Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: Apr.2024
Faculty: Science and Technology

Semester: IV

Program: B.Sc.Com05 **SET: B**
Program (Specific): B.Sc. Computer Science
Course Type: CC
Class: S.Y.B.Sc. Computer Science
Course Type: CC
Max. Marks: 35
Name of the Course: Wireless Communication & Internet of Things
Course Code: 23-ELC-242
Time: 2Hr
Paper: II

Instructions to the candidate:

1) ***There are 4 sections in the question paper. Write each section on separate page.***
2) ***All Sections are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Draw a well labelled diagram wherever necessary.***

SECTION: A

Q1) Define or Explain **5**

I) **Define reuse distance in cellular technology.**
II) **Write frequency range of 5G cellular network.**
III) **Write full form of WAP.**
IV) **Write full form of BSC.**
V) **Define Macrocell with reference to cellular technology.**

Q2) Very short answer questions (Attempt any 4/6) **4**

I) **What is adjacent channel interference?**
II) **State two features of 4G cellular network.**
III) **State the function of Visitor Location Register (VLR).**
IV) **Name any two public network used in telephonic communication.**
V) **Write frequency spectrum used in ZigBee communication.**
VI) **State the function of ZigBee coordinator.**

SECTION: B

Q3) Short answer questions (Attempt any 2/4) **8**

I) **Discuss Scatternet of Bluetooth technology.**
II) **Explain mobile handset with a neat block diagram.**
III) **Describe PaaS cloud model in IOT.**
IV) **Explain GPS receiver with a neat diagram.**

SECTION: C

Q4) Short answer questions (Attempt any 4/6) **8**

I) **Describe Edge computing layer from IOT architecture.**
II) **Explain working of active RFID tag.**
III) **Draw core model of IOT.**
IV) **Explain Piconet in Bluetooth architecture.**
V) **State two features of private cloud.**
VI) **State two features of LPWAN.**

SECTION: D

Q5) Long answer type Questions **10**

Attempt any two of the following (2/4)

I) **Discuss GPS with a neat block diagram.**
II) **Describe home automation using IOT.**
III) **Describe RFID system with a neat diagram.**
IV) **Explain handovers in GSM system.**