

**B. Tech. ELECTRONICS AND  
COMMUNICATION ENGINEERING (BTECVI)****Term-End Examination****December, 2012****BIEL-015: MICROPROCESSOR AND ITS  
APPLICATIONS***Time : 3 hours**Maximum Marks : 70*

*Note : (i) Attempt total of seven questions out of 10 questions.  
(ii) Assume suitable missing data, if any.*

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1. (a) Mention the similarities and differences in 8085 and 8088. 5
  - (b) Draw the architecture of 8086 and explain function of each block. 5
  2. Differentiate between Instruction cycle and machine cycle. Determine the machine cycles of instruction PUSH B in 8085, microprocessor and draw the timing diagram for the same. 10
  3. (a) Explain Maskable and Non-maskable interrupts in 8085. 5
  - (b) Define the multiple interrupts. How these can be resolved using a priority encoder. 5

4. What are the advantages and disadvantages of serial I/O transfer over parallel I/O transfer ? Discuss in detail with suitable example. 10
5. Explain the function of IC 8257 with pin diagram description. Discuss cycle stealing and burst mode also. 10
6. (a) What are the functions of MN/MX\* and DT/R\* signals in 8086 ? 5
- (b) Write a program for 8085 to move alternate data bytes from memory location 28000H to F000 H. 5
7. (a) Specify the function of the followings : 5
- (i)  $\overline{\text{INTA}}$  (ii) HLDA
- (iii)  $\text{IO}/\overline{\text{M}}$  (iv) ALE
- (v) TRAP
- (b) Write the description of the following and name the flags affected due to each of the followings : 5
- (i) ACI (ii) CALL
- (iii) CMC (iv) CPI
- (v) HLT
8. Explain the process of device selection and data transfer in microprocessor. Also explain the handshaking process. 10

9. (a) Write down the main function of segment unit and page unit of 80386 giving detail of address translation. 5
- (b) Give main differences between protected mode of the 80286 and 80386 microprocessors. 5
10. Write short note on *any two* of the following :  $2 \times 5 = 10$
- (a) Enabling, disabling and masking of Interrupts.
- (b) Segmentation and paging in 8086.
- (c) Interfacing A/D converter.
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