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63 (FY)SEM-3/SEC/MATSEC2013

2024

MATHEMATICS

Paper : MATSEC2013

(*Scilab*)

Full Marks : 40

Pass Marks : 16

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Choose the correct answer : $1 \times 5 = 5$

(i) Which one of the following functions is true about Scilab ?

- (a) They are all user-defined
- (b) Functions do not have arguments
- (c) User-defined functions are a subset of all functions
- (d) User-defined functions are a super-set of all functions

(ii) Which one of the following functions is not a mathematical function in Scilab ?

- (a) Trigonometric functions
- (b) Absolute value function
- (c) Gamma function
- (d) Logarithmic function

(iii) Key building depend on which of the following?

- (a) Operating system
- (b) Text bar
- (c) Printer
- (d) Keyboard

(iv) Which one of the following is not used to write algorithms for numerical computation ?

- (a) FORTAT
- (b) Python
- (c) Java
- (d) Calculator

(v) Which of the following is not a mathematical operation in Scilab ?

- (a) Division
- (b) Multiplication
- (c) Addition
- (d) Computation

2. Answer the following questions : **(any five)**

$$2 \times 5 = 10$$

- (i) Write any four physical constants in Scilab.
- (ii) What is Scilab ?
- (iii) What is Autocompletion in Scilab ?
- (iv) What is Tab Completion ?
- (v) Write four mathematical operations in Scilab in precedence order.
- (vi) Write *any two* predefined mathematical functions in Scilab.
- (vii) Write *any two* mathematical functions in Scilab.

3. Answer the following questions : **(any three)**
5×3=15

- (i) What are the five main data types?
- (ii) What are the five parts of Scilab workspace?
- (iii) How to write a text file in Scilab?
- (iv) What are the different types of plots in Scilab?
- (v) Write the steps to install Scilab in PC.

4. Answer the following question : **(any one)**
10×1=10

- i. How to plot 2D and 3D graphs in Scilab?
 - ii. What are matrix and vector? How to do matrix and vector in Scilab?
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