2074

B.E. (Electrical and Electronics Engineering)

Fifth Semester

PC-EE-504: Internet of Things

Time allowed: 3 Hours   Max. Marks: 50

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

x-x-x

I.   Attempt the following:-

   a) Define the Internet of Things (IoT) and its importance in modern technology

   b) What roles do major players and industry standards play in IoT?

   c) Explain the concept of Node Structure in IoT architecture.

   d) Define ZigBee and its application in IoT.

   e) Describe the concept of Layer/Stack architecture in IoT networking.   (5x2)

UNIT - I

II.   Explain the various interdisciplinary challenges that IoT faces and how they impact the deployment of IoT solutions.   (10)

III. Discuss IoT's various applications and societal benefits, highlighting how these applications are transforming industry practices.   (10)

IV.   Describe the role of various IoT standards and how they influence the development and interoperability of IoT systems.   (10)

UNIT -II

V.   Discuss the impact of signal processing and analytics on power and energy savings within IoT systems, including a simple case study.   (10)

VI.   Explain the process and challenges of IoT fabrication, including the role of embedded electronics and network requirements.   (10)

VII. Describe a hands-on IoT project that utilizes Raspberry Pi and Android software, outlining the objectives and expected outcomes of the project.   (10)

x-x-x