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Roll No. : .....

**328636(28)**

**B. E. (Sixth Semester) Examination, 2020**

**(Old Scheme)**

**(EEE, Et & T Engg. Branch)**

**COMPUTER ORGANISATION & ARCHITECTURE**

**Time Allowed : Three hours**

**Maximum Marks : 80**

**Minimum Pass Marks : 28**

**Note :** All questions are compulsory. Part (a) carries 2 marks is compulsory and attempt any two from part (b), (c) and (d) carries 7 marks each.

**Unit-I**

1. (a) What is program counter?

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- (b) Explain any three addressing modes with example. 7
- (c) How does the transfer of information takes place between memory and BUS, support your answer with suitable diagram. 7
- (d) How does the usage of register helpful is working of instruction? Explain different register used and their use. 7

### Unit-II

2. (a) What do you mean by hard wired control? 2
- (b) What is micro instruction format? Explain all functional parts related to it. 7
- (c) Describe about microprogramming. 7
- (d) Explain about microprogrammed control organization with diagram. 7

### Unit-III

3. (a) Write the following numbers into 2's complement representation : 2
- (i) 10101
- (ii) 001010

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- (b) What is use of booth algorithm? Explain it for multiplying binary integers is signed 2's complement representation. 7
- (c) Write algorithm for adding two fixed point number given is 2's complement representation. 7
- (d) Explain floating point representation with example. 7

### Unit-IV

4. (a) What is DMA? 2
- (b) What do you mean by interrupt? What are interrupt initiated I/O? Explain about priority interrupt. 7
- (c) Write short notes on : 7
- (i) Risc
- (ii) CISC
- (d) Describe about DMA controller with block diagram. 7

### Unit-V

5. (a) What is Cache Memory? 2
- (b) Explain different types of mapping procedures used in cache memory. 7

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(c) What do you mean by virtual memory? How it is useful? 7

(d) Explain about memory management requirement. 7