C16-CM–**505**

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BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

DCME - FIFTH SEMESTER EXAMINATION

ADVANCES IN COMPUTER TECHNOLOGY

Time : 3 hours]   [*Total Marks* : 80

PART—A   3×10=30

Instructions :   (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1.   List any six types of UML diagrams.

2.   What are the steps to draw the use case diagram in UML?

3.   Draw any three structural things in UML.

4.   List any three characteristics of big data.

5.   Classify the structure of big data.

6.   List any three applications of virtual reality.

7.   Differentiate traditional programming with machine learning.

8.   Write about artificial neural networks.

9.   List different types of hackers.

10.   What is penetration testing?

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. List and explain different types of interaction diagrams with examples. 10

12. *(a)* What are the goals of UML? 4

(b) Explain about UML building blocks. 6

13. Explain various tools used in big data. 10

14. Explain immersive virtual reality. Write its characteristics. 10

15. Explain the following : 2½+2½+2½+2½=10

(a) Mixed reality

(b) Teleexistence

(c) Telepresence

(d) HCI

16. *(a)* Explain about genetic algorithms. 5

(b) Explain about decision tree learning with an example. 5

17. *(a)* Write about cyber security principles. 5

(b) Explain the roles and responsibilities of ethical hackers. 5

18. *(a)* What is ethical hacking? Explain different phases of ethical hacking. 5

(b) Compare information security and cyber security. 5

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