B.TECH SEM – V (2007 COURSE) (ELECTRONICS) : WINTER - 2017

SUBJECT: MICROPROCESSORS AND MICROCONTROLLERS

Day: **Thursday** Time: **02.30 PM TO 05.30 PM**

Date: **11/01/2018** **W-2017-2464** Max. Marks: 80

N.B.:

1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY**. Out of the remaining questions attempt any **TWO** questions from each section.
2) Both the sections should be written in **SEPARATE** answer books.
3) Figures to the **RIGHT** indicate **FULL** marks.
4) Draw neat labeled diagrams **WHEREVER** necessary.
5) Assume suitable data, if necessary.

SECTION –I

Q.1	**a)**	How does stack work in 8085?	**(05)**
	b)	State addressing modes of 8051.	**(05)**
	c)	Describe mode O and BSR mode of 8255 with appropriate control word format.	**(04)**
Q.2	**a)**	What is SOD and SID serial I/O line in 8085?	**(07)**
	b)	Write brief on interrupt structure of 8085 with their address.	**(06)**
Q.3	**a)**	Interpret control word format of 8255.	**(07)**
	b)	With the help of block diagram explain 8259.	**(06)**
Q.4	**a)**	Draw and explain memory structures of 8051.	**(07)**
	b)	What are reset pin functions of 8051? And list the values of SFR's on reset.	**(06)**

SECTION –II

Q.5	**a)**	Write in brief on PIC microcontroller.	**(05)**
	b)	Illustrate following terms I) AVR II)Pipelining in 8086	**(05)**
	c)	Write in brief about OTP.	**(04)**
Q.6	**a)**	Summarize about serial communication in 8051 with RS232.	**(07)**
	b)	Interface Temperature sensor with 8051 using ADC.	**(06)**
Q.7	**a)**	Illustrate the following assembly directives. I) Assume I) PROC III) Global	**(07)**
	b)	What are the different flag register that are used in 8086.	**(06)**
Q.8	**a)**	Write brief on timers in PIC microcontroller	**(07)**
	b)	Compare 8051 with PIC microcontroller.	**(06)**