

4/6/13

SE Sem III (Rev) Computers
COA

V-A4-1st-Hf-Ex-13-E-92

Con. 6595-13.

GS-6621

(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No. 1 is compulsory.
(2) Attempt any **four** out of remaining **six** questions.
(3) Assume **suitable** data wherever **necessary**.
(4) Answer to **each** new question to be started on **fresh** page.

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|--------|--|----|
| 1. (a) | Explain different Instruction formats with suitable example. | 10 |
| (b) | Define following terms :— | 10 |
| | (i) Computer organization. | |
| | (ii) Computer Architecture. | |
| | (iii) MDR. | |
| | (iv) PC. | |
| | (v) SP. | |
| 2. (a) | Explain Instruction cycle with interrupt execution in detail. | 10 |
| (b) | Compare and explain static and dynamic data flow computers. | 10 |
| 3. (a) | Explain IEEE-754 formats. | 10 |
| (b) | Explain cache memory mapping techniques with example. | 10 |
| 4. (a) | Explain Micro-programmed control unit in detail. | 10 |
| (b) | Explain 6-stage Instruction execution with pipelined processor. | 10 |
| 5. (a) | Explain types of memories based on the hierarchy of speed and size. | 10 |
| (b) | Define “(Input/Output) I/O Module”. State the difference between Programmable and Non-programmable devices with suitable examples. | 10 |
| 6. (a) | Compare RISC and CISC processors. | 10 |
| (b) | Explain Interleaved Memory with low-order and high-order Interleaving. | 10 |
| 7. | Write short notes on any four of the following :— | 20 |
| | (a) RAID Memory. | |
| | (b) Booth’s Algorithm. | |
| | (c) MIMD and SIMD. | |
| | (d) Paging and Segmentation. | |
| | (e) Page Replacement Algorithm. | |