

G 1456

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Sixth Semester

Branch : Electronics and Communication Engineering

EC 010 605—MICROCONTROLLERS AND APPLICATIONS (EC)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. Represent the simplified internal architecture of 8051 with a neat diagram.
2. How should the following on-chip data memory locations be addressed ?
 - (a) Lower 128 bytes from 00H to 7FH.
 - (b) Upper 128 bytes from 80H to FFH.
 - (c) Special function registers located within 80H to FFH.
3. Mention the operating modes of timers in 8051 and state the reasons for having different modes.
4. What is meant by resolution in ADC ?
5. Give the features of program stack memory in PIC 18 micro-controller.

(5 × 3 = 15 marks)

Part B

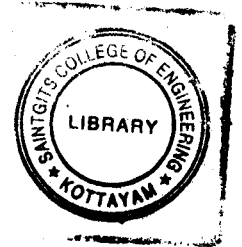
Answer all questions.

Each question carries 5 marks.

6. Compare the flags present in 8051 and 8085.
7. What is the maximum total size of data memory, which may be directly addressed by the 8752 micro-controller ? What type of address bus make it possible ? Explain.
8. Develop an ISR for low level sensitive INTI and then enable or disable it.
9. Write a note on the seven segments display interfacing.
10. State the significances of the important registers of PIC 18 micro-controller.

(5 × 5 = 25 marks)

Turn over



Part C

*Answer all questions.
Each question carries 12 marks.*

13. 1

11. Elaborate on the Harvard architecture of 8051 with necessary diagrams.

Or

14.

12. Explain the purpose of each pin of the 8051 micro-controller with a neat diagram.

13. Describe the major addressing modes of 8051 with suitable examples.

Or

15.

14. Explain conditional branching instructions with suitable examples.

15. Discuss about the external interrupts of 8051 highlighting the three SFRs.

16.

Or

16. Explain the functioning of Timer 0 and SFRs for Timer 0.

17

17. Elaborate on the interfacing of DIP switch with 8051 with a neat diagram.

Or

18. Explain how a stepper motor can be interfaced to 8051 with a neat diagram.

19. Discuss about the memory organization of PIC 18 with necessary diagrams.

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Or

20. Elaborate on the different addressing modes of PIC-18.

(5 × 12 = 60 marks)

