

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Fifth Semester)

Branch- **ELECTRONICS**

8051 MICROCONTROLLER

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks!)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Name any four special function registers in 8051.
- 2 What is PSW?
- 3 Give the use of SBUF.
- 4 What is RST?
- 5 Define Byte.
- 6 State the operation of PUSH instruction in 8051.
- 7 Expand UART.
- 8 State number of timers in 8051.
- 9 What is Debouncing?
- 10 Define Sensor.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Differentiate the microprocessor and microcontroller.
OR
b Brief the various 8051 family IC's.
- 12 a Explain the assembler directives of 8051.
OR
b Discuss the register bank and stack in 8051.
- 13 a Explain the various I/O ports in 8051.
OR
b Describe the single bit instructions of 8051.
- 14 a Explain the need of serial communication.
OR
b With net diagram, explain the 8051 connection to RS232.
- 15 a Explain the ADC interface to 8051.
OR
b Discuss the interfacing of stepper motor to 8051.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Describe the various addressing modes of 8051.
- 17 Explain the operation Loop and Jump instructions of 8051.
- 18 Describe the programming of 8051 timer.
- 19 Discuss the 8051 interrupts and its priority.
- 20 Brief the LCD interfacing to 8051.