Ch image

Q1: What is the most important component of a multimedia project?
- ✓ Still images

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Q2: What does the type of static images created depend on?
- ✓ on display resolution and hardware and software capabilities.

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Q3: What are the types of still images?
1. 3D drawing
2. 3D rendering.

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Q4: What are the ways in which still images are created?
1. Bitmaps.
2. Vector graphics.

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Q5: What is a bitmap?
1. It is derived from the words "bit", which means the simplest element in which only two numbers are used, and "map", which is a two-dimensional array of these bits.
2. It is a data matrix that describes the individual points of the image.
3. is a suitable image format.

…….

Q6: Why is the bitmap an appropriate image format?
to create:
1. Photorealistic.
2. complex graphics.
3. Pictures that require fine detail.

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Q7: What does a bitmap consist of?
- ✓ Individual points or image elements known as pixels or pixels.

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Q8: What can bitmaps contain?
- ✓ On different bits and color depths.

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Q9: What does a palette image file consist of?
1. Header (54 bytes) Used to store file type, size, etc.
2. Palette
3. data part (2d pixel matrix)

…….

Q10:   Why is Header used?
- ✓ Stores the file type, size, etc.

………

Q11:   What is the color palette?
1. It is a table that contains a set of entries.
2. Each entry (4 bytes) represents a color (RGB + fallback).
3. Painting size = number of colors * 4

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Q12:   What is the data part calculation law?
- ✓ H × W × pixel size (bit depth) / 8 (to find the size in bytes)

………

Q13:   What does a palette image file consist of?
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………

Q14:   Why is Header used?
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Q15:   What is the data part calculation law?
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………

Q16:   What is the bit depth in a true color image?
- ✓ Bit depth is either 24 or 32 bits

………

Q17:   What are still images?
- ✓ It is the one that is represented (uncompressed) as a bitmap (a grid of pixels).

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Q18:   What is the entry?
- ✓ digital camera, scanner, or created by graphics editor software (such as Paint)

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Q19:   What will analog sources require?
- ✓ Digitization.

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Q20:   Where is the bitmap image stored?
1. 1 bit per pixel (black and white),
2. 4, 16, 8 bits per pixel (gray scale, color map)
3. or 24 bits per pixel (true color)

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Q21: What is the size?

✓ a 512×512 8-bit Gray scale image takes up ≈1/4 Mb, with no compression.

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Q22: What is the law of image size?

✓ Image Size = H x W + Header (54 bytes) + Palette Size

....

Q23: What is the Palette size law?

✓ Palette size = colors in the palette x number of colors

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Q24: How is each pixel represented in a 24-bit color image?

✓ with three bytes, usually representing RGB.

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Q25: Note:

1. This format supports 256 x 256 x 256 possible color combinations, or a total of 16,777,216 possible colors.
2. However, this flexibility comes with a storage penalty: a 24-bit 640 x 480 color image requires 921.6 KB of storage without any compression.
3. Hot point: many 24-bit color images are actually stored as 32-bit images, with an extra byte of data used for each pixel to store an alpha value representing special effect information (such as transparency).

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Q26: How can bitmaps be inserted by?

1. Use clip art galleries.
2. Use bitmap software.
3. Take and edit photos.

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Q27: what is A clip art gallery?

✓ is an assortment of graphics, photographs, sound, and video.

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Q28: what are Clip arts?

✓ are a popular alternative for users who do not want to create their own images.

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Q29: where are Clip arts are available?

✓ on CD-ROMs and on the Internet.

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Q30: what is The industry standard for bitmap painting and editing programs are?

Ch image

1. Adobe's Photoshop and Illustrator.
2. Macromedia's Fireworks.
3. Corel's Painter.
4. CorelDraw.
5. Quark Express.

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Q31:   What is Capturing and storing images directly from the screen?
✓ is another way to assemble images for multimedia.

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Q32:   What does The PRINT SCREEN button in Windows and COMMAND-
CONTROL-SHIFT-4 keystroke on the Macintosh do?
✓ copies the screen image to the clipboard.

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Q33:   From what Image editing programs enable the user ?
1. Enhance and make composite images.
2. Alter and distort (تشوه) images.
3. Add and delete elements.
4. Morph (manipulate still images to create animated transformations).

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Q34:   What areas are diagrams used in?
1. Computer Aided Design (Computer Aided Design) (CAD) software.
2. Graphic designers for print media.
3. 3D animation software.

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Q35:   How Vector-Drawn Images Work?
1. A vector
2. Vector drawing makes use of Cartesian(ديكارتي) co-ordinates.
3. Cartesian coordinates

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Q36:   what is A vector?
✓ is a line that is described by the location of its two endpoints.

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Q37:   what are Cartesian coordinates?
✓ are numbers that describe a point in two or three-dimensional space as the
intersection of X, Y, and Z axis.

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Q38:   Vector-Drawn Images vs Bitmaps?
1. Vector images use less memory space and have a smaller file size as compared
to bitmaps.

2. For the Web, pages that use vector graphics in plug-ins download faster, and when used for animation, draw faster than bitmaps.
3. Vector images cannot be used for photorealistic images.
4. Vector images require a plug-in for Web-based display.
5. Bitmaps are not easily scalable and resizable.
6. Bitmaps can be converted to vector images using auto-tracing.
7. Most auto tracing packages read files in a variety of bit-mapped formats (PCX and TIFF are the most common) and produce a file in a vector format such as Encapsulated PostScript (EPS)

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Q39: 3-D Drawing and Rendering?
1. 3-D animation tools.
2. Features of a 3-D application.
3. Panoramas.

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Q40: What do the 3D animation, drawing and rendering tools include?
1. Ray Dream designer.
2. Caligari True Space 2.
3. Infini-D Shining.
4. form * Z.
5. New Tek's Lightwave.

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Q41: what is Features of a 3-D Application?
1. Modeling - Placing all the elements into 3-D space.
2. Extrusion (قذف)- The shape of a plane surface extends some distance.
3. Lathing (التدوير)- A profile of the shape is rotated around a defined axis.
4. Rendering (تقديم)- Use of intricate(معقد) algorithms to apply user-specified effects.

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Q42: what is Rendering?
✓ is the process of generating an image from a model (or models in what collectively could be called a scene file), by means of computer programs.

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Q43: what is 3D Studio Max?
✓ is rendering tool that includes a number of very high-end professional tools for character animation, game development, and visual effects production.

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Q44: what is Softimage XSI?
✓ is a powerful modeling, animation, and rendering package used for animation and special effects in films and games.

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Q45: what is RenderMan?
- ✓ Is rendering package, created by Pixar, is both a software and an application programming interface (API) for the network-distributed rendering of complex and potentially ray-traced three-dimensional views, employing a render farm of many client computers. The clients do not require 3D graphics cards but may benefit from them if they are available.

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Q46: What is Maya?
- ✓ is competing product to Softimage (boasts impressive visual effects and game development toolset); it is a complete modeling package. Maya is the industry-leading package for 3D animation.

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Q47: How are panoramas created?
- ✓ By grouping a series of images together around a circle and adjusting them into one seamless bitmap.

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Q48: Why is software like ULead Cool 360 and Panorama Factory needed?
- ✓ to create panoramic images.

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Q49: How does the light come?
- ✓ of an atom in which an electron passes from a higher energy level to a lower energy level.

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Q50: What does each atom produce?
- ✓ Uniquely defined colours.

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Q51: what is the color ?
- ✓ It is the frequency of a light wave within the narrow band of the electromagnetic spectrum, to which the human eye responds.

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Q52: Colors must be used in accordance with ?
- ✓ For target audience screen specifications.

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Q53: What is your preferred screen resolution?
- ✓ It is 800x600 pixels.

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Q54: What is your preferred color depth?
- ✓ is 32-bit.

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Q55:   What is color depth or bit depth?
✓ The number of bits used to represent the color of a single pixel in a bitmap or video frame buffer.

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Q56:   What models are used to define color in computer terms?
1. color model
2. RGB model
3. HSB and HSL models
4. Other models include CMYK, CIE, YIQ, YUV, and YCC.

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Q57:   What is the color model?
✓ It is an abstract mathematical model that describes the way colors can be represented as groups of numbers

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Q58:   What is the RGB model?
✓ It is a 24-bit methodology where color is specified in terms of red, green and blue values ranging from 0 to 255.

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Q59:   What are the HSB and HSL models?
✓ Two color is defined as an angle from 0 to 360 degrees on the color wheel.

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Q60:   What are Palettes?
✓ They are mathematical tables that specify the color of the pixels displayed on the screen.

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Q61:   What are Palettes called?
✓ Color Lookup Tables or CLUTs on the Macintosh.

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Q62:   What are the most popular Palettes?
✓ They are 1, 4, 8, 16 and 24 bits.

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Q63:   What is dithering?
✓ A process by which the color value of each pixel is changed to the closest matching color value in the target palette.

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Q64:   How is Dithering calculated?

✓ using a mathematical algorithm.

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Q65:   What types of image files are used in multimedia?
1. Macintosh formats.
2. Windows formats.
3. Cross-platform formats.

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Q66:   What is the most used format on Macintosh?
✓ is PICT.

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Q67:   What is PICT?
✓ It is a complex and versatile (varied) format developed by Apple.

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Q68:   What is the most used image file format on Windows?
✓ is DIB.

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Q69:   What does DIB stand for?
✓ to device-independent bitmaps.

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Q70:   What is the preferred file type for Windows multimedia developers?
✓ It is the Resource Interchange File Format (RIFF).

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Q71:   What are the bitmap formats that Windows developers use most often?
1. BMP - Windows bitmap file.
2. TIFF - Widely used in DTP packets.
3. PCX - Used by MS-DOS Paint.

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Q72:   What is desktop publishing (also known as DTP)?
✓ It is the creation of documents using page layout software on a personal computer.

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Q73:   What image file formats are compatible across platforms?
1. DXF - used by CAD applications.
2. Initial Graphics Exchange Standard (IGS or IGES) - a standard for the transmission of CAD drawings.
3. JPEG and GIF - the most widely used formats on the web.

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