

S.Y. M.Sc. (Physics) (CBCS Pattern) Fourth Semester CBCS
PSCPHYTI15.4 - Core Elective E-2.5 - Applied Electronics-II Paper-15

P. Pages : 2

Time : Three Hours



GUG/W/18/11421

Max. Marks : 80

1. Either

- a) Explain the sampling theorem, comment natural sampling and flat top sampling in signal recovery. 8
- b) Discuss the effect of thermal noise in delta modulation. 8

OR

- e) Explain PCM and delta modulation and their unique feature in digital modulation. 8
- f) Explain mathematical interpretation of noise? What is the effect of noise in PCM and demodulation. 8

2. Either

- a) Explain the protocol used for computer networking. Also compose the network with their performance characteristic. 8
- b) Explain FDMA and TDMA used in mobile and satellite communication. 8

OR

- e) Explain the Poisson distribution protocol with CSMA. 8
- f) Explain the protocol for development of ARPNET, ISDN and LAN networking. 8

3. Either

- a) Explain internal architecture of 8086. 8
- b) Discuss Clock generator (8284A) 8

OR

- e) Explain in detail memory paging. 8
- f) Explain the classification of instruction set with their memory space occupancy. 8

4. Either

- a) Describe the pin configuration of memory used for interfacing of memory with microprocessor 8086. 8

- b) Explain interrupts and their types with interrupt processing cycle. Differentiate between soft and hard interrupts. 8

OR

- e) Explain interrupt structure and its expansion with 8259APIC. 8
- f) What is UART? Elaborate your answer with functional block diagram of UART. 8

5. Answer all the following.

- a) Explain output signal to noise ratio in DM. 4
- b) What is the difference between ARPNET and ISDN? 4
- c) Comments on flag structure of 8086. 4
- d) Explain 3 to 8 line decoder. 4
