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Paper Code : BCAC403 Python Programming
UPID : 400088

Time Allotted : 3 Hours   *Full Marks :70*

The Figures in the margin indicate full marks.
Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

1. Answer *any ten* of the following :   [1 x 10 = 10]

(I)   What will be the output of the following Python code?

```
>>> a={5, 4}
>>> b={1, 2, 4, 5}
>>> a<b
```

(II)   What is the extension of the Python file?

(III)   What will be the output of the following Python program?

```
i = 0
while i < 5:
    print(i)
    i += 1
    if i == 3:
        break
else:
    print(0)
```

(IV)   Suppose list1 is [2, 33, 222, 14, 25], What is list1[:-1]?

(V)   What will be the output of the following Python code?

```
>>>my_tuple = (1, 2, 3, 4)
>>>my_tuple.append( (5, 6, 7) )
>>>print len(my_tuple)
```

(VI)   What will be the value of the following Python expression?
4 + 3 % 5

(VII)   What will be the output of the following Python code?

```
print("Hello {0[0]} and {0[1]}".format(('foo', 'bin')))
```

(VIII)   What will be the output of the following Python code?

```
a=[13, 56, 17]
a.append([87])
a.extend([45, 67])
print(a)
```

(IX)   What will be the output of the following Python code?

```
>>> a={4, 5, 6}

>>> b={2, 8, 6}

>>> a+b
```

(X) What is the order of precedence in python?

(XI) The process of pickling in Python includes _____

(XII) What will be the output of the following Python code?

```
>>>t = (1, 2, 4, 3, 8, 9)

>>>[t[i] for i in range(0, len(t), 2)]
```

Group-B (Short Answer Type Question)

Answer *any three* of the following : [5 x 3 = 15]

2. Define a property that must have the same value for every class instance (object). [5]

3. Define variable in Python? [5]

4. Is elif a nested if in Python? [5]

5. What are functions in Python? [5]

6. Write a Python class to get all possible unique subsets from a set of distinct integers. [5]

Group-C (Long Answer Type Question)

Answer *any three* of the following : [15 x 3 = 45]

7. (a) Define functions in Python. [5]

   (b) Write a Python function that takes a number as a parameter and checks whether the number is prime or not. [10]

8. (a) What are the advantages and disadvantages of using a for loop in Python? [10]

   (b) How can I use a break statement in a for loop in Python? [5]

9. (a) Explain Inheritance in Python with an example. [10]

   (b) How are classes created in Python? [5]

10. Write a Python function student_data () that will take as argument student_name and student_class from the user and print the student name and class. [15]

11. (a) How to comment multiple lines in Python? [5]

    (b) What is a dictionary in Python? Explain with an example. [10]

*** END OF PAPER ***