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ROLL NO:- U18CO081

CLASS:- BTECH III, Computer Eng.

SEM:- Semester 6

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1/2/21

Computer Graphics
Tutorial 2

Ans 1:

- **Refresh Buffer:-**
Picture definition is stored in memory area called Refresh Buffer or Frame Buffer. This memory area holds the set of intensity values for all the screen points.

- **Horizontal Retracing:-**
At the end of scan line, the electron beam returns to the left side of the screen to begin displaying the next line. The return to the left of the screen, after refreshing each scan line is called the horizontal retrace.

- **Passive Graphics System:-**
In Passive Graphics System, the picture is produced by the monitor and the user is not able to control the images produced on the monitor.
For example, television.

- **Video Display Device:-**
Video Display Device is an output device used to represent the visual data such as pictures and images on a screen either LCD, LED or based on CRT.

Ans 2:

Ans 3:

Ans 4

Ans 2:- Given,
Resolution:- 1024×1024

For N=1, Memory Required = $2^{10} \times 2^{10} \times 1 = 1$ Mb
For N= 8, Memory Required = $2^{10} \times 2^{10} \times 8 = 8$ Mb
For N= 24, Memory Required = $2^{10} \times 2^{10} \times 24 = 24$ Mb
For N = 32, Memory Required = $2^{10} \times 2^{10} \times 32 = 32$ Mb

Ans 3:-
Resolution = 800×1000
Storage per pixel = 6 bits

Required Memory = $800 \times 1000 \times 6$
$= 4800,000$
$= 4.8 \times 10^6$ bits

Ans 4:-

Resolution → / Bits ↓	640×480	1280×1024	2560×2048
12	$640 \times 480 \times 12$ $= 3.6864 \times 10^6$	$1280 \times 1024 \times 12$ $= 15.728 \times 10^6$	$2560 \times 2048 \times 12$ $= 62.914 \times 10^6$
24	$640 \times 480 \times 24$ $= 7.3128 \times 10^6$	$1280 \times 1024 \times 12$ $= 31.456 \times 10^6$	$2560 \times 2048 \times 24$ $= 125.828 \times 10^6$

Ans 5:

Random Scan	Raster Scan
• It has high resolution	• It has low resolution
• It is more expensive.	• It is less expensive.
• Any modification if needed is easy.	• Any modification is tough
• Solid pattern is tough to fill.	• Solid patterns are easy to fill.
• Refresh rate depends on resolution.	• Refresh rate doesn't depend on resolution.
• Only screen with views on an area is displayed.	• Whole screen is scanned.
• Beam penetration technology comes under it.	• Shadow mask technology comes under it.
• It does not use interlacing method.	• It uses interlacing method