

SECTION - C

16220(D) - 0 DEC 2016

B. Tech 7th Semester Examination

Peripheral System Design and Interfacing (NS)

EC-411(c)

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

- Note :** (i) Attempt five questions in all selecting one question each from sections A, B, C and D. Section E is compulsory.
- (ii) All Parts of a question should be answered at one place.
- (iii) Answers should be brief and to the point and be supplemented with neat sketches.

SECTION - A

1. (a) Discuss the physical interface in context of RS-232 C. (10)
- (b) Differentiate Serial and Parallel Communication. (10)
2. (a) Describe the role of PCI bus in detail. (10)
- (b) Write a note on current loop interface. (10)

SECTION - B

3. (a) Discuss the application of VESA-VL bus in detail. (10)
- (b) Discuss the merits and demerits of GPIB bus configuration. (10)
4. With the help of an example explain difference between memories mapped I/O and Isolated I/O. (20)

5. Write a note on DMA Controller and CRT based display. (20)
6. (a) When a DMA module takes control of a bus and while it retain control of a bus, what does the processor do? (10)
- (b) Briefly explain the role of communication controllers. (10)

SECTION - D

7. Discuss the PLC scanning process. Discuss the role of on delay and off delay timers in detail. (20)
8. Write note on:
 - (i) PC based data acquisition system.
 - (ii) Microprocessor development system. (20)

SECTION - E

9. Answer the Following:
 - (i) What is the role of external buses in computer?
 - (ii) What are parallel PCI?
 - (iii) How PLC is used to control machines and processes?
 - (iv) What is the use of opto-isolator in PLC?
 - (v) Discuss the role of in-circuit emulators in microprocessor based system design.
 - (vi) What is asynchronous serial communication?
 - (vii) Explain software interrupt.
 - (viii) What is the width of memory data bus in Pentium?
 - (ix) What are the limitations of CRT based display?
 - (x) What is handshaking? (10×2=20)