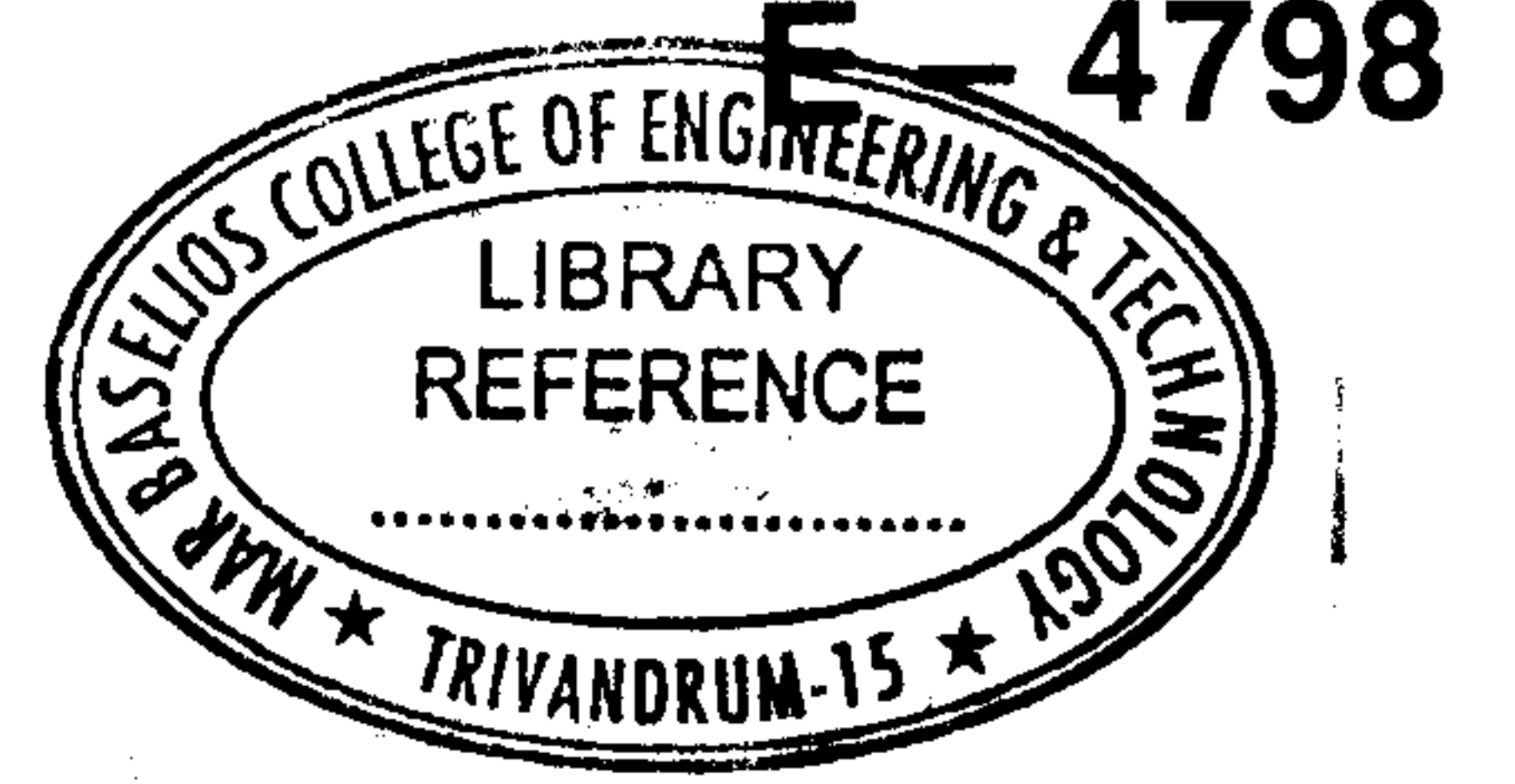




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Reg. No. : .....

Name : .....

**Fourth Semester B.Tech. Degree Examination, September 2018  
(2008 Scheme)**

**08.403 : MICROCONTROLLER - BASED DESIGN (F)**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions.

1. Give the comparison between microprocessor and microcontroller.
2. Write a short note on external memory microcontroller.
3. Draw the bit pattern of program status word of 8051 and explain the significance of each bit.
4. Draw the diagram for connecting external data memory for 8051 and explain how to access this external data memory.
5. With the help of diagram, explain the 8051 microprogrammed control unit.
6. List the functions supported by special function registers.
7. What are the steps in handling an interrupt ?
8. Explain the operation of interrupt controlled embedded system.
9. What is ARM processor ? State the features of ARM processor.
10. What do you mean by quasi-bidirectional port ? **(10×4=40 Marks)**

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**PART – B**

Answer **any one** question from **each** Module.

**Module – I**

11. Explain the memory structure of 8051 with diagram.

OR

12. Write an assembly language program to arrange the given 8 bit numbers in the ascending order.

**Module – II**

13. State and explain the various modes available for timer in 8051 with an example.

OR

14. Explain the interrupts in 8051.

**Module – III**

15. How is an ADC interfaced to 8051 ? Explain with neat diagram.

OR

16. Explain any four featured software development tools in embedded systems.

**(3×20=60 Marks)**

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