***FINAL EXAM Question 5***

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***Course: 2812ICT Perceptual Computing (lectured by Alan Wee-Chung)***

A)

p3

p2

Epipolar line for p3

p1

Epipolar line for p2

Intersection with given image when traveling from given centre to given point

Epipolar line for p1

Optical centre’ of image 2

Epipole intersection of vector T through image 2

Epipole intersection of vector T through image 1

Vector T from optical centre to optimal centre ‘

Optical centre of image 1

As can be seen in the image above, each point represented on image 1 can be found by some where on image 2 along the line of intersection between image 2 and a plane created by the optical centre of image 1 and 2 and each p respectively, this line is known as the epipolar line for a given plane

Furthermore, as all of these said planes are made up by the vector traveling from the optical centre of image 1 and image 2, all created planes create and epiline which intersects with a point known as the epipole, the location in which the vector from image 1 optical centre to image 2 optical centre intersects with the images respectively.

B)

epipole