

2019

B.Sc. (Hons)

4th Semester Examination

COMPUTER SCIENCE

Paper - GE4T

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Programming in Python

Group - A

1. Answer any *five* questions : 5×2=10
- (a) Define Python interpreter, Python shell.
 - (b) What do you mean by default argument ? Give an example.
 - (c) Write down the difference between top-down and bottom-up approach in programming.

[Turn Over]

- (d) What is the purpose of PYTHON PATH environment variable ?
- (e) What are the elements of python programming? Give example.
- (f) What are the Key features of python ?
- (g) How can you generate random number in python ?
- (h) What is the output of the following program segments of list =

['abcd', 789, 2.23, 'John', 70.28] Calculate list[2] = ? and print list * 2 ?

Group - B

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

- (a) What is the difference between del() and remove () methods of list in python ? What is the output of [1, 2, 3] + [4, 5, 6] ? What are the negative indexes and why are they used ?

2+1+2

- (b) Explain binary search with example. 5

- (c) How can you define a class in python ? Explain with an example.

- (d) What is inheritance in python ? Give an example. 2+3
- (e) Write a program to find GCD of two given numbers.
- (f) What is the usage of help() and dir() function in python ? 2½+2½

Group - C

3. Answer any *one* questions : 1×10
- (a) (i) Write a program to reverse a list of numbers. 5
- (ii) What is multi threading in python ? Give an example. 2+3
- (b) (i) What do mean by Tkinter ? What are negative indexes and why they are used ? 2+3
- (ii) What is the difference between range and x-range in python ? What is the difference between Numpy and Scipy ? 2+3
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[Turn Over]

Programming in VB/GAMBAS Lab

Group - A

1. Answer any *five* questions : 5×2=10

- (a) What is IDE ?
- (b) What is graphical user interface ?
- (c) What is the use of ADODC control in VB ?
- (d) Explain Input Box () function.
- (e) What is an object, properties and methods in VB?
- (f) Why Visual Basic is known as event driven programming language ?
- (g) Differentiate between Drop-Down menu and pop-up menu.
- (h) What is the difference between Implicit and Explicit declaration of variable in VB ?

Group - B

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

- (a) What is scroll bar ? Explain it's use with Image control.

- (b) Explain the difference between single document and MDI.
- (c) Design a VB project to calculate the simple interest.
- (d) Write a program in VB to find factorial of a number.
- (e) Explain event driven programming in VB.
- (f) What is procedure ? Discuss various types of procedure used in V.B.

Group - C

3. Answer any *one* question : 1×10
- (a) (i) Explain the method of connecting an ADO Data control to a database. 6
 - (ii) What are the various modules in VB ? 4
 - (b) (i) Explain combo box in VB. 5
 - (ii) Differentiate option butto and check box with example. 5
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[Turn Over]

Information Security and Cyber Laws

Group - A

1. Answer any *five* questions : 5×2=10

- (a) What is meant by balancing security and Access?
- (b) How information assets are classified ?
- (c) What is residual risk ?
- (d) What is information security Blueprint ?
- (e) What are the objectives of ISO 17799 ?
- (f) What is a VPN and what are its technologies ?
- (g) Differentiate between Symmetric encryption and Asymmetric encryption.
- (h) What are the advantages and disadvantages of using a honey pot ?

Group - B

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

- (a) Explain the components of Information Systems. Discuss the legal and ethical issues associated with the information security. 2+3

- (b) Briefly discuss the ISO 17799/BS7799. Explain the business continue planning. 2+3
- (c) Illustrate in detail risk control strategies. 5
- (d) Explain the different types of firewall systems in detail. Write short note on Packet sniffers, Honey nets. $2+(1\frac{1}{2}+1\frac{1}{2})$
- (e) Draw the major steps involved in contingency planning. 2
- Name the primary functions of IRP, DRP and BCP. 3
- (f) Explain the functions of caesar cipher. 5

Group - C

3. Answer any *one* question : 1×10
- (a) Write five short notes on the following : $2 \times 5 = 10$
- (i) Trap and Trace System
- (ii) Padded cell systems.
- (iii) Digital Certificates

[Turn Over]

(iv) Digital Signature

(v) Steganography

(vi) Password cracking

(b) What is cryptography ? Discuss the different cipher methods with suitable examples. 2+8
