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| **ASSIGNMENT** | |
| **Course Code** | BSC104A |
| **Course Name** | Engineering Mathematics - 2 |
| **Programme** | B.Tech |
| **Department** | Mathematics |
| **Faculty** |  |

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| **Semester/Year** | 02/2018 |
| **Course Leader/s** |  |

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| **Declaration Sheet** | | | | | | | | |
| Student Name |  | | | | | | | |
| Reg. No |  | | | | | | | |
| Programme |  | | | | | Semester/Year |  | |
| Course Code |  | | | | | | | |
| Course Title |  | | | | | | | |
| Course Date |  | | to | |  | | | |
| Course Leader |  | | | | | | | |
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| 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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|  |  |  |
| --- | --- | --- |
| **Symbol** | **Description** | **Units** |
| A | Current | Amp |
| g | Acceleration due to gravity - 9.81 | m/s2 |
| V | Voltage | Volts |
| w | Width | mm |
|  |  |  |

< Arrange in alphabetical order>

# **Question No. 1**

**Solution to Question No. 1 part A:**

## A.1 Explanation of Lagrange and Newton bivariate interpolation with examples:

Overview to the question (students are expected to give a brief introduction to the context on which the question is set, applications, limitations, new developments happening and students own views on the question and the paragraph should not exceed 200 words and references should be cited and it should be authored by the students means to say students should not be borrowing sentences as they are from any referred literature)

## A.2 Comparison between above interpolations:

Students are expected to provide the solution to the question considering the points mentioned in the marking scheme of the assignment question

## A.3 MATLAB function for the Lagrange bivariate interpolation:

Students are expected to discuss the solutions obtained in section 1.2 and present their views/suggestions/recommendations (not to exceed 150 words)

# **Question No. 2**

**Solution to Question No. 1 part B:**

## B.1.1 Formation of ODE and its solution:

Overview to the question (students are expected to give a brief introduction on the context on which the question is set, applications, limitations, new developments happening and students own views on the question and the paragraph should not exceed more than 200 words and references should be cited and it should be authored by the students means to say students should not be borrowing sentences as they are from any referred literature)

## B.1.2 Time required for the lake to become pollutant free:

Students are expected to provide the solution to the question considering the points mentioned in the marking scheme of the assignment question

## B.1.3 Plot of versus time:

Students are expected to discuss the solutions obtained in section 1.2 and present their views/suggestions/recommendations (not to exceed 150 words)

## B.1.4 Time required for pollutants to become thrice and one tenth of the initial quantity:

Students are expected to draw conclusions based on the discussions and suggestions (not to exceed 100 words)

# **Question No. 3**

**Solution to Question No. 2 part B:**

## B.2.1 ODE and solution:

Overview to the question (students are expected to give a brief introduction on the context on which the question is set, applications, limitations, new developments happening and students own views on the question and the paragraph should not exceed more than 200 words and references should be cited and it should be authored by the students means to say students should not be borrowing sentences as they are from any referred literature)

## B.2.2 Time required to repay the loan completely:

Students are expected to provide the solution to the question considering the points mentioned in the marking scheme of the assignment question

## B.2.3 Amount of load paid after 10 years and 15 years:

Students are expected to discuss the solutions obtained in section 1.2 and present their views/suggestions/recommendations (not to exceed 150 words)

## B.2.4 Comments and conclusion:

Students are expected to draw conclusions based on the discussions and suggestions (not to exceed 100 words)

# **Question No. 4**

**Solution to Question No. 3 part B:**

## B.3.1 MATLAB function for polynomial using NGFIF:

Overview to the question (students are expected to give a brief introduction on the context on which the question is set, applications, limitations, new developments happening and students own views on the question and the paragraph should not exceed more than 200 words and references should be cited and it should be authored by the students means to say students should not be borrowing sentences as they are from any referred literature)

## B.3.2 Speed for each listed time:

Students are expected to provide the solution to the question considering the points mentioned in the marking scheme of the assignment question

## B.3.3 Maximum speed of the horse:

Students are expected to discuss the solutions obtained in section 1.2 and present their views/suggestions/recommendations (not to exceed 150 words)

## B.3.4 Plot of the distance and speed curve:

Students are expected to draw conclusions based on the discussions and suggestions (not to exceed 100 words)

# **Question No. 5**

**Solution to Question No. 4 part B:**

## B.4.1 MATLAB function for Lagrange Interpolation:

Overview to the question (students are expected to give a brief introduction on the context on which the question is set, applications, limitations, new developments happening and students own views on the question and the paragraph should not exceed more than 200 words and references should be cited and it should be authored by the students means to say students should not be borrowing sentences as they are from any referred literature)

## B.4.2 Prediction of population at 1997 and 2008:

Students are expected to provide the solution to the question considering the points mentioned in the marking scheme of the assignment question

## B.4.3 Plot of the number of polio affected children verses year:

Students are expected to discuss the solutions obtained in section 1.2 and present their views/suggestions/recommendations (not to exceed 150 words)

**Bibliography**

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All referencing, bibliography needs to be done as described in the following article:

<http://www.msruas.ac.in/pdf_files/VCBlogs/Academic%20Good%20Practices.pdf>