

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

BSc DEGREE EXAMINATION MAY 2017
(Fifth Semester)

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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 What is microcontroller?
- 2 Define addressing mode.
- 3 Draw the PSW register and name each bit.
- 4 Write few lines about stack.
- 5 What is timer / counter?
- 6 Give all the special function registers.
- 7 What is interrupt?
- 8 Define serial communication.
- 9 Expand: LCD, DAC.
- 10 List out the devices which are connected with 8051 microcontroller.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Distinguish microprocessor, micro controller and embedded system.
OR
b Explain inside the 8051.
- 12 a Narrate loop and jump instruction in brief.
OR
b Describe time delay generation for 8051.
- 13 a Enumerate mode a programming and its steps of timer.
OR
b Draw the pin out of 8051 and explain.
- 14 a Elucidate interrupt priority in 8051.
OR
b Explain asynchronous serial communication and data framing.
- 15 a Give an account on ADC interface with 8051 (any one IC).
OR
b Describe the DAC interface.

SECTION - C (30 Marks)

* Answer any **THREE** Questions

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

- 16 Explain assembling and running of an 8051 program.
- 17 Describe register banks and stack.
- 18 Elucidate I/O port programming.
- 19 Enumerate the 8051 interrupts.
- 20 Narrate how LCD is interfaced with 8051.