Multiple Choice Questions
Computer Vision
USTHB University, April, 2022

First Name:	Last Name:	Signature:

Select (one or many) correct answer for the following questions:

1- Epipolar point is:
   a- Is the intersection of all epipolar lines on the image plane
   b- Is the image of the projection center of the second camera
   c- Is a specific point of epipolar line
   d- Is the projection of point at infinity

2- Epipolar plane is defined by:
   a- two image points and one projection center
   b- two matched image points and one projection center
   c- One image points and two projection centers
   d- Two image points and two projection centers

3- The epipolar line is useful for :
   a- The computation of epipolar line.
   b- To find the match on the second image of each point in the first image.
   c- To find the epipole points on each image plane.
   d- To measure the distance enter-cameras.

4- We express the relationship between the three coordinates of two matched points using:
   a- The essential matrix
   b- The rotation and translation of the right camera with respect to the left camera frame.
   c- Using the fundamental matrix

5- The essential matrix may be inferred from:
   a- Calibration matrices and the fundamental matrix
   b- Calibration matrices and the epipolar plane.
   c- Epipolar plane and the calibration matrices.

6- To estimate the fundamental matrix we need:
   a- To compute before the essential matrix
   b- To use at least 6 pairs of matched points
   c- To use more than 8 pairs of matched points

7- The projection matrix P:
  a- Is specific to each view
  b- Expresses the image point coordinates using intrinsic and extrinsic parameters
  c- Is calculated as the product of the intrinsic and extrinsic matrices.

8- To calibrate a camera:
  a- We need at least the 3D coordinates of 4 scene points and their images.
  b- We need no more than the 3D coordinates of 6 scene points and their images.
  c- We need the image coordinates of 4 pairs of matched points.

9- For camera calibration, we need:
  a- Known non planar 3D coordinates of scene points with a static camera.
  b- Planar 3D coordinates of scene points with dynamic camera
  c- Known non planar 3D coordinates of scene points with a dynamic camera

10- A stereo system of vision is composed by:
  a- Two cameras such that the image planes are planar
  b- Two cameras such that their image planes are not planar
  c- Two cameras

11- In case of simple stereo system, for depth computation:
  a- We need to know the calibration matrix.
  b- The disparity is sufficient
  c- We need to know the stereo correspondence of image points.

12- For depth computation, increasing the size block will:
  a- Give an accurate depth map and increase the computation time.
  b- Decrease the computation time and decrease the accuracy of depth map.
  c- Be without effect on the depth map computation.

13- Image rectification is made:
  a- In order to facilitate the depth computation.
  d- To have horizontal epipolar lines
  e- To have the epipoles at infinity.

14- For image rectification, we need:
  f- Matched image points and the calibration matrix.
  g- Matched image points and the Fundamental matrix.
  h- Only the Matched image points.

15- The computed disparity:
  i- Is a positive or negative value.
  j- Is not equal to zero.
  k- It depends on the depth of the 3D points.