In [13]:
```
import numpy as np
ones_arr=np.ones((3,3))
ones_arr
```

Out[13]:
```
array([[1., 1., 1.],
       [1., 1., 1.],
       [1., 1., 1.]])
```

In [15]:
```
ones_arr=np.ones((5,5),dtype=int)
ones_arr
```

Out[15]:
```
array([[1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1]])
```

In [17]:
```
ones_arr*255
```

Out[17]:
```
array([[255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255]])
```

In [19]:
```
import matplotlib.pyplot as plt
```

In [21]:
```
%matplotlib inline                #      #Plot all graph inside bounding boxes
```

```
UsageError: unrecognized arguments: # #Plot all graph inside bounding boxes
```

In [23]:
```
from PIL import Image             # python Imaging Library
```

In [25]:
```
horse_img=Image.open(r'C:\Users\Rinku Pawar\Downloads\nature-field-animal-634613.jp
```

In [28]:
```
horse_img
```

Out[28]:

In [30]:
```
type(horse_img)
```

Out[30]:
```
PIL.JpegImagePlugin.JpegImageFile
```

In [32]:
```
horse_arr=np.asarray(horse_img)
horse_arr
```

Out[32]:
```
array([[[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 27,  28,  22],
        [ 29,  30,  24],
        [ 31,  32,  26]],

       [[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 28,  29,  23],
        [ 29,  30,  24],
        [ 30,  31,  25]],

       [[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 29,  30,  24],
        [ 29,  30,  24],
        [ 29,  30,  24]],

       ...,

       [[ 85,  88,   0],
        [ 86,  93,  15],
        [ 91, 102,  36],
        ...,
        [ 91, 108,  40],
        [ 97, 114,  43],
        [ 89, 106,  35]],

       [[ 72,  76,   0],
        [ 68,  74,   0],
        [ 66,  78,  14],
        ...,
        [ 79,  96,  28],
        [ 85, 102,  31],
        [ 82,  99,  28]],

       [[ 66,  69,   0],
        [ 60,  66,   0],
        [ 55,  66,   6],
        ...,
        [ 77,  94,  26],
        [ 82,  99,  28],
        [ 82,  99,  28]]], dtype=uint8)
```

In [34]:
```
type(horse_arr)
```

Out[34]:
```
numpy.ndarray
```

In [36]:
```
plt.imshow(horse_arr)
```

Out[36]: <matplotlib.image.AxesImage at 0x1a90079a9c0>

In [38]:
```
horse_arr.shape
```

Out[38]: (4068, 6096, 3)

In [ ]:
```
plt.imshow(horse_arr[:,:,1],cmap='grey')
```

In [ ]:
```
horse_red=np.asarray(horse_img)
horse_red
```

In [ ]:
```
plt.imshow(horse_red[:,:,2])
```

In [40]:
```
horse_red=horse_arr.copy()
horse_red
```

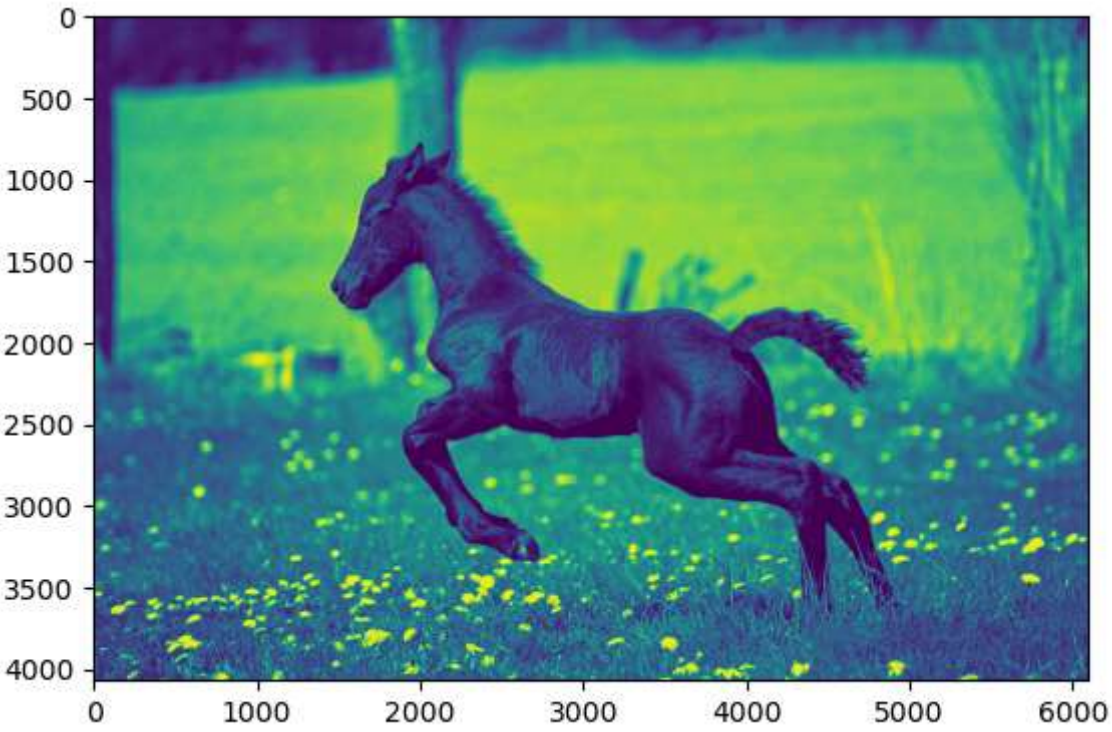
Out[40]:
```
array([[[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 27,  28,  22],
        [ 29,  30,  24],
        [ 31,  32,  26]],

       [[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 28,  29,  23],
        [ 29,  30,  24],
        [ 30,  31,  25]],

       [[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 29,  30,  24],
        [ 29,  30,  24],
        [ 29,  30,  24]],

       ...,

       [[ 85,  88,   0],
        [ 86,  93,  15],
        [ 91, 102,  36],
        ...,
        [ 91, 108,  40],
        [ 97, 114,  43],
        [ 89, 106,  35]],

       [[ 72,  76,   0],
        [ 68,  74,   0],
        [ 66,  78,  14],
        ...,
        [ 79,  96,  28],
        [ 85, 102,  31],
        [ 82,  99,  28]],

       [[ 66,  69,   0],
        [ 60,  66,   0],
        [ 55,  66,   6],
        ...,
        [ 77,  94,  26],
        [ 82,  99,  28],
        [ 82,  99,  28]]], dtype=uint8)
```

In [42]:
```
horse_red.shape
```

Out[42]:
```
(4068, 6096, 3)
```

In [46]:
```
plt.imshow(horse_red[:,:,0])
```

Out[46]: <matplotlib.image.AxesImage at 0x1a9008c8c50>

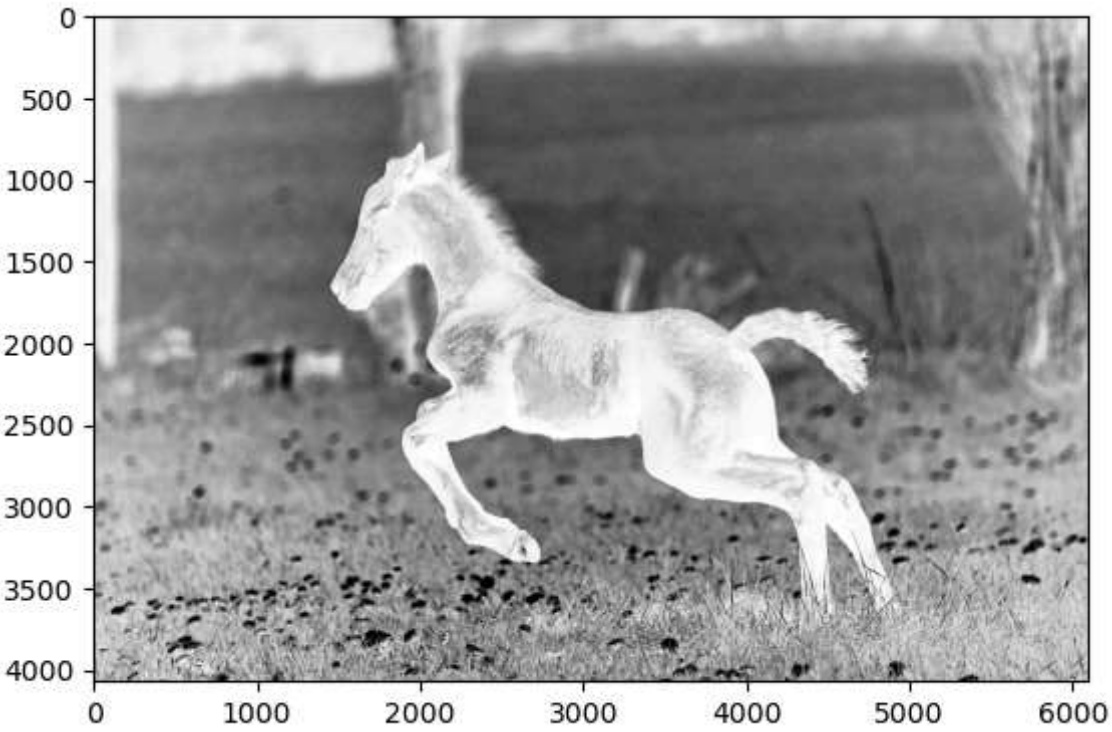


In [64]:
```
plt.imshow(horse_red[:,:,1],cmap='YlGn')
```

Out[64]: <matplotlib.image.AxesImage at 0x1a923416c90>

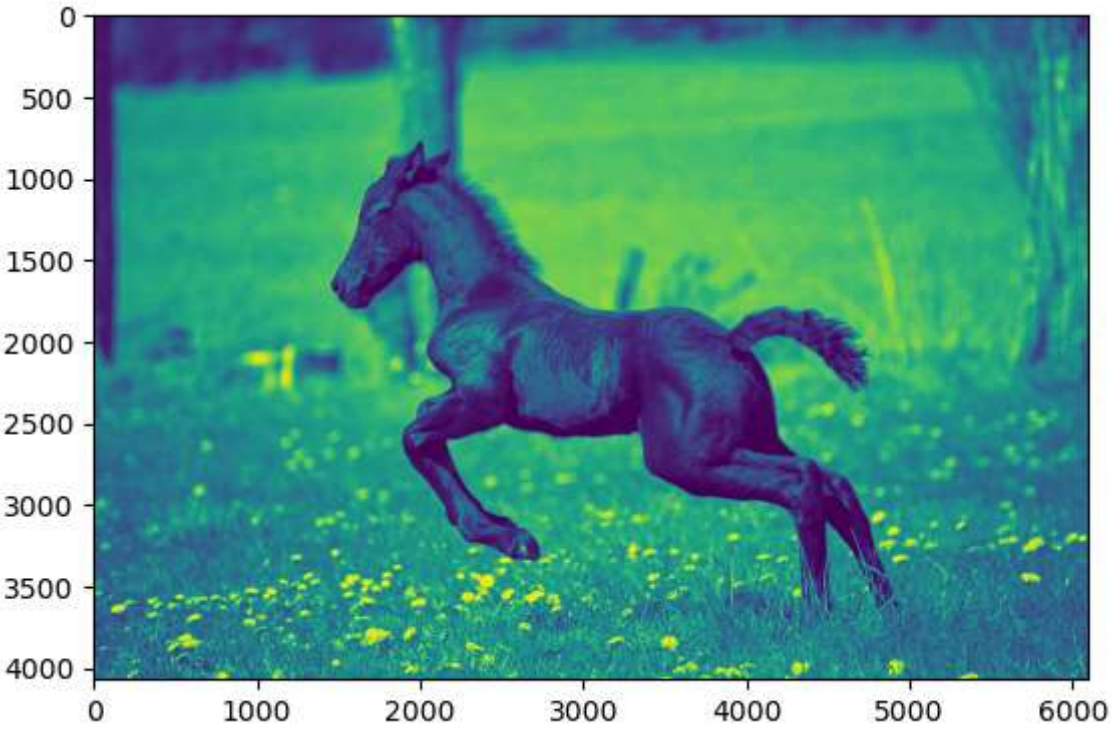
In [70]:
```
plt.imshow(horse_red[:,:,1],cmap='Greys')
```

Out[70]: <matplotlib.image.AxesImage at 0x1a9232a79e0>



In [74]:
```
plt.imshow(horse_red[:,:,1])
```

Out[74]: <matplotlib.image.AxesImage at 0x1a926542ed0>



In [76]:
```
horse_red[:,:,2]=0
```

In [80]:
```
plt.imshow(horse_red)
```

Out[80]: <matplotlib.image.AxesImage at 0x1a926543aa0>

In [84]:
```
arr1=np.asarray(horse_img)
arr1
```

Out[84]:
```
array([[[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 27,  28,  22],
        [ 29,  30,  24],
        [ 31,  32,  26]],

       [[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 28,  29,  23],
        [ 29,  30,  24],
        [ 30,  31,  25]],

       [[ 20,  20,  20],
        [ 20,  20,  20],
        [ 20,  20,  20],
        ...,
        [ 29,  30,  24],
        [ 29,  30,  24],
        [ 29,  30,  24]],

       ...,

       [[ 85,  88,   0],
        [ 86,  93,  15],
        [ 91, 102,  36],
        ...,
        [ 91, 108,  40],
        [ 97, 114,  43],
        [ 89, 106,  35]],

       [[ 72,  76,   0],
        [ 68,  74,   0],
        [ 66,  78,  14],
        ...,
        [ 79,  96,  28],
        [ 85, 102,  31],
        [ 82,  99,  28]],

       [[ 66,  69,   0],
        [ 60,  66,   0],
        [ 55,  66,   6],
        ...,
        [ 77,  94,  26],
        [ 82,  99,  28],
        [ 82,  99,  28]]], dtype=uint8)
```

In [86]:
```
type(arr1)
```

Out[86]:
```
numpy.ndarray
```

In [88]:
```
arr1.shape
```

Out[88]: (4068, 6096, 3)

In [92]:
```
horse_img1=arr1.copy()
```

In [94]:
```
horse_img1[:,:,0]=0
```

In [96]:
```
plt.imshow(horse_img1)
```

Out[96]: <matplotlib.image.AxesImage at 0x1a9264afdd0>

In [98]:
```
horse_img1[:,:,1]=0
```

In [100…
```
plt.imshow(horse_img1)
```

Out[100… <matplotlib.image.AxesImage at 0x1a9264adf40>


0
500
1000
1500
2000
2500
3000
3500
4000
0
1000
2000
3000
4000
5000
6000

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: