

**e-Yantra Robotics Competition Plus**

**(eYRC+ Pilot)**

**<Please enter your team id here>**

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| --- | --- |
| **Team leader name** |  |
| **College** |  |
| **e-mail** |  |
| **Date** |  |

**Image Processing** (8)

Write down the answers to the following questions.

1. What is the resolution (size) of the test image assigned in the task?
2. What is the use of thresholding an image?

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Answer format: Bulleted form

1. Answer to question 1

2. Answer to question 2

3. Answer to question 3 etc.

>

Explain the algorithm used to perform the task given in practice\_test folder.

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Answer format: Bulleted form

1. Step 1

2. Step 2

3. Step 3 etc.

>

**Software used**  (7)

Write down the answers to the following questions.

1. Write a function in python to open a color image and convert the image into grayscale. You are required to write a function *color\_grayscale(filename,g)* which takes two arguments:
   1. filename: a color image (Test color image is in folder “Task1\_Practice/test\_images”. Pick first image to perform the experiment.)
   2. g: an integer

Output of program should be a grayscale image if g = 1 and a color image otherwise.

<Answer format:

Code for question 1, explanation of code in form of comments. Use the snippet given below to write the function. >

**def** color\_grayscale**(**filename**,**g**):**

'''

filename-- input color image stored as file(Test color image is in folder

“Task1\_Practice/test\_images”. Pick first image to perform the experiment.)

g -- int 0 or 1

returns img-- grayscale of input image if g=1 else color image

'''

#add your code here

**return(**img**)**