Total No. of Printed Pages—7

3 SEM TDC GECS (CBCS) GE 3 (A/B/C)

2022

(Nov/Dec)

COMPUTER SCIENCE

(Generic Elective)

Paper : GE-3

Full Marks : 53
Pass Marks : 21

Time : 3 hours

The figures in the margin indicate full marks for the questions

Paper : GE–3A

(Multimedia and Applications)

1. Answer the following as directed : 1×5=5

(a) SMTP stands for _____.

(Fill in the blank)

(b) PNG stands for _____.

(Fill in the blank)

(c) Name any one multimedia software.

(d) What is multimedia?

(e) Mention one characteristic of multimedia.

2. Answer any *four* of the following questions : 2×4=8

(a) What is the importance of text in multimedia?

(b) Mention any two advantages of HTML.

(c) What is hypertext?

(d) Mention any two advantages of MIDI.

(e) What is a web browser?

3. Answer any *five* of the following questions : 4×5=20

(a) Differentiate between hypertext and hypermedia.

(b) What are the differences between bitmap and vector images?

(c) Mention the difference between font and typeface in multimedia.

(d) What is virtual reality?

(e) Write a short note on any *one* of the following :

(i) Picasa

(ii) Windows movie maker

(iii) Adobe Photoshop

(f) Mention the different components of multimedia.

4. Answer any *four* of the following questions : 5×4=20

(a) Briefly explain about any three common image file formats.

(b) Explain how digital video works.

(c) Explain briefly about the principles of animation.

(d) Explain briefly about different hardware components required for multimedia applications.

(e) Explain about the features of multimedia authoring tools.

Paper : GE–3B

(Programming in Python)

1. Answer any *five* of the following : 2×5=10

(a) Define algorithm. How is it helpful in context of software development?

(b) What is Bottom-up programming?

(c) What are the different types of error in programming?

(d) What is an interpreter?

(e) Differentiate between integer and floating point numbers.

(f) Explain the utility of continue statement.

2. Answer any *one* of the following : 3

(a) What is a default argument? Give one example.

(b) Write the differences between local and global variables.

Answer any *four* from the following : 10×4=40

3. *(a)* Explain the utility of keyword argument with the help of an example. 5

(b) Write a Python Program to find the factorial of a number. 5

4. *(a)* What is slice operation? Explain with an example. 5

(b) Write a Python Program to find the sum of the following series : 5

$$S = 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \cdots + \frac{1}{n}$$

5. *(a)* What is class instantiation? How is it done? Give one example. 5

(b) Write a Python program to perform linear search in a list. 5

6. *(a)* Write a Python Program to remove all the duplicates from a list. 5

(b) Write a Python Program to create a list of numbers from 1–20 which are either divisible by 2 or divisible by 4. 5

7. *(a)* Write a Python Program to print the minimum value in a list. 5

(b) Explain bubble sort with an example. 5

Paper : GE–3C

(Programming in Visual Basic)

1. Answer the following questions :

(a) Answer briefly : 2×5=10

(i) What is GUI?

(ii) What is object orientation?

(iii) What is debugging?

(iv) What is the use of label?

(v) What is a MsgBox?

(b) State the advantages of Visual Programming. 3

2. Answer any *four* from the following : 10×4=40

(a) Explain about nested if statement along with its advantages.

(b) Explain the use menu and submenu in Visual applications.

(c) Compare the applications of check box with list box.

(d) Compare do-while loop with for-loop with example.

(e) Explain the database connectivity of MYSQL with Visual applications.

(f) Explain about various arithmetic operators and data types in Visual Basic.

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