Exam.Code:0915
Sub. Code: 33419

2076

B.E. (Computer Science and Engineering)

Third Semester

VAC-101: Latest Trends and Technologies in Computer Science

Time allowed: 3 Hours Max. Marks: 50

NOTE: Attempt <u>five</u> questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer <u>*any ten*</u> of the following:-

a) What are the main components of a mobile network?

b) Mention one advantage of 6G over 5G.

c) Define IoT platform with example.

d) What are actuators in IoT?

e) Define Virtual Reality and mention its hardware requirements.

f) What are "three illusions" in VR?

g) Define hypervisor and its role in cloud virtualization.

h) Differentiate between Private and Public cloud.

i) What is Deep Learning?

j) Mention two key tools used for developing AI applications.

k) Define information security.

l) What is a smart contract? (10x1)

UNIT - I

II. Describe the architecture and working of modern telecommunication networks. Discuss basic network performance metrics. (10)

III. Explain IoT protocols and real-time examples of IoT applications. What are the major challenges in IoT implementation? (10)

IV. Discuss AR Core-based AR application development process. Explain the hardware and software requirements. (10)

P.T.O.

UNIT - II

V. Explain the service models of cloud computing (IaaS, PaaS, SaaS) with examples. Discuss the benefits and challenges of cloud adoption. (10)

VI. Explain the process of building a simple machine learning model. Discuss major applications of ML in data-driven decision systems. (10)

VII. Define Cybersecurity. Explain types of cybercrimes and describe how blockchain enhances digital trust. (10)

x-x-x