

M.Sc.(Physics) CBCS Pattern Semester-IV
PSCPHYT15.4 / PSCPHYT15.4 - Paper-XV - Core Elective E2.5
Applied Electronics-II

P. Pages : 2

Time : Three Hours



GUG/W/23/11421

Max. Marks : 80

Notes : 1. All questions are compulsory.

Either:

1. a) Explain digital electronic communication system with block diagram. 8
- b) Discuss BPSK and DPSK digital modulation techniques. 8

OR

- e) Discuss PAM channel bandwidth for a PAM signal. 8
- f) What is output signal power effect of thermal noise? Explain the effect of thermal noise in Delta modulation. 8

Either:

2. a) Discuss different types of networks. 8
- b) Design features of communication network in TYMNET and ARPANET 8

OR

- e) Discuss frequency division multiple access (FDMA) with schematic diagram. 8
- f) Discuss carrier sense multiple access. 8

Either:

3. a) What is microprocessor? Draw schematic diagram of 8086 microprocessor. Explain its pin description. 2+4
+4
- b) Discuss different addressing modex in 8086 microprocessor. 6

OR

- e) Discuss different types of registers and their applications of 8086 microprocessor. 10
- f) Explain clock generator. 6

Either:

4. a) Discuss various types of memory devices. **8**
b) Discuss interfacing using 8255. **8**

OR

- e) Discuss hardware interrupt. **8**
f) Draw schematic diagram of PIC 8259A. Explain interfacing of PIC 8259A and I/O devices to the microprocessor. **8**
5. Attempt all questions.
- a) Write a short note on FSK. **4**
b) Discuss base and band signal receiver. **4**
c) Describe pin description for minimum mode of operation. **4**
d) Discuss address decoding. **4**
