

B.TECH SEM – VI (2007 COURSE) (BIOMEDICAL ENGG.) :

WINTER - 2017

SUBJECT: MICROPROCESSOR

Day: **Tuesday**
Date: **21/11/2017**

W-2017-2534

Time: **10.00 AM TO 01.00 PM**
Max. Marks: 80

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of remaining attempt any **TWO** questions from each section.
 - 2) Figures to the **RIGHT** indicate full marks.
 - 3) Answer to the both sections should be written in **SEPARATE** answer book.
 - 4) Assume suitable data if necessary.
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SECTION-I

- Q.1**
- a) Explain the flag register of 8085. (05)
 - b) Explain the control word format of 8253/54. (05)
 - c) Explain PORT 3 in 8051. (04)
- Q.2**
- a) Explain the following instructions of 8085 with the help of example. (07)
i) MVI M, data ii) ORI data iii) CMA
 - b) Explain the interrupt structure of 8085. (06)
- Q.3**
- a) Explain the following terms related to data transfer in 8251:- (06)
i) Synchronous Data Transfer
ii) Baud Rate
iii) Asynchronous Data Transfer
 - b) With a neat block diagram explain the operation of 8259 controller. (07)
- Q.4**
- a) With suitable example explain the following instructions of 8051:- (06)
i) ADD A, R_n ii) INC R_n iii) MUL AB
 - b) Explain the MCS 51 family architecture of microcontroller. (07)

SECTION-II

- Q.5**
- a) Explain any two instructions of 8086 with suitable examples. (04)
 - b) Draw & explain the interfacing of stepper motor with 8051. (06)
 - c) State the features of PIC. (04)
- Q.6**
- a) Explain the address decoding in 8051. (06)
 - b) Explain the special functions registers related to serial communication in 8051. (07)
- Q.7**
- a) Explain memory segmentation of 8086 processor. List the advantages of segmentation. (07)
 - b) Explain the different addressing modes of 8086. (06)
- Q.8**
- a) Compare 8051 and PIC microcontroller. (06)
 - b) Draw and explain the architecture of PIC microcontroller. (07)

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