Comp. org. & Archi / sem IV / COMP & I.T

29-05-14

**QP Code :NP-19761**

(3 Hours) [ Total Marks :80

K. G. C. E. EXAM KARJAT, RAIGAD

**N.B.:—** (1) Question no.**1** is **compulsory.**
(2) Solve any **three** questions out of remaining **five** questions.
(3) Assume suitable data if **necessary.**
(4) Answer to **each** new question to be started on a **fresh page.**

1. (a) What is stored program concept? 3
   (b) Show IEEE 754 Standards for Binary Floating-Point Representation for 32 bit single format and 64 bit double format. 3
   (c) What are applications of Microprogramming? 3
   (d) What is Virtual Memory? 4
   (e) Explain in brief function of 8089 I/O Processor. 4
   (f) Name the Flynn`s Classification of Parallel Processing Systems. 3

2. (a) Draw the flow chart for Booth`s Algorithm for Twos Complement Multiplication. 5
   Using Booth`s Algorithm show the multiplication of 7x5. 7
   (b) Explain with diagram functioning of Micropregrammed Control Unit. 8

3. (a) What are the differences between RISC and CISC processors? 5
   (b) Describe hardwired control unit and specify its advantages. 7
   (c) What are characteristics of memory devices? 8

4. (a) Explain in details Memory Hierarchy with examples. 6
   (b) What are elements of cache design? Explain in details. 8
   (c) What are major requirements for an I/O module? 6

5. (a) Explain the DMA based data transfer techniques for I/O devices. 8
   (b) Explain concepts of nanoprogramming. 6
   (c) What is instruction pipelining? 6

6. Write short notes on:
   (a) Touch Pad 7
   (b) L1, L2 and L3 Cache memory. 7
   (c) Programmed I/O 6

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