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| **ASSIGNMENT** | |
| **Course Code** | 19CSC205A |
| **Course Name** | Microprocessor & Assembly Language. |
| **Programme** | B. Tech |
| **Department** | Computer Science & Engineering |
| **Faculty** | Faculty of Engineering Technology |

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| **Name of the Student** | SUBHENDU MAJI |
| **Reg. No** | 18ETCS002121 |
| **Semester/Year** | 3RD / 2019 |
| **Course Leader/s** | Supriya M.S. |

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| **Declaration Sheet** | | | | | | | | |
| Student Name | SUBHENDU MAJI | | | | | | | |
| Reg. No | 18ETCS002121 | | | | | | | |
| Programme | B. Tech | | | | | Semester/Year | 3rd / 2019 | |
| Course Code | 19CSC205A | | | | | | | |
| Course Title | Microprocessor & Assembly Language | | | | | | | |
| Course Date |  | | To | |  | | | |
| Course Leader | Supriya M.S. | | | | | | | |
| **Declaration**  The assignment submitted herewith is a result of my own investigations and that I have conformed to the guidelines against plagiarism as laid out in the Student Handbook. All sections of the text and results, which have been obtained from other sources, are fully referenced. I understand that cheating and plagiarism constitute a breach of University regulations and will be dealt with accordingly. | | | | | | | | |
| Signature of the Student | |  | | | | | Date |  |
| Submission date stamp  (by Examination & Assessment Section) | |  | | | | | | |
| Signature of the Course Leader and date | | | | Signature of the Reviewer and date | | | | |
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| **Faculty of Engineering & Technology** | | | |
| **Ramaiah University of Applied Sciences** | | | |
| **Department** | Computer Science and Engineering | **Programme** | B. Tech. |
| **Semester/Batch** | 3rd /2018 | | |
| **Course Code** | 19CSC205A | **Course** **Title** | Microprocessors and Assembly Programming |
| **Course Leader** | P.Padma Priya Dharishini , Supriya M.S. | | |

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| Assignment - 1 | | | | | | | | |
| Name of Student | | |  | Register No | |  | | |
| Sections |  | Marking Scheme | | | Max Marks | | First Examiner Marks | Second Examiner Marks |
| Part-A | A1.1 | Assembly Language Program | | | 3 | |  |  |
| A1.2 | Clock cycle time, Execution time of sequence recognizer, CPI | | | 3 | |  |  |
| A1.3 | AMAT | | | 2 | |  |  |
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|  | **Max Marks** | | | **10** | |  |  |

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| **Course Marks Tabulation** | | | | |
| **Component- CET B Assignment** | **First Examiner** | **Remarks** | **Second Examiner** | **Remarks** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Marks (out of 10 )** |  |  |  |  |
| Signature of First Examiner Signature of Second Examiner | | | | |

# **Question No. 1**

**Solution to Question No. 1:**

## A1.1 Assembly Language Program

## A1.2 Clock cycle time, Execution time of sequence recognizer, CPI

## A1.3 AMAT

We know,

Two-level cache **AMAT formula**:

------**equation 1**

Where,

Given,

|  |  |  |
| --- | --- | --- |
| **Parameters** | **L1 cache** | **L2 cache** |
| Associativity | 2-way set Associative | 4-way set Associative |
| Block size | 32 bytes | 64 bytes |
| Cache size | 512 Kb | 1Gb |
| Hit rate | 40% | 60% |
| Miss Penalty | - | 30 |
| Hit time | 4 ns | 20 ns |

Substituting the values in equation 1,

## A1.4 Comparison of Execution time

# Bibliography