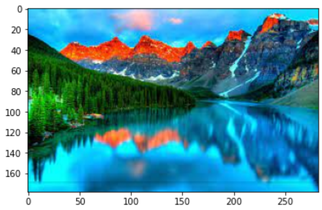
In [1]:
```
#IMAGE TO PENCIL SKETCH CONVERSION
import cv2
```

In [2]:
```
image=cv2.imread("nature.jpeg")
image
```

Out[2]:
```
array([[[248, 208,  60],
        [248, 208,  60],
        [249, 209,  61],
        ...,
        [248, 227,  15],
        [242, 228,  16],
        [240, 230,  12]],

       [[249, 206,  59],
        [248, 208,  60],
        [251, 208,  61],
        ...,
        [251, 226,  16],
        [248, 228,  13],
        [246, 229,  12]],

       [[249, 204,  59],
        [248, 204,  59],
        [250, 205,  60],
        ...,
        [255, 223,  15],
        [255, 226,   9],
        [254, 227,   9]],

       ...,

       [[246, 220,  19],
        [250, 223,  18],
        [255, 229,  19],
        ...,
        [250, 171,  14],
        [233, 142,   9],
        [216, 120,   3]],

       [[248, 213,  15],
        [248, 214,  14],
        [250, 216,   9],
        ...,
        [248, 177,  13],
        [239, 157,   8],
        [230, 142,   6]],

       [[252, 212,  16],
        [252, 213,  14],
        [252, 215,  11],
        ...,
        [246, 179,  10],
        [237, 160,   3],
        [231, 145,   1]]], dtype=uint8)
```

In [3]:
```
import matplotlib.pyplot as plt
%matplotlib inline
img_rgb=cv2.cvtColor(image,cv2.COLOR_BGR2RGB)
plt.imshow(img_rgb)
```

Out[3]:
```
<matplotlib.image.AxesImage at 0x2d9c8a05940>
```

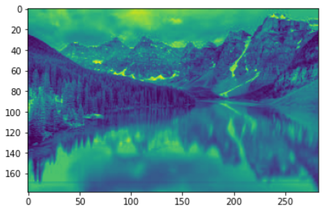


In [4]:
```
gray_image=cv2.cvtColor(image,cv2.COLOR_BGR2GRAY)
gray_image
```

Out[4]:
```
array([[168, 168, 169, ..., 166, 166, 166],
       [167, 168, 169, ..., 166, 166, 166],
       [166, 166, 167, ..., 164, 164, 165],
       ...,
       [163, 165, 169, ..., 133, 113,  96],
       [158, 158, 158, ..., 136, 122, 111],
       [158, 158, 158, ..., 136, 122, 112]], dtype=uint8)
```

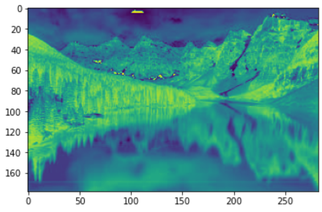
In [5]:
```
plt.imshow(gray_image)
```

Out[5]:
```
<matplotlib.image.AxesImage at 0x2d9c9163d30>
```



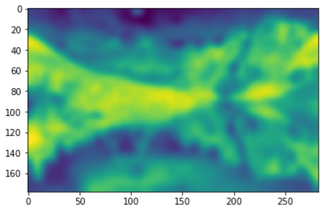
In [6]:
```
inverted_image=225- gray_image
plt.imshow(inverted_image)
```

Out[6]:
```
<matplotlib.image.AxesImage at 0x2d9c91fc580>
```



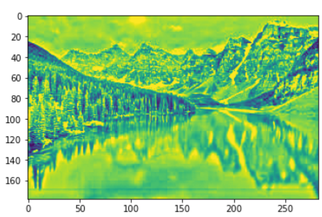
In [7]:
```
blurred=cv2.GaussianBlur(inverted_image,(21,21),0)
plt.imshow(blurred)
```

Out[7]:
```
<matplotlib.image.AxesImage at 0x2d9c9257d90>
```



In [8]:
```
inverted_blurred=255-blurred
pencil_sketch=cv2.divide(gray_image,inverted_blurred,scale=256.0)
plt.imshow(pencil_sketch)
```

Out[8]:
```
<matplotlib.image.AxesImage at 0x2d9c92bb5e0>
```



In [ ]: