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School of Engineering
Second Theory Sessional Examination
Odd Semester (AS: 2024-25)

B. Tech: CSE [30-39] **[Year: 3rd]** **[Semester:5th]**

Course Title: Microprocessor & Interfacing	**Max Marks: 30**
Course Code: BCS 3502	**Time: 1 *hrs***

Instructions if any: Read the question Carefully.

SECTION 'A' **Q.N.1. Attempt all parts of the following:**		**Course Objective**	**Marks**
a)	What are the operating modes of the 8086 microprocessor?	CO3	1
b)	What is the purpose of the execution unit in the 8086 microprocessor?	CO3	1
c)	Define Macro and Subroutine.	CO3	1
d)	What is the word size of the 8086 microprocessor?	CO3	1
e)	Explain the purpose of the Instruction Pointer (IP) register in the 8086.	CO3	1
SECTION 'B' **Q.N.2. Attempt any two parts of the following:**		**Course Objective**	**Marks**
a)	Describe the programming techniques and design approaches (top-down and bottom-up) for modular programming in assembly language.	CO3	7.5
b)	Explain the block diagram of 8255 PPI.	CO4	7.5
c)	Draw and explain the flag register of 8086 microprocessor.	CO3	7.5
SECTION 'C' **Q.N.3. Attempt any one part of the following:**		**Course Objective**	**Marks**
a)	Describe the different types of instruction formats used in the 8086 microprocessor.	CO3	10
b)	Discuss the working and applications of the 8259 Programmable Interrupt Controller.	CO4	10
c)	Describe the DMA controller (8237) and its interfacing with the 8086 microprocessor.	CO4	10

Table 1: Mapping between COs and questions
(Number of COs may vary from course to course)

Cos	Questions Numbers	Total Marks
CO3	1a, 1b, 1c, 1d, 1e, 2a, 2c, 3a	30
CO4	2b, 3b, 3c	27.5