

B. M. S. College of Engineering, Bengaluru - 560019

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E.

Branch: Aerospace Engineering

Course Code: 19AE3DCCTA

Course: Computer Aided Tools for Aerospace Engineering

Semester: III

Duration: 3 hrs.

Max Marks: 100

Date: 13.09.2023

Instructions:

Answer the following questions choosing one question from each unit

UNIT - I

1. a) Discuss the following Engineering articles
i. Brochure, ii. Catalogs, iii. Banner, iv. Poster, v. Notes 10
- b) Discuss the key elements of a research paper. 6
- c) List the current generation word processing softwares. 4

OR

2. a) Discuss in detail about Manuscript. 5
- b) List the various types of academic documents. 3
- c) Discuss salient features of (i) Excel (ii) Latex and (iii) Beamer. 12

UNIT - II

3. a) Give an overview of Python. List its advantages and disadvantages. 8
- b) Explain the difference between the C++ and python languages. 6
- c) Describe the role of Lab view in engineering. 6

OR

4. a) Discuss the criteria for a programming language. 8
- b) State the applications of the following programming languages.
(i) Python, (ii) R programming, (iii) Matlab, (iv) Math CAD, (v) Minitab & (vi) Excel 12

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

UNIT - III

5. a) Drawing is the language of Engineers. Elaborate. **5**
- b) Differentiate between first angle and third angle system of projections. **5**
- c) What are the types of geometric transformations? Explain four important types with examples. **10**

UNIT - IV

6. a) Discuss the advantages and disadvantages of 3D Computer Modelling. Give examples with their application in industry. **8**
- b) Discuss Reverse Engineering & clay modeling principles. **8**
- c) Discuss graphics exchange standards. **4**

UNIT - V

7. a) Discuss important steps in computer aided analysis process. List. **7**
- (i) Its benefits and
- (ii) the broad areas covered by CAE
- b) Explain the process of computer aided manufacturing. **5**
- c) Classify the structural analysis types listing the tools used for it. **8**
