Code No: R32024 **R10** **Set No: 1**

III B.Tech. II Semester Regular/Supplementary Examinations, May/June -2014

MICRO PROCESSORS AND MICRO CONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. Draw a neat sketch and explain of architecture of 8086 microprocessor? (15M)

2. Explain the instruction set of 8086 microprocessor (5× 3M)
   a) POP b) AAA c) CMP d) CWD e) ROL

3. i) Explain algorithm implementation of (2 ×5M)
   a) IF-THEN-ELSE b) FOR loop
   ii) Write a short notes on MACRO's ? (5M)

4. Explain by drawing the architecture of 8255 PPI ? (15M)

5. Discuss in detail the block diagram of programmable interrupt controller with a neat sketch ? (15M)

6. Write short notes on special function registers of 8051 micro controller (3×5M)
   a) TCON b) SCON c) TMOD

7. a) Write an assembly language program in 8051 micro controller to find 1's and 2's complement of CCH (7.5M)
   b) Explain immediate addressing modes, direct addressing mode with examples ?(7.5M)

8. Explain interfacing of 8051 micro controller with LED's? (15M)

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Code No: R32024 **R10** **Set No: 2**

III B.Tech. II Semester Regular/Supplementary Examinations, May/June -2014

MICRO PROCESSORS AND MICRO CONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. a) Explain status flags and control flag register in detail in 8086 micro processor in detail ? (12M)
   b) If data segment starts at a location of 1000H and data reference contains an address of 31H, find physical address ? (3M)

2. Explain the instruction set of 8086 micro processor (5×3M)
   a) DAA b) DIV c)TEST d)RCR e)CMPSW

3. Discuss the assembler directives of 8086 micro processor (5×3M)
   a) PROC b) DQ c)DUP d)EQU e)ENDS

4. a) Discuss bit set reset mode in detail ? (7.5M)
   b) Explain operational mode of mode 0 in 8255 PPI ? (7.5M)

5. Explain the architecture diagram of 8279 in detail ? (15M)

6. Write short notes on special function registers of 8051 micro controller (3×5M)
   a) PCON b) IE c)IP

7. Write short notes on the instruction set of 8051 micro controller (4M+3M+4M+4M)
   a) CJNE A, add, radd b)MOV DPTR ,#nn c) PUSH d) DAA

8. Explain interfacing of Seven Segment display with 8051 micro controller (15M)

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Code No: R32024 **R10** **Set No: 3**

III B.Tech. II Semester Regular/Supplementary Examinations, May/June -2014

MICRO PROCESSORS AND MICRO CONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. a) Discuss the register organization of 8086 micro processor? (7.5M)
   b) Explain memory organization of 8086 microprocessor ? (7.5M)

2. a) Explain maximum mode of operation in 8086 micro processor ? (7.5M)
   b) Draw the timing diagram of minimum mode in 8086 micro processor in read and write cycle? (4M+ 3.5M)

3. Explain in detail about the interfacing of A to D Converter ? (15M)

4. Explain operational command words of 8259 ? (15M)

5. a)Mention the difference between 8086 micro processor and 8051 micro controller (7M)
   b) Explain PSW register in 8051 micro controller ? (8M)

6. a) write an assembly language program of factorial of 5 using 8051 micro controller (7M)
   b) Write a short notes on interrupt priority in 8051 micro controller ? (8M)

7. Explain key board interfacing on 8051 microcontroller ? (15M)

8. a) Explain indirect addressing modes, register addressing mode with examples ? (7.5M)
   b) Explain the algorithms for assembler programming of WHILE, REPEAT ? (7.5M)

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Code No: R32024 **R10** **Set No: 4**

III B.Tech. II Semester Regular/Supplementary Examinations, May/June -2014

MICRO PROCESSORS AND MICRO CONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. a) Explain the evolution of microprocessors? (7.5M)
   b) Explain general bus operation of 8086 microprocessor? (7.5M)

2. Discuss the interfacing of stepper motor in detail? (15M)

3. a) Write an assembly language program in 8051 microcontroller to find the subtraction of 20 and 10 ? (3M)
   b) Explain control word of mode 1 of 8255 PPI with timing diagrams? (12M)

4. Write short notes on the instruction set of 8051 microcontroller (3M+4M+ 4M +4M)
   a) ANL A, #n b) RRC A c)MUL d) POP

5. Explain architecture of 8051 micro controller with a neat sketch? (15M)

6. Explain in detail about the interfacing of D to A Converter? (15M)

7. Explain initialization command words of 8259? (15M)

8. Explain interacting of 8051 microcontroller with relay's and latch connections? (15M)

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