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**Question Paper Code : 71455**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Fifth Semester

Electronics and Communication Engineering

EC 2304/EC 54 — MICROPROCESSORS AND MICROCONTROLLERS

(Regulation 2008)

(Common to PTEC 2304 — Microprocessors and Micro Controllers for  
B.E. (Part-Time) Fifth Semester Electronics and Communication Engineering  
Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the 16 – bit registers of 8085 microprocessor.
2. List the allowed register pairs of 8085.
3. Compare Procedure and Macro.
4. What is the purpose of segment registers in 8086?
5. What is the various programmed data transfer method?
6. Give the different types of command words used in 8259A.
7. What are the modes used in keyboard Display Interface?
8. What is synchronous data transfer?
9. Specify the single instruction, which clears the most significant bit of B register of 8051, without affecting the remaining bits.
10. Give the DJNZ instruction of Intel 8051 microcontroller.

PART B — (5 × 16 = 80 marks)

11. (a) Describe in detail with neat diagram the Pin Configuration of the 8085 Processor with its functions. (16)

Or

- (b) Explain in detail the addressing modes of 8085 with suitable examples. (16)

12. (a) Enumerate about the Architecture of 8086 Microprocessor with a block diagram and also explain its functions in detail. (16)

Or

- (b) Write a 8086 ALP to sort an array of ten bytes in ascending order. Add comments to your Program. (16)

13. (a) (i) Using model, write a program to communicate between two 8086 microprocessors using 8255. (10)  
(ii) Show the control word format of 8255 and explain how each bit is programmed. (6)

Or

- (b) With neat block diagram, explain the description and functions of 8259. (16)

14. (a) Explain in detail the interfacing of Temperature Controller using 8085 Processor. (16)

Or

- (b) Explain in detail the procedure and the block diagram involved in the Traffic Light Controller using 8085. (16)

15. (a) Describe the architecture of 8051 with neat diagram. (16)

Or

- (b) Explain in detail the various modes available for timer in 8051. (16)