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SEAT No._____ No. of Printed Pages: 02

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SARDAR PATEL UNIVERSITY
External Examination (CBCS)
B. Sc. (CA & IT) - Vth - Semester
US05CINT06 - Computer Architecture & Microprocessor
17th November, Friday - 2017

Time : 10:00 am to 1:00 pm Total Marks :70

Q-1 Select an appropriate option. 10

1. CPU stands for _____.
   (a) Central Processing Unit (b) Control Processing Unit
   (c) Central Programming Unit (d) Control Programming Unit

2. The _____ store intermediate data used during the execution of instruction.
   (a) Register Set (b) CPU (c) CU (d) ALU

3. RPN Stands for _____.
   (a) Reverse Polish Notation (b) Reverse Programming Notation
   (c) Random Polish Notation (d) None of these

4. The _____ register specifies the number of words that must be transferred.
   (a) Word Count (b) Address (c) Data (d) Control

5. The _____ contains an address to specify the desired location in memory.
   (a) Address Register (b) Word Count Register
   (c) Control Register (d) All of these

6. The memory unit that communicates directly with the CPU is called the ___.
   (a) Main Memory (b) Auxiliary Memory
   (c) Secondary Memory (d) None of these

7. The _____unit provides the necessary timing and control signals to all the operations in the microcomputer.
   (a) Control (b) Input (c) Output (d) ALU

8. The group of eight bit is called _____.
   (a) Bit (b) Byte (c) Nibble (d) Kilo Byte

9. LED Stands for _____.
   (a) Light Energy Data (b) Light Emitting Data
   (c) Light Emitting Diode (d) Liquid Emitting Diode

10. PSW stands for _____.
    (a) Program Status Word (b) Program Store Word
    (c) Program Set Word (d) None of these

(P.T.O.)

Q-2 Answer the following questions. (Attempt any **TEN**) 20

1. Explain PUSH and POP operation of Stack.
2. Define Infix Notation with example.
3. Define I/O command.
4. Explain Bus Request (BR) and Bus Grant (BG).
5. What is Cache memory?
6. Define Multiprogramming.
7. Define Multiprocessor.
8. Define Machine Level Languages.
9. What is Operating System?
10. Define Data Bus.
11. Define Program Counter.
12. Write full form of EPROM and EEPROM.

Q-3
(a) Explain Components of CPU. 5
(b) Explain Two Address Instruction with example. 5

OR

Q-3
(a) Explain General Register Organization. 5
(b) Explain RPN with example. 5

Q-4
(a) What is DMA? Explain DMA Controller. 5
(b) Explain Binary Multiplication using Register Method. 5

OR

Q-4
(a) What is Memory? Explain memory hierarchy in computer system. 5
(b) Explain Virtual Memory with Address Space and Memory Space. 5

Q-5
(a) Explain characteristics of Multiprocessor. 5
(b) Explain Cross Bar Switch in detail. 5

OR

Q-5
(a) Explain Microprocessor in detail. 5
(b) Explain Time Sharing common bus structure. 5

Q-6 Explain Memory Classification in detail. 10

OR

Q-6 Write short note on: (i) Internal Data Operation (ii) Input Output Devices 10

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