University of Mumbai
Examination 2020 under Cluster 2 FRCRCE

Program: BE Information Technology

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: TEITC501 and Course Name: Computer Graphics and Virtual Reality

Time: 1 hour   Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	A pixel may be defined as _____.
Option A:	Smallest size object
Option B:	Larger size object
Option C:	Medium size object
Option D:	Largest size object
Q2.	Two consecutive scaling transformation s1 and s2 are _____, while two consecutive rotation transformation t1 and t2 are _____.
Option A:	Additive, multiplicative
Option B:	Additive, subtractive
Option C:	Multiplicative, additive
Option D:	Subtractive, additive
Q3.	Which of the following is integrating the objects physical characteristics for bringing realism to the virtual world?
Option A:	Geometric modeling
Option B:	Physical modeling
Option C:	Kinematic modeling
Option D:	Potential modeling
Q4.	Which flag constant of the GeometryArray constructor specifies that the vertex array contains colors with transparency?
Option A:	TEXTURE_COORDINATE_3
Option B:	COLOR_3
Option C:	COLOR_4
Option D:	COLOR_1
Q5.	Colors that are contained by the color guns of computer screen are _____.
Option A:	Red, Green and Blue
Option B:	Yellow, Red and Green
Option C:	Orange, Red and Green
Option D:	Black, Blue and Green

Q6.	The transformation in which an object is moved from one position to other in circular path along a specified pivot point is called
Option A:	Translation
Option B:	Scaling
Option C:	Rotation
Option D:	Reflection
Q7.	Sutherland Hodgeman polygon clipping algorithm uses _____ number of clippers
Option A:	6
Option B:	7
Option C:	4
Option D:	9
Q8.	The Three -dimensional transformation matrix for translation with homogenous coordinate is given as
Option A:	$\begin{bmatrix} tx & 0 & 0 & 1 \\ ty & 0 & 1 & 0 \\ tz & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \end{bmatrix}$
Option B:	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ tx & 1 & 0 & 0 \\ ty & 0 & 1 & 0 \\ tz & 0 & 0 & 1 \end{bmatrix}$
Option C:	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ tx & ty & tz & 1 \end{bmatrix}$
Option D:	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \\ tx & ty & ty & 1 \end{bmatrix}$
Q9.	CAVE stands for
Option A:	Cart Automatic Virtual Environment
Option B:	Care Automatic Virtual Environment
Option C:	Cave Automatic Virtual Environment
Option D:	Calm Automatic Virtual Environment
Q10.	Fractals deal with curves that are?
Option A:	irregularly irregular
Option B:	regularly irregular
Option C:	irregularly regular
Option D:	regularly regular

Q11.	Positive values for the rotation angle Ө defines
Option A:	Counterclockwise rotations about the end points
Option B:	Counterclockwise translation about the pivot point
Option C:	Counterclockwise rotations about the pivot point
Option D:	Negative direction
Q12.	In Sutherland Hodgeman polygon clipping algorithm rules for a given edge of a subject polygon if both input vertices are inside the clipping polygon , then output list will contain _____.
Option A:	Second vertex of the given edge of the subject polygon
Option B:	Intersection and the second vertex
Option C:	Only the intersection
Option D:	Nothing will be added to the output list.
Q13.	Which of the following uses cameras to project an image of a user into a computer program and creating a 2D computer character?
Option A:	Immersive
Option B:	Non immersive
Option C:	Video mapping VR
Option D:	Augmented
Q14.	The VR system should support the frame rate of at least ____ frame/s.
Option A:	15
Option B:	10
Option C:	5
Option D:	20 or more
Q15.	What is the first stage in physical modelling that determines whether two or more objects are in contact with each other?
Option A:	Surface deformation
Option B:	Collision detection
Option C:	Surface definition
Option D:	Force Smoothing
Q16.	What kind of modelling maCluster 2 FRCRCEkes use of interactive objects, virtual agents and crowds?
Option A:	Geometric Modeling
Option B:	Physical Modeling
Option C:	Kinematics Modeling
Option D:	Behavior Modeling
Q17.	What are the Shape 3D constructors?
Option A:	Shape3D(Node node) and Shape3D(Node node, Object object)
Option B:	Shape3D(Node node, Object object)

Option C:	Shape3D(), Shape3D(Geometry geometry), Shape3D(Geometry geometry, Appearance appearance))
Option D:	Shape3D(NodeComponent nc, Texture texture)
Q18.	Raster images are more commonly called_____.
Option A:	Pix map
Option B:	Bitmap
Option C:	Vector map
Option D:	Raster map
Q19.	Which modelling specifies the spatial description of virtual objects in the world coordinate system?
Option A:	Geometric Modeling
Option B:	Physical Modeling
Option C:	Kinematics Modeling
Option D:	Behavior Modeling
Q20.	Which is the basic node for defining visible VRML objects?
Option A:	Model
Option B:	Shape
Option C:	Header
Option D:	Object
Q21.	A bitmap is _____bit(s) per pixels.
Option A:	0
Option B:	1
Option C:	2
Option D:	3
Q22.	Identify different type of computer graphics.
Option A:	Monochrome and Color
Option B:	CRT and Flat panel
Option C:	Vector and Raster
Option D:	Monitors and Hardcopy devices
Q23.	A circle, if scaled only in one direction becomes a
Option A:	Hyperbola
Option B:	Ellipse
Option C:	Parabola
Option D:	Circle only
Q24.	In Sutherland Hodgeman polygon clipping algorithm rules for a given edge of a subject polygon If first input vertex is inside, and second is outside the clipping polygon , then output list will contain _____.

Option A:	Second vertex of the given edge of the subject polygon
Option B:	Intersection and the second vertex
Option C:	Only the intersection
Option D:	Nothing will be added to the output list.
Q25.	Which of the following is not TRUE about 6DOF(Degree of Freedom) tracking device?
Option A:	Inertial
Option B:	Ultrasonic
Option C:	Electromagnetic
Option D:	Inductive