

Total No. of Questions : 8]

SEAT No. :

PC2831

[Total No. of Pages : 2

[6352]-55

S.E. (Information Technology)

PROCESSOR ARCHITECTURE

(2019 Pattern) (Semester - IV) (214451)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) Explain PIR (Peripheral Interrupt Request Register) IPR (Peripheral Interrupt Priority Register). [8]

b) Draw and explain the interfacing of relay and buzzer with PIC 18 FXXX microcontroller. [7]

c) Explain function of 3 important pins of LCD. [3]

OR

Q2) a) Discuss the steps in executing interrupts in PIC 18 microcontroller. [7]

b) Draw an interfacing diagram for 4×4 matrix keyboard with PIC18F microcontroller and explain it. [8]

c) What are peripheral interrupts, IVT and ISR? [3]

Q3) a) State the applications of CCP module in PIC. [6]

b) Write short note on SPI protocol. [5]

c) Explain the DC motor interfacing with PIC18F microcontroller with suitable diagram. [6]

OR

Q4) a) Explain the stepper motor interfacing with PIC18FXX microcontroller with suitable diagram. [6]

b) List the steps involved in programming PIC microcontroller in compare mode. [6]

c) Write short note on PWM module of PIC 18 F microcontroller. [5]

P.T.O.

- Q5)** a) Explain RTC DS1306 interfacing with PIC18FXX microcontroller. [6]
- b) Write short note I2C bus. [6]
- c) Draw and explain the interfacing diagram of DAC0808 with PIC 18FXX microcontroller. [6]

OR

- Q6)** a) Explain interfacing of LM35 temperature sensor with PIC 18FXX microcontroller. [6]
- b) With suitable diagram, explain on-chip ADC of PIC 18. [6]
- c) State the features of RTC. [6]

- Q7)** a) State differences between the ARM7, ARM9 and ARM11 processors. [6]
- b) Describe the major Design Rules of RISC philosophy. List the features of RISC Processor accepted by ARM processor. [5]
- c) Why ARM processors are suitable in embedded system applications? [6]

OR

- Q8)** a) What are privileged and non-privileged modes? Write down the processor modes in ARM. [6]
- b) Explain bits in CPSR of ARM7 in detail along with diagram. What is the use of SPSR. [6]
- c) Compare PIC microcontroller and ARM core processor. [5]

