

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute)
Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow
M.Tech
FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)
(Objective Type)

Subject Code: AMTCSE0216

Subject: Advanced Computer Architecture

Max. Mks. : 40

Time : 70 Minutes

General Instructions:

All questions are compulsory.

Question No- 1 to 5 are objective type question carrying 2 marks each.

Question No- 6 to 20 are also objective type/Glossary based question carrying 2 marks each.

| Q.No | Question Content | Question Image | Category | Sub Category | Marks | Options Randomization | Type | Difficulty | Correct | Option1 | Option2 | Option3 | Option4 |
|------|--|----------------|-------------------------|-------------------------|-------|-----------------------|---------------|------------|--|---|---|--|--|
| 1 | A digital circuit that generates single output by taking multiple inputs | | Single Choice Questions | Single Choice Questions | 2 | | Single Choice | Smart | Multiplexer | Multiplexer | Decoder | Adder | Demultiplexer |
| 2 | The instruction “JUMP” belongs to | | Single Choice Questions | Single Choice Questions | 2 | | Single Choice | Smart | control transfer & branch instructions | sequential control flow instructions | control transfer instructions | branch instructions | control transfer & branch instructions |
| 3 | The performance of a pipelined processor suffers if | | Single Choice Questions | Single Choice Questions | 2 | | Single Choice | Smart | All of the above | The pipeline stages have different delays | Consecutive instructions depend on each other | The pipeline stages share single hardware resources | All of the above |
| 4 | VLIW stands for _____ | | Single Choice Questions | Single Choice Questions | 2 | | Single Choice | Smart | very long instruction word | very long instruction word | very long instruction width | very large instruction word | None of the above |
| 5 | Which of the following operations in instruction pipeline processing is performed first? | | Single Choice Questions | Single Choice Questions | 2 | | Single Choice | Smart | Fetch instruction | Calculate operand address | Fetch instruction | Decode instruction | Execute instruction |
| 6 | Each stage in pipelining should be completed within _____ cycle. | | Glossary I | Glossary I | 2 | | Single Choice | Smart | 1 | pipelining | 1 | to convert sequential scalar instructions into vector instructions | |
| 7 | Basic difference between vector and array processor is | | Glossary I | Glossary I | 2 | | Single Choice | Smart | pipelining | pipelining | 1 | to convert sequential scalar instructions into vector instructions | |
| 8 | The task of vectorizing compiler is | | Glossary I | Glossary I | 2 | | Single Choice | Smart | to convert sequential scalar instructions into vector instructions | pipelining | 1 | to convert sequential scalar instructions into vector instructions | |
| 9 | The Sun micro systems processors usually follow _____ architecture | | Glossary II | Glossary II | 2 | | Single Choice | Smart | RISC | Physical addresses | RISC | Complex instruction set computer | |
| 10 | _____ is stored in a Translation Look aside Buffer | | Glossary II | Glossary II | 2 | | Single Choice | Smart | Physical addresses | Physical addresses | RISC | Complex instruction set computer | |
| 11 | _____ consists of a variety of expert instruction and may just not be frequently used in practical programs. | | Glossary II | Glossary II | 2 | | Single Choice | Smart | Complex instruction set computer | Physical addresses | RISC | Complex instruction set computer | |
| 12 | The presence of anti dependencies and output dependencies leads to | | Glossary III | Glossary III | 2 | | Single Choice | Smart | WAR and WAW stalls | Committed | WAR and WAW stalls | 1967 | |
| 13 | When an instruction is guaranteed to complete, it is called | | Glossary III | Glossary III | 2 | | Single Choice | Smart | Committed | Committed | WAR and WAW stalls | 1967 | |
| 14 | The Tomasulo algorithm is a hardware algorithm developed in | | Glossary III | Glossary III | 2 | | Single Choice | Smart | 1967 | Committed | WAR and WAW stalls | 1967 | |

| Q.No | Question Content | Question Image | Category | Sub Category | Marks | Options Randomization | Type | Difficulty | Correct | Option1 | Option2 | Option3 | Option4 |
|------|---|----------------|-------------|--------------|-------|-----------------------|---------------|------------|-------------------|------------------|-----------------|-------------------|---------|
| 15 | The Control unit of a computer generates _____ for execution of instruction | | Glossary IV | Glossary IV | 2 | | Single Choice | Smart | Control signals | Micro-operations | Control signals | Microinstructions | |
| 16 | Microprogram consisting of _____ is stored in control memory of control unit | | Glossary IV | Glossary IV | 2 | | Single Choice | Smart | Microinstructions | Micro-operations | Control signals | Microinstructions | |
| 17 | To execute machine instruction, a set of _____ in a proper sequence must be | | Glossary IV | Glossary IV | 2 | | Single Choice | Smart | Micro-operations | Micro-operations | Control signals | Microinstructions | |
| 18 | A collection of lines that connects several devices is called | | Glossary V | Glossary V | 2 | | Single Choice | Smart | Bus | bus arbitration | 4 | Bus | |
| 19 | To resolve the clash over the access of the system bus, we use | | Glossary V | Glossary V | 2 | | Single Choice | Smart | bus arbitration | bus arbitration | 4 | Bus | |
| 20 | selection lines are there in common bus for 16 registers of 16 bits each. | | Glossary V | Glossary V | 2 | | Single Choice | Smart | 4 | bus arbitration | 4 | Bus | |