CVM UNIVERSITY

M.Sc. (GEOINFORMATICS) Semester-I Examination-2021

Monday, 1st March – 2021

2:00 PM to 4:00 PM

101400107: PYTHON PROGRAMMING

Total Marks: 60

Note: (1) Attempt all questions.

(2) Figures to the right indicate marks.

Q. 1 (a) **Answer the following multiple choice questions.** **(08)**

(1) Which character is used in Python to make a single line comment?
(a) /   (b) //   (c) #   (d) !

(2) Which of the following operators is the correct option for power(ab)?
(a) a ^ b   (b) a**b   (c) a ^ ^ b   (d) a ^ * b

(3) Given a string s = "Welcome", which of the following code is incorrect?
(a) print s[0]   (b) print s.lower()   (c) print s.strip()   (d) s[1] = 'r'

(4) When will the else part of try-except-else be executed?
(a) always
(b) when an exception occurs
(c) when no exception occurs
(d) when an exception occurs in to except block

(5) To fetch the data, which function we use to run the select query?
(a) fetch()   (b) rawquery()   (c) executequery()   (d) execute()

(6) _____ method is used to programmatically set the text of the line edit in PyQt.
(a) setText()   (b) getText()   (c) text()   (d) selectedText()

(7) Whenever a checkbox is checked or cleared, it emits _____ signal.
(a) buttonChanged()   (b) stateChanged()
(c) buttonClicked()   (d) stateClicked()

(8) _____ method of QgsProject Instance is used to add raster layer in qgis using python.
(a) addRasterLayer()   (b) addMapLayer()
(c) InsertRasterLayer()   (d) InsertMapLayer()

(b) **Answer the following (True or False)** **(08)**

(1) Multiple assignment is not possible in Python.

(2) To display total no. of features in vector layer, layer.featureCount() function is used in python.

(3) Plugin Builder plugin is required to create python plugin in QGis.

(4) Each PyQt widget, which is derived from QObject class, is designed to emit 'slot' in response to one or more events.

(5) label.size() method is used to auto adjust the size of the label in PyQt.

(6) For loop is used to executes a group of statements an unknown number of times.

(7) An argument is the value that is sent to the function when it is called.

(8) "from .. import all" statement imports all attributes of a module.

Q.2		Attempt any six of the following.	(12)
	(1)	What is Python? List out features of Python.	
	(2)	How one can perform input and output in Python? Explain with example.	
	(3)	What is module? How module can be imported in Python?	
	(4)	Explain scope of Variables with example.	
	(5)	Define Signal, Slot	
	(6)	List out and define PyQt Layouts.	
	(7)	Explain in brief about Python Plugins.	
	(8)	Write two methods to run Python code when QGIS starts.	

Q. 3	Write a note on Data types in Python. Explain with example.	(08)
	OR	
Q. 3	Explain various types of operators in Python with example.	(08)

Q. 4	Write a note on Functions in Python. Also explain various ways to pass arguments to the function.	(08)
	OR	
Q. 4	How errors can be handled in Python? Explain all the blocks of exceptional handling.	(08)

Q. 5	Explain QLabel, QLineEdit and QPushButton in detail.	(08)
	OR	
Q. 5	Explain QComboBox and QSpinBox in detail.	(08)

Q. 6	Explain various operations that can be done with vector layer in QGIS using Python	(08)
	OR	
Q. 6	How one can Load vector and raster layers in QGIS using Python.	(08)