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# с16-см-505

## 6629

#### **BOARD DIPLOMA EXAMINATION, (C-16)**

#### AUGUST/SEPTEMBER—2021

#### **DCME - FIFTH SEMESTER EXAMINATION**

ADVANCES IN COMPUTER TECHNOLOGY

Time: 3 hours ]

### PART—A

[ Total Marks: 80

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.

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- **8.** Write about artificial neural networks.
- **9.** List different types of hackers.
- **10.** What is penetration testing?

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### PART—B

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<b>Instructions :</b> (1) Answer <i>any</i> <b>five</b> questions.		
(2) Each question carries <b>ten</b> marks.		
	<ul><li>(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.</li></ul>	
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 : $2\frac{1}{2}+2\frac{1}{2}+2\frac{1}{2}+2\frac{1}{2}+2\frac{1}{2}=$	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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