BANKURA UNIVERSITY

B.Sc. Semester-III(Honours) Examination, 2021-22

Subject: Computer Science

Course Code.: SH/CSC/305/SEC-1   Course ID.: 31515

Course Title: Programming in Python

Full Marks: 25   Time: 1Hr. 15min.

The figures in the margin indicate full marks

Answer all the questions.

UNIT-I

1. Answer any five questions: 1×5=5
   (a) What is cache memory?
   (b) Give example of interpreters.
   (c) What is flowchart?
   (d) What is the purpose of '//' operator in python?
   (e) What is the purpose of continue statement in python?
   (f) How to define dictionary variable in python? Give example.
   (g) Name two modern programming languages.
   (h) Mention purpose of two logical operators in python?
   (i) How lists are different from tuple?

UNIT-II

2. Answer any Two questions: 5×2=10
   (a) Explain parts of CPU. How cache memory increases the performance of a computer?
   (b) Write an algorithm that finds the reverse of a given number.
   (c) Explain difference between while and for loop in python.
   (d) Draw the flowchart to check whether a given number is Armstrong or not.

UNIT-III

3. Answer any one question: 10×1=10
   (a) Describe Different types of Operators in python.
   (b) Write Python program to check whether a given number is the Fibonacci number or not.
       Explain recursive function with example.   5+5

Course Code.: SH /CSC/305/SEC-1   Course ID.: 31515

Course Title: Unix/ Linux Programming

Full Marks: 25   Time: 1Hr. 15min

Unit-I

1. Answer any five questions: 1×5=5
   (a) What is Operating system?
   (b) What is the use of fork() function?
   (c) Name different linux Shell.
   (d) Define inter process communication.
   (e) Mention some linux/unix Operating system.
   (f) What is the purpose of 'cal' and 'cat' command in linux shell?
   (g) What is the command to give execute permissions to a file in linux shell?
   (h) What is the different file systems used in Linux?

Unit-II

2. Answer any Two questions: 5×2=10
   (a) Differentiate between shell variables and environment variables and user defined variables.
   (b) Explain the following commands with syntax, options and examples: i) head ii) tail.
   (c) Explain briefly different shells used in different Linux operating systems.
   (d) Why Linux considered as more secured than other OS.

Unit-III

3. Answer any one question: 10×1=10
   (a) Explain briefly on different Linux File system.
   (b) Write a shell script to check whether a given year is leap year or not. Write a shell program to find prime factors of a given number.   5+5