



Malaviya National Institute of Technology Jaipur
Department of Computer Science Engineering
Computer Graphics Lab CSL310
Mid-Sem Evaluation (Group A3), Date: Feb 22, 2024

Time: 9:00am - 11:00am

Spring 2024, VI Semester

Max marks: 20

All questions are mandatory. You can use Google Search to look up syntax, but not AI tools like ChatGPT.

1. (a) Let $S_{x,y}$ be a scaling matrix where x, y are the scale factors along the x and y axis. Prove the following equation:

$$S_{a,b} \cdot S_{c,d} = S_{c,d} \cdot S_{a,b} = S_{ac,bd}$$

(5)

- (b) Then experimentally write a code proving the same for the test image (test_mid.png). Also, write the structure of the code in the answer sheet in about 100 words.

(5)

2. (a) You have already performed homography in one of the lab assignments. Use the idea of homography for stitching image two images (paris_1.png, paris_2.png). The correspondence points can be selected manually. Inbuilt functions related to stitching such as cv2.warpAffine are not allowed.

(Hint: Lecture notes on homography and image stitching)

(10)

*****Best wishes*****