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**SUBJECT CODE NO:- B-2145**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**B.Sc. T.Y. (Sem-V)**  
**Examination November/December- 2022**  
**Electronics Paper- XVI**  
**Micro Controller – I**

[Time: 1:30 Hours]

[Max. Marks: 50]

“Please check whether you have got the right question paper.”

- N.B
- i) Attempt all questions.
  - ii) Illustrate your answer with suitable labeled diagrams.
- Q. 1 Draw the pin diagram of 8051 Microcontroller showing signal names on each pin. Enlist any ten features of 8051 Microcontroller. 20
- OR**
- Explain five addressing modes in 8051 Microcontrollers with instruction format & one example each. Write instruction output after its execution. 20
- Q. 2 Enlist any ten bitwise / Boolean variable instruction in 8051 microcontroller. Explain each instruction format with one example. Write output of instruction after execution. 20
- OR**
- Write short note on any four. 20
- (1) SFR Format of TCON and IE reg in 8051 Microcontroller.
  - (2) Bit addressable registers in 8051  $\mu$ c.
  - (3) ALP to generate Square Wave.
  - (4) Unconditional jump instructions in 8051 Microcontroller.
  - (5) Structure of data memory of 8051 Microcontroller.
  - (6) PSW register format of 8051 Microcontroller.

Q. 3 Attempt the following by selecting correct answer.

- 1) 89C51 Microcontroller is \_\_\_\_\_ pin IC.
  - (a) 4
  - (b) 12
  - (c) 20
  - (d) 40
  
- 2) 8051 has \_\_\_\_\_ pins for port 0.
  - (a) 2
  - (b) 4
  - (c) 6
  - (d) 8
  
- 3) 89C2051 has \_\_\_\_\_ I/O pins.
  - (a) 10
  - (b) 15
  - (c) 20
  - (d) 40
  
- 4) 8051 Microcontroller has \_\_\_\_\_ on chip RAM.
  - (a) 64 byte
  - (b) 64 k byte
  - (c) 128 byte
  - (d) 128 k byte
  
- 5) Which of following instruction form register addressing mode.
  - (a) Mov A, 40H
  - (b) Mov A, # 40H
  - (c) Mov A, Ro
  - (d) Mov A, @ Ro

- 6) If Reg A = 25 H, Content of Accumulator after execution instruction ADD A, # 92H is \_\_\_\_\_.
- (a) 17 H
  - (b) B7 H
  - (c) C7 H
  - (d) 117 H
- 7) The default value of Register sp is \_\_\_\_\_
- (a) 37 H
  - (b) 27 H
  - (c) 17 H
  - (d) 07 H
- 8) Timer modes are set using \_\_\_\_\_ register.
- (a) TCON
  - (b) TMOD
  - (c) TH0
  - (d) TL1
- 9) Vector address of Timer 0 interrupt is \_\_\_\_\_.
- (a) 03H
  - (b) 0BH
  - (c) 13H
  - (d) 1BH
- 10) The SFR address in MCS-51 Microcontroller starts from \_\_\_\_\_.
- (a) 7FH
  - (b) 80H
  - (c) 90H
  - (d) F0H