disease, publication, gene mutation and also upload and test their own data using the bioinformatics tools. Researchers can progress their projects much faster and more cost-efficiently because the data and analysis run in the cloud, powered by rapid computing capabilities that do not require downloading anything.

- a) What is the role of Machine Learning and AI techniques in the above case?
- b) What are the data security and privacy issues associated with the case?
- c) Explain the process of Automation involved in the case.
- d) What improvements are expected from the use of Machine Learning and AI in project InnerEye from the traditional way.