Sec B Answers

Ques 1:

```python
squares = [x**2 for x in range(1, 11) if x % 2 == 0]
  print(squares)
```

Ques 2:

```python
  my_list = [1, 2, 3, 1, 2, 1, 3, 4, 5]
  count_dict = {}
  for item in my_list:
      count_dict[item] = count_dict.get(item, 0) + 1
  print(count_dict)
```

Ques 3:

```python
  import numpy as np
  array1 = np.array([1, 2, 3])
  array2 = np.array([4, 5, 6])
  dot_product = np.dot(array1, array2)
  print(dot_product)
```

Ques 4:

```python
score = int(input("Enter the student's score: "))
  if score >= 90:
      grade = 'A'
  elif score >= 80:
      grade = 'B'
  elif score >= 70:
      grade = 'C'
```

```python
    elif score >= 60:
        grade = 'D'
    else:
        grade = 'F'
    print("The student's grade is:", grade)
```

ques 5 :

```python
squares = [x**2 for x in range(1, 11) if x % 3 != 0]
print(squares)
```

Ques 6:

```python
dict1 = {'a': 1, 'b': 2}
dict2 = {'c': 3, 'd': 4}
concatenated_dict = {**dict1, **dict2}
print(concatenated_dict)
```

Ques 7:

```python
import numpy as np
array = np.array([1, 2, 3, 4, 5])
mean = np.mean(array)
median = np.median(array)
std_dev = np.std(array)
print("Mean:", mean)
print("Median:", median)
print("Standard Deviation:", std_dev)
```

Ques:8

```python
year = int(input("Enter a year: "))
    if year % 4 == 0:
        if year % 100 == 0:
```

```python
    if year % 400 == 0:
        print(year, "is a leap year.")
    else:
        print(year, "is not a leap year.")
  else:
    print(year, "is a leap year.")
else:
  print(year, "is not a leap year.")
```