UNIT 1:

1. A translation is applied to an object by

a) Repositioning it along with straight line path

b) Repositioning it along with circular path

c) Only b

d) All of the mentioned

Explanation: A translation is applied to an object by repositioning it along with straight line path from one location to another.

2) The original coordinates of the point in polar coordinates are :

a. X’=r cos (Ф +ϴ) and Y’=r cos (Ф +ϴ)

b.X’=r cos (Ф +ϴ) and Y’=r sin (Ф +ϴ)

c.X’=r cos (Ф -ϴ) and Y’=r cos (Ф -ϴ)

d.X’=r cos (Ф +ϴ) and Y’=r sin (Ф -ϴ)

3) Positive values for the rotation angle ϴ defines

(A) Counterclockwise rotations about the endpoints

(B) Counterclockwise translation about the pivot point

(C) Counterclockwise rotations about the pivot point

(D) Clockwise rotations about the pivot point

4) In Bresenham's algorithm, while generating a circle , it is easy to generate?

a. One octant first and other by successive rotation

b. One octant first and other by successive translation

c. One octant first and other by successive reflection

d. All octants

5) A line with endpoints codes as 0000 and 0100 is ?

a. Completely visible

b. Completely invisible

c. Partially invisible

d. Trivially invisible

6) In the raster scan method for transformation, a 90º rotation can be performed by ?

a.by coping each row of the block into a column in the new frame buffer location

b. reversing the order of bits within each row in the frame buffer

c. by performing XOR on the frame buffer location

d. None of above

7)Line produced by moving pen is \_\_ at the end points than the line produced by the pixel replication?

a. straight

b. thin

c. both (a) and (b)

d. thicker

8) The region code 0000 represents the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. bottom clipping window

b. right clipping window

c. left clipping window

d. viewing window

9) A two dimensional rotation is applied to an object by repositioning it along a?

a. upward in the x-y plane

b. diagonals path in the x-y plane

c. circular path in the x-y plane

d. straight path in the x-y plane

10) If an object is rotated through an angle A in clockwise direction, the rotation matrix R= ...............

a.cos A sin A-sin A cos A

b.cos A -sin Asin A cos A

c.sin A cos A - cos A sin A

d.None

11) Forming products of transformation matrices is often referred as

a.Concatenation

b.Composition

c.both a & b

d.None of above

12) The process of mapping a world window in world coordinate system to viewport are called

a. Transformation viewing

b. Viewport

c. Clipping window

d. Screen coordinate system

UNIT 2:

1. The types of projection are

**a.** Parallel projection and perspective projection

**b.** Perpendicular and perspective projection

**c.** Parallel projection and Perpendicular projection

d. None of these

1. The types of parallel projection are

a. Orthographic projection and quadric projection

b. Orthographic projection and oblique projection

c. Oblique projection and quadric projection

d. None of these

1. The projection in which the projection plane is allowed to intersect the x, y and z-axes at equal distances is

a. Isotonic projection

b. Constructive solid geometry projection

c. Isometric projection

d. Back face removal projection

1. Engineering drawing commonly applies ?

a. orthographic projection

b. oblique projection

c. perspective projection

d. none of the above

1. The subcategories of orthographic projection are ?

**a.** isometric, dimetric, trimetric

**b.** cavalier, cabinet

**c.** cavalier, cabinet, isometric

**d.** isometric, cavalier, trimetric

1. The types of hidden surface removal algorithm are

**a.** Depth comparison, Z-buffer, back-face removal

**b.** Scan line algorithm, priority algorithm

**c.** BSP method, area subdivision method

**d.** All of these

1. Ray-tracing is an extension of

a. Ray calling

**b. Ray casting**

c. Ray sampling

d. Ray coherence

1. Scan lines are used to scan from

**a. Top to bottom**

b. Bottom to top

c. Both a & b

d. None of these

1. The best hidden surface removal algorithm is ?

a. Depth buffer

b. Area subdivision

**c. Depends on the application**

d. painters

1. Why we need removal of hidden surface

a. for displaying realistic view

**b. for determining the closest visible surface**

c. Both a & b

d. None of these

1. The algorithm of hidden surface are

a. Object-space method

b. Image-space method

**c. Both a & b**

d. None of these

1. Which surface algorithm is based on perspective depth ?

a. Depth comparison

**b. Z-buffer or depth-buffer algorithm**

c. subdivision method

d. back-face removal

UNIT 3:

1. Fractals deals with curves that are?

regularly irregular[object Object] . Correct answer



irregularly irregular[object Object] . Incorrect answer



regularly regular[object Object] . Incorrect answer



irregularly regular[object Object] . Incorrect answer



2. The key property of fractals is

Invariant[object Object] . Incorrect answer



self-similar[object Object] . Correct answer



self-Affine[object Object] . Incorrect answer



none of these[object Object] . Incorrect answer



3. what are the types of Fractals

Self Similar fractals[object Object] . Correct answer



Self Affine fractals[object Object] . Correct answer



Invariant fractals[object Object] . Correct answer



Pixels[object Object] . Incorrect answer



4. A particle system is a collection of many --------- particles that together represent a ------- object.

tiny,fuzzy[object Object] . Incorrect answer



minute,clear[object Object] . Incorrect answer



large,clear[object Object] . Incorrect answer



minute,fuzzy[object Object] . Correct answer



5. Particles are born from an?

lighter[object Object] . Incorrect answer



emitter[object Object] . Correct answer



fuzzy object[object Object] . Incorrect answer



none of these[object Object] . Incorrect answer



6. Point emitters emit particles from a\_\_\_\_\_\_\_\_ and area emitters emit particles over an area.

single point, specified[object Object] . Correct answer



large point, not specified[object Object] . Incorrect answer



big point,specified[object Object] . Incorrect answer



double point, large[object Object] . Incorrect answer



7. An image is a\_\_\_\_\_\_\_\_\_\_\_\_ of something.

visual representation[object Object] . Incorrect answer



Picture[object Object] . Incorrect answer



visual representation or Picture[object Object] . Correct answer



novisual representation[object Object] . Incorrect answer



8. What is a Digital Image composed of?

Picture Elements[object Object] . Correct answer



Pixel's[object Object] . Correct answer



raster values[object Object] . Incorrect answer



rgb color[object Object] . Incorrect answer



9.

Common image file formats??

**Correct answers:**JPEG,GIF,GIF89,PNG,SVG ,TIFF,etc

10.

what is the purpose of image processing

Visualization, Measurement of pattern[object Object] . Incorrect answer



Image sharpening and restoration[object Object] . Incorrect answer



Image retrieval, Image Recognition



All the above

UNIT 4:

# Which of the following color models are defined with three primary colors? \* (1 Point)

 RGB and HSV color models

 RGB and CMY color models

 HSV and HLS color models

 CMY and HSV color models

# The color code “000” is for \* (1 Point)

 a) White

 b) Black

 c) Blue

 d) Green

1. Colored information can be stored in:

a) Main memory

 b) Secondary memory

 c) Graphics card

 d) Frame buffer

# White color in the Cartesian Coordinate System can be represented as \* (1 Point)

 (0,1,1)

 (1,1,1)

 (0,0,1)

 (0,1,0)

# Color model is also called \* (1 Point)

 color area

 color system

 color space

color system & color space



6.The subtractive color model uses the concept of

d. None of these

 c. Printing line

 b. Light to display color

 a. Printing ink

# Two dimensional color model are \* (1 Point)

 d. None

 a. RGB and CMKY

 b. RBG and CYMK

 c. RGB and CMYK

# RGB model is used for \* (1 Point)

 d. None of these

 c. Painting

 b. Printing

a. Computer display

1. CMYK model is used for

a. Computer display

 c. Painting

 d. None of these

 b. Printing

# The intersection of three primary RGB color produces \* (1 Point)

 c. Magenta color

 a. White color

 d. Blue color

 b. Black color

# The intersection of primary CMYK color produces \* (1 Point)

 b. Black color

 c. Cyan color

 d. Magenta color

a. White color

1. RGB true color model has \_\_\_\_\_\_\_\_\_ color depth

c. 64bit

 b. 32bit

 a. 24bit

 d. None

# CMYK true color model has color depth \* (1 Point)

 d. None

* b. 32bit
*  a. 24bit  c. 64bit

# Grey scale images have a maximum color depth of \* (1 Point)

 a. 8bit

 b. 16bit

 d. 32bit

c. 24bit

15. Which color is produced with only green and red dots

c. Magenta

 a. Blue

 d. White

 b. Yellow

# Which color s produced with the blue and red dots \* (1 Point)

 c. Magenta

 a. Blue

 d. White

 b. Yellow

# Non impact use various techniques to combine three color pigment to produce a range of color patterns \*

(1 Point)

 a. Cyan , magenta and yellow

 b. Cyan , white and black

 c. Cyan , white and yellow

 d. Black , magenta and yellow

18. Example of edge detection method is

d) Multi-scale Segmentation

 a) Neural Networks Segmentation

 b) Graph Partitioning Methods

 c) Watershed Transformation

# Techniques like Livewire or Intelligent Scissors are used in \* (1 Point)

 d) None of the above

 b) Semi-automatic Segmentation

 a) Model based Segmentation

 c) Threshold based Segmentation

# Image segmentation is the process of \* (1 Point)

 a) Partitioning a digital image into multiple segment

 b) Classify the image into number of objects

 c) None of the above

d) All of the above



UNIT 5:

1.Which of the following is required by K-means clustering?

(1 Point)

a) defined distance metric



b) number of clusters



c) initial guess as to cluster centroids



d) all of the mentioned



2.The goal of clustering is to-

(1 Point)

A. Divide the data points into groups



B. Classify the data point into different classes



C. Predict the output values of input data points



D. All of the above



3.Clustering is a-

(1 Point)

A. Supervised learning



B. Unsupervised learning



C. Reinforcement learning



D. None



4.Which version of the clustering algorithm is most sensitive to outliers?

(1 Point)

A. K-means clustering algorithm



B. K-modes clustering algorithm



C. K-medians clustering algorithm



D. None



5.For clustering, we do not require-

(1 Point)

A. Labeled data



B. Unlabeled data



C. Numerical data



D. Categorical data



6.Which of the following is an application of clustering?

(1 Point)

A. Biological network analysis



B. Market trend prediction



C. Topic modeling



D. All of the above



7.Classification is-

(1 Point)

A. Unsupervised learning



B. Reinforcement learning



C. Supervised learning



D. None



8.What is the most widely used distance metric in KNN?

(1 Point)

A. Euclidean distance



B. Manhattan distance



C. Perpendicular distance



D. All of the above



9.What does k stand for in the KNN algorithm?

(1 Point)

A. Number of neighbors



B. Number of output classes



C. Number of input features



D. None



10.Which is the following is true about neurons?

(1 Point)

A. A neuron has a single input and only single output



B. A neuron has multiple inputs and multiple outputs



C. A neuron has a single input and multiple outputs



D. All of the above



11.Neural networks can be used in-

(1 Point)

A. Regression problems



B. Classification problems



C. Clustering problems



D. All of the above



12.Gaussian Noise is referred to as

(1 Point)

red noise



black noise



white noise



normal noise



13.The Purpose of Restoration is to Gain?

(1 Point)

degraded image



original image



pixels



coordinates



14.degradation image is produced using the degradation process and

(1 Point)

additive noise



destruction



pixels



15.Degraded image is given in

(1 Point)

frequency domain



time domain



spatial domain



plane

