

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Fifth Semester)

Branch – COMPUTER TECHNOLOGY

CORE ELECTIVE – I : EMBEDDED SYSTEM

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

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

- 1 Write down the classification of embedded system.
- 2 Define Microprocessor.
- 3 What is meant by Portability?
- 4 Define CAN.
- 5 Define Microcontroller.
- 6 What is mean by Stack Pointer?
- 7 Write about Immediate Addressing.
- 8 List out any two instruction set in data transfer.
- 9 Write two examples for IDE.
- 10 Define Simulator.

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Comparison between General Purpose computing system and Embedded system.
OR
b Clarify about Communication Interface in Embedded system.
- 12 a Explain the different characteristics of embedded system in detail.
OR
b Discuss about washing machine – Application – specific embedded system.
- 13 a Discuss the factors to be considered in selecting a controller.
OR
b Write about timer unit and serial port.
- 14 a Illustrate about fundamental issues of hardware and software co-design.
OR
b Examine the various different addressing mode supported by 8051.
- 15 a Explain in detail about Emulator and debugging.
OR
b Write the processor trends in embedded system.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 Explain in detail about sensors and actuators in embedded system.
- 17 Explain about Operational and Non-Operational Quality attribute considered in embedded system.
- 18 Clarify about 8051 Memory Organization with neat diagram.
- 19 Illustrate in detail about any three 8051 instruction set.
- 20 Evaluate the types of files generated for cross-compilation.