Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

## Question Paper Code : 20420

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

Fourth/Fifth Semester

Electronics and Communication Engineering

EC 6504 — MICROPROCESSOR AND MICROCONTROLLER

(Common to Biomedical Engineering, Computer Science and Engineering, Medical Electronics and Information Technology)

(Regulations 2013)

(Also Common to PTEC 6504 – Microprocessor and Microcontroller for B.E. Part-Time – Fourth Semester – Electronics and Communication Engineering, Third Semester – Computer Science and Engineering – Regulation 2014)

Time : Three hours                                                                 Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   What is the need for interrupts in microprocessor operation?

2.   What are Byte and String Manipulations?

3.   Define system bus.

4.   When is co-processor used?

5.   Why is memory interfacing required?

6.   What are the differences between LED display and LCD display?

7.   How Microcontroller is different from Microprocessor?

8.   What are Addressing Modes for a Micro Controller?

9.   How to program 8051 Timers?

10.  What are the types of ADC?

PART B — (5 × 13 = 65 marks)

11. (a) For 8086 Microprocessor what are the instruction set and assembler directives?

Or

(b) Explain the various addressing modes of 8086 microprocessor.

12. (a) Distinguish between closely coupled and loosely coupled multiprocessor configurations.

Or

(b) What do you understand from system bus structure? Explain.

13. (a) How are D/A and A/D Interfaces used? Explain.

Or

(b) What are Interrupt controller and DMA controller? Explain.

14. (a) What are special function registers? Explain.

Or

(b) How input/output Pins and Ports help in a circuit of a Microcontroller?

15. (a) Write and explain. What is known as Serial Port programming?

Or

(b) What are Sensor interfacing and External memory interfacing? Explain.

PART C — (1 × 15 = 15 marks)

16. (a) How Microprocessor and Microcontrollers are different from computer based controllers?

Or

(b) How Microprocessor and Microcontroller can help to Control a Process or a Machine tool?