

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

P. Pages : 1

Time : Three Hours



GUG/S/23/11421

Max. Marks : 80

Either :-

1. a) Explain channel bandwidth for PAM signal. 4
b) Explain low pass and band pass signals. 4
c) Discuss effect of thermal noise in data modulation. 8

OR

- e) Explain PCM and delta modulation and their unique feature in digital modulation. 8
f) Explain the block diagram of digital system. State sampling theorem and its applications in pulse code modulation system. 8

Either :-

2. a) What are type networks? Explain it. 8
b) Explain FDMA and TDMA used in mobile and satellite communication. 8

OR

- e) Explain the protocol for development of ARPANET, ISDN and LAN networking. 8
f) Explain the following terms. 8
i) ALOHA ii) Slotted ALOHA

Either :-

3. a) Explain the functional block diagram of 8086 with pin configuration. 8
b) Explain stack memory addressing modes. 4
c) Discuss arithmetic and logic instructions. 4

OR

- e) Explain bus buffering and latching. 8
f) Explain clock generator (8284A) with suitable diagram. 8

Either :-

4. a) Discuss memory organization with their classification how address bus and data bus selection configuration used in memory expansion. 8
b) What is UART? Elaborate your answer with functional block diagram of UART. 8

OR

- e) Explain interrupt structure and its expansion with 8259A PIC. 8
f) Discuss input and output interface. 8

5. a) Discuss quantization noise in DM. 4
b) Discuss carrier sense multiple access (CSMA). 4
c) Comments on flag structure of 8086. 4
d) Discuss 3 to 8 line decoder 74LS138. 4
