

**Question Number : 165 Question Id : 640653738303 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 3**

Question Label : Short Answer Question

What is the value of  $P(1 < X < 2.5)$ ? Enter the answer correct to two decimal places.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Range**

**Text Areas : PlainText**

**Possible Answers :**

0.72 to 0.78

## Sem2 Intro to Python

|   |             |
|---|-------------|
| <b>Section Id :</b>   | 64065351401 |
| <b>Section Number :</b>   | 8           |
| <b>Section type :</b>   | Online      |
| <b>Mandatory or Optional :</b>                                      | Mandatory   |
| <b>Number of Questions :</b>  | 15          |
| <b>Number of Questions to be attempted :</b>                        | 15          |
| <b>Section Marks :</b>  | 50          |
| <b>Display Number Panel :</b>                                       | Yes         |
| <b>Section Negative Marks :</b>                                     | 0           |
| <b>Group All Questions :</b>  | No          |
| <b>Enable Mark as Answered Mark for Review and Clear Response :</b> | Yes         |
| <b>Maximum Instruction Time :</b>                                   | 0           |
| <b>Sub-Section Number :</b>   | 1           |

Sub-Section Id :

640653107957

Question Shuffling Allowed :

No

Is Section Default? :

null

Question Number : 166 Question Id : 640653738304 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0


Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER II: INTRODUCTION TO PYTHON (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?  
CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532470583.  YES

6406532470584.  NO

Question Number : 167 Question Id : 640653738305 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

# Useful Data

## Presentation

There are two types of blocks that you would see in all the questions:

### Code

```
1 for i in range(10):  
2     if i % 2 == 0:  
3         print(i)
```

### Input or Output

```
1 0  
2 2  
3 4  
4 6  
5 8
```

In both the blocks, please note that the region to the left of the thin vertical line — **|** — corresponds to line-numbers. Do not confuse the line numbers with the content of the code or the input-output. Just to be clear:

Line Numbers



Code/Input/Output

```
1 0  
2 2  
3 4  
4 6  
5 8
```

## Useful information

### range

Sample behaviour of the `range` function:

- `range(5)` corresponds to the sequence `0, 1, 2, 3, 4`
- `range(1, 5)` corresponds to the sequence `1, 2, 3, 4`
- `range(1, 1)` is the empty sequence

### // operator

`//` is the floor division operator. `5 // 2` is `2` and *not* `2.5`

### NAT → integer

For all NAT questions in this exam, the answer will always be an integer and not a float value. If the answer to a question is 18, then just enter that value. Do *not* enter 18.0

### Options :

6406532470585. ✔ Useful Data has been mentioned above.

6406532470586. ✖ This data attachment is just for a reference & not for an evaluation.

|                              |              |
|------------------------------|--------------|
| Sub-Section Number :         | 2            |
| Sub-Section Id :             | 640653107958 |
| Question Shuffling Allowed : | Yes          |
| Is Section Default? :        | null         |

**Question Number : 168 Question Id : 640653738306 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

Consider a program that accepts a word as input from the user and prints the number of vowels in it. You can assume that the input will be given in lower case.

### Snippet - 1

```
1 word = input()
2 count = 0
3 for char in word:
4     if char in ['a', 'e', 'i', 'o', 'u']:
5         count = count + 1
6 print(count)
```

### Snippet - 2

```
1 word = input()
2 count = 0
3 for char in word:
4     if char in 'aeiou':
5         count = count + 1
6 print(count)
```

Which of these two snippets is correct?

#### Options :

6406532470587. ✖ Only snippet-1 is correct

6406532470588. ✖ Only snippet-2 is correct

6406532470589. ✔ Both snippets 1 and 2 are correct

6406532470590. ✖ Both snippets 1 and 2 are incorrect

**Question Number : 169 Question Id : 640653738307 Question Type : MCQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

We wish to print the following pattern:

```
1 11111
2 10001
3 10001
4 10001
5 11111
```

Which of these two snippets is correct?

### Snippet - 1

```
1 n = 5
2 one = '1'    # len(one) == 1
3 zero = '0'   # len(zero) == 1
4 for i in range(n):
5     if i == 0 or i == n - 1:
6         print(one * n)
7     else:
8         print(one + zero * (n - 2) + one)
```

### Snippet - 2

```
1 n = 5
2 one = '1'    # len(one) == 1
3 zero = '0'   # len(zero) == 1
4 for i in range(n):
5     for j in range(n):
6         if j == 0 or j == n - 1:
7             print(zero, end = '') # an empty string is passed to end
8         else:
9             print(one, end = '') # an empty string is passed to end
10    print()
```



Tip

Some code snippet

```
1 print('1', end = '') # an empty string is passed to end
2 print('2', end = '') # an empty string is passed to end
3 print()
4 print('3' * 5)
```

Output of the above snippet

```
1 12
2 33333
```

**Options :**

6406532470591. ✓ Only snippet-1 is correct

6406532470592. ✗ Only snippet-2 is correct

6406532470593. ✗ Both snippets 1 and 2 are correct

6406532470594. ✗ Both snippets 1 and 2 are incorrect

**Question Number : 170 Question Id : 640653738308 Question Type : MCQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Multiple Choice Question

Which of the code snippets given below computes the minimum of three integers, not necessarily distinct from each other?

### Snippet - 1

```
1 a, b, c = int(input()), int(input()), int(input())
2 if (a <= b <= c) or (a <= c <= b):
3     print(a)
4 if (b <= a <= c) or (b <= c <= a):
5     print(b)
6 else:
7     print(c)
```

### Snippet - 2

```
1 a, b, c = int(input()), int(input()), int(input())
2 if (a < b < c) or (a < c < b):
3     print(a)
4 if (b < a < c) or (b < c < a):
5     print(b)
6 if (c < a < b) or (c < b < a):
7     print(c)
```

Note that the correct code snippet should have *exactly one line in the output*, which displays the minimum of  $a$ ,  $b$  and  $c$ .

### Options :

6406532470595. ✖ Only snippet-1 is correct

6406532470596. ✖ Only snippet-2 is correct

6406532470597. ✖ Both snippets 1 and 2 are correct

6406532470598. ✔ Both snippets 1 and 2 are incorrect

Sub-Section Number : 3

Sub-Section Id : 640653107959

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 171 Question Id : 640653738309 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Max. Selectable Options : 0



Question Label : Multiple Select Question

Select all values of `M` for which the following snippet of code prints the value `True`.

```
1 # M is a list of lists
2 n = len(M)
3
4 flag = True
5 for i in range(n):
6     for j in range(i):
7         if M[i][j] != 0:
8             flag = False
9
10 if flag:
11     print('True')
12 else:
13     print('False')
```

Options :

6406532470599. ✓

1 | `[[1, 3, 0, 5], [0, 2, -2, 5], [0, 0, 3, 1], [0, 0, 0, 5]]`

6406532470600. ✓

1 | `[[10, 20, 30], [0, 3, 4], [0, 0, -3]]`

6406532470601. ✗

1 | `[[1, 0, 0, 0], [4, 10, 0, 0], [3, -1, -2, 0], [10, -3, 4, 5]]`

6406532470602. ✗

1 | `[[0, 1, -1], [-2, 0, 4], [-1, -4, 0]]`

Question Number : 172 Question Id : 640653738310 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Select all inputs for which the code below prints the value `True`.

```
1 sentence = input()
2 # all letters in alpha are in lower case
3 alpha = 'abcdefghijklmnopqrstuvwxyz'
4
5 surprise = True
6 for char in alpha:
7     if char not in sentence:
8         surprise = False
9         break
10
11 print(surprise)
```

Each input is a sentence with a space between consecutive words, all of which are in lower case.

**Options :**

6406532470603. ✓

1 | the quick brown fox jumps over the lazy dog

6406532470604. ✓

1 | how vexingly quick daft zebras jump

6406532470605. ✗

1 | this is a remarkable property

6406532470606. ✗

1 | pack my box with five dozen chips packets

**Sub-Section Number :**

4

**Sub-Section Id :**

640653107960

**Question Shuffling Allowed :**

Yes

**Is Section Default? :**

null

**Question Number : 173 Question Id : 640653738311 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

Question Label : Short Answer Question

What is the output of the following snippet of code? Enter an integer as your answer.

```
1 first = 3
2 second = 9
3
4 i = 2
5 while i <= 5:
6     next_term = first + second
7     first = second
8     second = next_term
9     i += 1
10
11 print(second)
```

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

54

**Question Number :** 174 **Question Id :** 640653738312 **Question Type :** SA **Calculator :** None

**Response Time :** N.A **Think Time :** N.A **Minimum Instruction Time :** 0

**Correct Marks :** 4

Question Label : Short Answer Question

What is the output of the following snippet of code? Enter an integer as your answer.

```
1 word = '12794'
2 out = '' # this is an empty string
3
4 i = len(word) - 1
5 while i >= 0:
6     out += word[i]
7     i -= 1
8
9 print(int(out))
```

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

49721

**Question Number :** 175 **Question Id :** 640653738313 **Question Type :** SA **Calculator :** None

**Response Time :** N.A **Think Time :** N.A **Minimum Instruction Time :** 0

**Correct Marks :** 4

**Question Label :** Short Answer Question

Consider the following snippet of code.

```
1 word_1 = input()
2 word_2 = input()
3 word_3 = input()
4 word_4 = input()
5
6 level = 0
7 if word_1 in word_2:
8     level = level + 1
9     if word_2 in word_3:
10         level = level + 1
11         if word_3 in word_4:
12             level = level + 1
13
14 print(level)
```

Consider the following inputs.

| Input                                  | Output   |
|--|----------|
| be<br>abel<br>abeliangroup<br>group    | <i>a</i> |
| abc<br>abc<br>abc<br>abc               | <i>b</i> |
| group<br>gro<br>ro<br>r                | <i>c</i> |
| phenomenon<br>phenomenons<br>non<br>on | <i>d</i> |

If  $a, b, c, d$  are the outputs produced for each of these four inputs, form the four digit number  $abcd$  and enter that as your answer. For example, if  $a = 1, b = 2, c = 3, d = 4$ , your answer should be 1234.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

**Question Number : 176 Question Id : 640653738314 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4**

**Question Label : Short Answer Question**

What is the output of the following snippet of code?

```
1 L = ['2', '370', '1234', '1634', '38', '100']
2 count = 0
3
4 for num in L:
5     val = 0
6     for x in num:
7         val = val + (int(x) ** len(num))
8     if val == int(num):
9         count = count + 1
10
11 print(count)
```

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

3

**Sub-Section Number : 5**

**Sub-Section Id : 640653107961**

**Question Shuffling Allowed : No**

**Is Section Default? : null**

**Question Id : 640653738321 Question Type : COMPREHENSION Sub Question Shuffling**

**Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Question Numbers : (177 to 178)**

Question Label : Comprehension

Consider the following snippet of code.

```
1 a = int(input())
2 b = int(input())
3 string = 'IAmAnIndianCitizen'
4 print(string[a:b])
```

The output of this code is Indian.

Based on the above data, answer the given subquestions.

### Sub questions

**Question Number : 177 Question Id : 640653738322 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Short Answer Question

What is the value of  $a$  , the first input entered by the user, if it is given that the user entered a positive integer?

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

5

**Question Number : 178 Question Id : 640653738323 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 1**

Question Label : Short Answer Question

What is the value of  $b$  , the second input entered by the user, if it is given that the user entered a positive integer?

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

11

|                              |              |
|------------------------------|--------------|
| Sub-Section Number :         | 6            |
| Sub-Section Id :             | 640653107962 |
| Question Shuffling Allowed : | No           |
| Is Section Default? :        | null         |

**Question Id :** 640653738315 **Question Type :** COMPREHENSION **Sub Question Shuffling Allowed :** No **Group Comprehension Questions :** No **Question Pattern Type :** NonMatrix **Calculator :** None **Response Time :** N.A **Think Time :** N.A **Minimum Instruction Time :** 0

**Question Numbers :** (179 to 180)

**Question Label :** Comprehension



Execute the following snippet of code and answer the two sub-questions that follow:

```
1 L = [4, 1, 3, 2, 4, 0, 4, 3, 1, 3, 4]
2
3 n = max(L) # finds the maximum element in L
4 P = [ ]
5 for x in range(n + 1):
6     P.append(0)
7
8 for x in L:
9     P[x] += 1
10 print(P)
11 #####
12 #####
13
14 mnum, mval = 0, P[0]
15 for i in range(len(P)):
16     if P[i] > mval:
17         mval = P[i]
18         mnum = i
19
20 print(mnum)
```

### Sub questions

**Question Number : 179 Question Id : 640653738316 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

What is the first line of output?

**Options :**

6406532470611. ✖

1 | [4, 1, 3, 2, 4, 0, 4, 3, 1, 3, 4]

6406532470612. ✖

1 | [0, 1, 2, 3, 4]

6406532470613. ✖

1 | [0, 0, 0, 0, 0]

6406532470614. ✓

1 | [1, 2, 1, 3, 4]

**Question Number : 180 Question Id : 640653738317 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question

What is the second line of the output? Enter an integer as your answer.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

4

**Question Id : 640653738318 Question Type : COMPREHENSION Sub Question Shuffling**

**Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Question Numbers : (181 to 182)**

Question Label : Comprehension

Execute the following snippet of code and answer the subquestions that follow:

```
1 num = '1263.871945'
2 start = False
3 out = '' # empty string
4 loop_counter = 0
5 for x in num:
6     loop_counter = loop_counter + 1
7     if x == '.':
8         start = True
9         trunc = -1
10    if start:
11        trunc += 1
12        if trunc == 3:
13            break
14    out = out + x
15
16 print(loop_counter)
17 print(float(out))
```

### Sub questions

**Question Number : 181 Question Id : 640653738319 Question Type : SA Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Short Answer Question

What is the first line of the output?

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

8

**Question Number : 182 Question Id : 640653738320 Question Type : MCQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

What is the second line of the output?

**Options :**

6406532470617. ✔ 1263.87

6406532470618. ✖ 1263

6406532470619. ✖ 1263.871

6406532470620. ✖ 1263.8719

**Question Id : 640653738324 Question Type : COMPREHENSION Sub Question Shuffling**

**Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Question Numbers : (183 to 184)**

Question Label : Comprehension

Execute the following snippet of code and answer all the subquestions that follow:

```
1 P = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
2
3 Q = [ ]
4 R = [ ]
5 for i in range(len(P)):
6     x = 0
7     y = 0
8     for j in range(len(P)):
9         x = x + P[i][j]
10        y = y + P[j][i]
11    Q.append(x)
12    R.append(y)
13
14 print(Q)
15 print(R)
```

**Sub questions**

**Question Number : 183 Question Id : 640653738325 Question Type : MCQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

What is the first line of the output?

**Options :**

6406532470623. ✓

1 | [6, 15, 24]

6406532470624. ✗

1 | [12, 15, 18]

6406532470625. ✗

1 | [1, 5, 9]

6406532470626. ✗

1 | [3, 5, 7]

**Question Number : 184 Question Id : 640653738326 Question Type : MCQ Is Question**

**Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 2**

Question Label : Multiple Choice Question

What is the second line of the output?

**Options :**

6406532470627. ✗

1 | [6, 15, 24]

6406532470628. ✓

1 | [12, 15, 18]

6406532470629. ✖

1 | [1, 5, 9]

6406532470630. ✖

1 | [3, 5, 7]