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Courses » Design Practice - II

Announcements

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Unit 3 - WEEK 02 Design Practice II

Course outline

How to access the portal

WEEK 01 Design practice II

WEEK 02 Design Practice II

☒ Representation of curves☐ Parametric representation of synthetic curves☐ Curve fitting problem (Hermite case)☒ Problem solving (based on Bezier curve)☒ Representation of Surfaces☐ Quiz : Week 02_Assignment 02☐ Solutions_Week 02_Assignment 02☐ WEEK 2 - FEEDBACK Design Practice - II

Week 02_Assignment 02

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Due on 2018-09-12, 23:59 IST.

1) Which of the following is not a synthetic entity?

1 point

- ☐ Hyperbola
- ☐ Bezier curve
- ☐ B-spline curve
- ☐ Cubic-spline curve

No, the answer is incorrect.

Score: 0

Accepted Answers:

Hyperbola

2) The number of tangents required to describe cubic spline is:

1 point

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

No, the answer is incorrect.

Score: 0

Accepted Answers:

1

3) A translation is applied to an object by:

1 point

- ☐ Repositioning it along with circular path
- ☐ Repositioning it along with straight line path

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4) In 2D-translation, a point (X, Y) can move to the new position (X', Y') by using the equation **1 point**

- ☐ $X' = X + dX$ and $Y' = Y + dX$
- ☐ $X' = X + dY$ and $Y' = Y + dX$
- ☐ $X' = X + dX$ and $Y' = Y + dY$
- ☐ $X' = X - dX$ and $Y' = Y - dX$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$X' = X + dX$ and $Y' = Y + dY$

5) The translation distances (dx, dy) is called as **1 point**

- ☐ Translation vector
- ☐ Shift vector
- ☐ Both Translation and shift vector
- ☐ None of them are true

No, the answer is incorrect.

Score: 0

Accepted Answers:

Both Translation and shift vector

6) The basic geometric transformations are: **1 point**

- ☐ Translation
- ☐ Scaling
- ☐ Rotation
- ☐ all of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

all of these

7) _____ is a rigid body transformation that moves objects without deformation. **1 point**

- ☐ Rotation
- ☐ Scaling
- ☐ Translation
- ☐ all of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

Translation

8) To change the position of a circle or ellipse we translate **1 point**

- ☐ Center coordinates
- ☐ Center coordinates and redraw the figure in new location
- ☐ Outline coordinates
- ☐ All of the mentioned

No, the answer is incorrect.

Score: 0

Accepted Answers:

Center coordinates and redraw the figure in new location

9)

1 point

A unit square is transformed by a 2x2 transformation matrix. The resulting position vectors are:

$$[X'] = \begin{bmatrix} 0 & 0 \\ 2 & 3 \\ 8 & 4 \\ 6 & 1 \end{bmatrix} \text{ Determine the transformation matrix used.}$$

☐ $\begin{bmatrix} 2 & 3 \\ 4 & 1 \end{bmatrix}$

☐ $\begin{bmatrix} 2 & 3 \\ 0 & 1 \end{bmatrix}$

☐ $\begin{bmatrix} 2 & 0 \\ 8 & 0 \end{bmatrix}$

☐ $\begin{bmatrix} 2 & 3 \\ 8 & 4 \end{bmatrix}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$\begin{bmatrix} 2 & 3 \\ 4 & 1 \end{bmatrix}$$

10) Consider a triangle whose vertices are (2 2), (4 2) and (4 4). Find out the transformed vertices using the concatenation method of the triangles as it be rotated by 90 degrees about the origin followed by reflection through the line $y = -x$. 1 point

☐ $\begin{bmatrix} -2 & 2 \\ 4 & 2 \\ -4 & 4 \end{bmatrix}$

☐ $\begin{bmatrix} 2 & -2 \\ 4 & -2 \\ 4 & -4 \end{bmatrix}$

☐ $\begin{bmatrix} -2 & 2 \\ -4 & 2 \\ -4 & 4 \end{bmatrix}$

☐ $\begin{bmatrix} -2 & 2 \\ -4 & 6 \\ -6 & 4 \end{bmatrix}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$\begin{bmatrix} -2 & 2 \\ -4 & 2 \\ -4 & 4 \end{bmatrix}$$

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