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| **ASSIGNMENT** | |
| **Course Code** | 20CSE421A |
| **Course Name** | Data Science Foundation |
| **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** | 7th semester / 2018 batch |
| **Course Leader/s** |  |

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| **Declaration Sheet** | | | | | | | | |
| Student Name | Subhendu Maji | | | | | | | |
| Reg. No | 18ETCS002121 | | | | | | | |
| Programme | B. Tech. | | | | | Semester/Year | 7th sem /2018 batch | |
| Course Code | 20CSE421A | | | | | | | |
| Course Title | Data Science Foundation | | | | | | | |
| Course Date |  | | to | |  | | | |
| Course Leader |  | | | | | | | |
| **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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| **Assignment - 01** | | | | |  | |  | |  |
| Register No | | | **18ETCS002121** | Name of Student |  | **Subhendu Maji** | | |  |
| Sections |  | Marking Scheme | | |  | | **Marks** | |  |
| Max  Marks | |  | First  Examiner  Marks | Moderat or Marks |
| **Part**  **-**  **A** |  | | | |  | |  | |  |
| A 1.1 | Python language and its usage in data science | | | 04 | |  |  |  |
| A 1.2 | Python syntax and core constructs | | | 06 | |  |  |  |
| A 1.3 | Functions: Namespaces and scopes | | | 05 | |  |  |  |
| A 1.4 | Exception handling | | | 04 | |  |  |  |
| A1.5 | Libraries for Data Science Applications | | | 05 | |  |  |  |
| A1.6 | Data modelling, processing | | | 06 | |  |  |  |
|  | **Part-A Max Marks** | | | **30** | |  |  |  |
| **Part B 1** |  | | | |  | |  | |  |
| B 1.1 | Design a system for reading data in text format using pandas library | | | 7 | |  |  |  |
| B 1.2 | Design a system for storing data in text format using pandas library | | | 8 | |  |  |  |
| B 1.3 | Design about the task in a parallel system using Celery to obtain square root of a value | | | 5 | |  |  |  |
| B 1.4 | Design about the client and server role in a parallel system using Celery to obtain square root of a value | | | 10 | |  |  |  |
|  | **Part-B1 Max Marks** | | | **30** | |  |  |  |
| **Part B 2** |  | | | |  | |  | |  |
| B2.1 | Implement Python code for reading data in text format using pandas library | | | 10 | |  |  |  |
| B2.2 | Implement Python code for storing data in text format using pandas library | | | 10 | |  |  |  |
|  | B2.3 | Implement Python code for the task in a parallel system using Celery to obtain square root of a value | | | 5 | | |  |  |
| B2.4 | Implement Python code for the client and server role in a parallel system using Celery to obtain square root of a value | | | 15 | | |  |  |
|  | **Part-B2 Max Marks** | | | **40** | | |  |  |
|  |  | **Total Assignment Marks** | | | **100** | | |  |  |

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| **Course Marks Tabulation** | | | | |
| **Component- CET B Assignment** | **First**  **Examiner** | **Remarks** | **Second Examiner** | **Remarks** |
| A |  |  |  |  |
| B.1 |  |  |  |  |
| B.2 |  |  |  |  |
| **Marks (Max 50)** |  |  |  |  |
| **Marks (out of 25)** |  |  |  |  |
| Signature of First Examiner Signature of Second Examiner | | | | |

# **Question No. 1**

**Solution to Question No. 1:**

## A1.1 Python language and its usage in data science

## A1.2 Python syntax and core constructs

## A1.3 Functions: Namespaces and scopes

## A1.4 Exception handling

## A1.5 Libraries for Data Science Applications

## A1.6 Data modelling, processing

# **Question No. 2**

**Solution to Question No. 2:**

## B1.1 Design a system for reading data in text format using pandas library

## B1.2 Design a system for storing data in text format using pandas library

## B1.3 Design about the task in a parallel system using Celery to obtain square root of a valueA1.4 Exception handling

## B1.4 Design about the client and server role in a parallel system using Celery to obtain square root of a value

# **Question No. 3**

**Solution to Question No. 3:**

## B2.1 Implement Python code for reading data in text format using pandas library

## B2.2 Implement Python code for storing data in text format using pandas library

## B2.3 Implement Python code for the task in a parallel system using Celery to obtain square root of a value

## B2.4 Implement Python code for the client and server role in a parallel system using Celery to obtain square root of a value

**Bibliography**

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