MINISTRY OF HIGHER EDUCATION IMAM JA'AFAR AL-SADIQ UNIVERSITY - AL MUTHANNA **College:** 

**Department**:



Time: 3Hrs. Date: / /2020 Subject: Digital Image Processing Level: Attempt: First

## Answer all questions

## Q1/ Answer by true or false for all the following statements (15 points):

- Images exist only in the visual spectrum.
- \*\*<mark>\*\*</mark>\*\*\*\*\*\*\*
- \*\*\*\*\*\*\*\*\*\*
- \*\*\*\*\*

## Q2/ Select the right answer for each of the following questions (15 points):

- When you enter dark room in a bright day, it takes some time before you can see reasonably well in the room. Which visual process explains this phenomena?
  - Brightness adaptation
  - Binocular vision (2 eyes)
  - Color vision
  - Dilated pupils

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  - \*\*\*\*\*\*\*\*\*\*\*
  - \*\*\*\*\*\*\*\*\*\*\*\*\*\*
  - \*\*\*\*\*\*\*\*\*

Q3/ Complete the following statements by filling the blanks (15 points):

- The determinant of a rotation matrix is: ------
- \*\*\*\*\*\*\*\*\*\*
- \*\*\*\*\*\*\*\*\*\*
- \*\*\*\*\*\*\*\*\*\*\*
- \*\*\*\*\*\*\*\*\*\*\*\*

Q4/ What is positron emission tomography (PET) (5 points)? And how it works (20 points)?

Q5/ How the imaging machines advance our pictorial information (30 points)?