Test

Please use a pencil to complete the test. Print your name on the Name line above. Read the instructions for each section carefully. When you have completed the test, place your test face down on your desk and raise your hand.

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1.   The categories of software tools we examine here are
- Music sequencing and notation
- Digital audio
- Graphics and image editing
- Video editing
- Animation
- Multimedia authoring.

which of Categories of Multimedia software tools ?

(A) Music Sequencing and Notation   (B) Digital Audio

(C) Graphics and Image Editing   (D) Multimedia Authoring

(E) All of these

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2. **Sound Forge**

Like Audition, Sound Forge is a sophisticated PC-based program for editing WAV files. Sound can be captured through the sound card, and then mixed and edited. It also permits adding complex special effects.

Special effect for sound could be added using sound editing program called

(A) Sound echo   (B) Sound task

(C) Sound forge   (D) Sound page

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1

3.

For a much simpler approach to animation that also allows quick development of effective small animations for the Web, many shareware and other programs permit creating animated GIF images. GIFs can contain several images, and looping through them creates a simple animation.

Which of the following formats creates a perfect reproduction of images?

(A) JPEG   (B) MIDI

(C) BMP   (D) GIF

4.
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1.3.5   Animation

Multimedia APIs

Java3D is an API used by Java to construct and render 3D graphics, similar to the way Java Media Framework handles media files. It provides a basic set of object primitives (cube, splines, etc.) upon which the developer can build scenes. It is an abstraction layer built on top of OpenGL or DirectX (the user can select which), so the graphics are accelerated.

_____ are primarily used to illustrate or demonstrate an idea or a concept.

(A) Graphics   (B) Videos

(C) Animations   (D) Multimedia

5.
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Freehand is a text and web graphics editing tool that supports many bitmap formats, such as GIF, PNG, and JPEG. These are *pixel-based* formats, in that each pixel

Not related to image format

(A) JPEG   (B) GIF

(C) WAV   (D) PNG

6.
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1.3.6   Multimedia Authoring

Tools that provide the capability for creating a complete multimedia presentation, including interactive user control, are called *authoring* programs.

_____tools provide the important frame work for organizing and editing the elements of your multimedia project, including graphics,sounds,animations and video clips.

(A) Multimedia authoring   (B) Software authoring

(C) Media authoring   (D) Hardware authoring

7.
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Photoshop is the standard in a tool for graphics, image processing, and image manipulation. Layers of images, graphics, and text can be separately manipulated for maximum flexibility, and its set of filters permits creation of sophisticated lighting effects.

In an image-editing program, look for a tool that uses_____that can be combined,hidden,and recorded

(A) styles   (B) formats

(C) frames   (D) layers

8.
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A computer science or engineering student reading this book likely has a more application-oriented view of what multimedia consists of: applications that use multiple modalities to their advantage, including text, images, drawings, graphics, animation, video, sound (including speech), and, most likely, interactivity of some kind. This contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material.

_____is any combination of text, graphic art, sound, animation, and video delivered to you bycomputer or other electronic devices.

(A) Multimedia   (B) Network

(C) Hyper media   (D) Visual Media

9.
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Hypermedia, again first introduced by Ted Nelson, went beyond text-only. It includes a wide array of media, such as graphics, images, and especially the continuous media—sound and video, and links them together. The *World Wide Web* (WWW or simply Web) is the best example of a hypermedia application, which is also the largest.

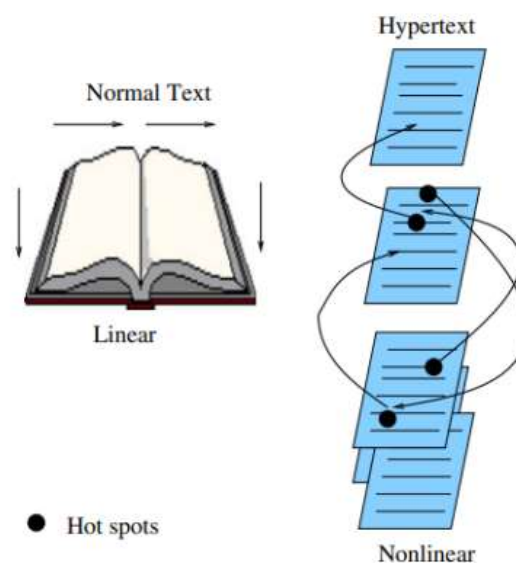A structure of linked elements through which the user can navigate, interactive multimedia becomes _____.

(A) Hypermedia   (B) Hypertext

(C) inter media   (D) digital media

10.
— 1

Extensible Markup Language (XML)

XML stands for _____.

(A) eXprimental Markup Language   (B) eXtensible Markup Language

(C) eXtra Multi Language   (D) eXtensible Making Language

— 11.
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Fig. 1.4 Hypertext is nonlinear

Text that can be navigated through in a nonlinear way is called

(A) hypertext

(B) hypermedia

(C) XML

(D) MIDI

— 12.
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A brief history of the use of multimedia to communicate ideas might begin with newspapers, which were perhaps the *first* mass communication medium, using text, graphics, and images. Before still-image camera was invented, these graphics and images were generally hand-drawn.

the first mass communication mediun was

(A) newspaper

(B) television

(C) Edison phonograph

(D) vintage dry-plate camera

— 13.
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In 1945, as part of MIT's postwar deliberations on what to do with all those scientists employed on the war effort, Vannevar Bush wrote a landmark article [9] describing what amounts to a hypermedia system, called "Memex." Memex was

in 1945,the memex was developed by

(A) N. Yankelovitch.

(B) v.Bush.

(C) M. Hilmes.

(D) J. Jacobs.

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1 **14.** ous media—sound and video, and links them together. The *World Wide Web* (WWW or simply Web) is the best example of a hypermedia application, which is also the largest.

WWW stands for

(A) world web wide.

(B) web world wide.

(C) wide world web.

(D) World Wide Web.

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1 **15.** For example, researchers are interested in camera-based object tracking technology. But while face detection is ubiquitous, with camera software doing a reasonable job of identifying faces in images and video, face detection and object tracking are by no means solved problems today (although for face tracking, combining multiple poses may be a promising direction [13]). As a matter of fact, interest in these topics is somewhat flagging, with need for some new breakthrough. Instead, the current emphasis is on event detection, e.g. for security applications such as a person leaving a bag unattended in an airport.

What is the current emphasis in camera-based object tracking?

(A) Face detection

(B) Event detection

(C) Shot detection

(D) Video classification

—
1 **16.** While shot detection—finding where scene changes exist in video—and video classification have for some time been of interest, new challenges have now arisen in these old subjects due to the abundance of online video that is not professionally edited.

What is the purpose of shot detection in video?

(A) To identify camera angles

(B) To find where scene changes occur

(C) To classify videos based on content

(D) To track objects

—
1 **17.** Extending the conventional 2D video, today's 3D capture technology is fast enough to allow acquiring dynamic characteristics of human facial expression during speech, to synthesize highly realistic facial animation from speech for low-bandwidth applications. Beyond this, multiple views from several cameras or from a single camera under differing lighting can accurately acquire data that gives both the shape and surface properties of materials, thus automatically generating synthetic graphics models. This allows photo-realistic (video-quality) synthesis of virtual actors. Multimedia applications aimed at handicapped persons, particularly those with poor

What can 3D capture technology capture in addition to conventional 2D video?

(A) Facial expressions only

(B) Dynamic body movements

(C) Shape and surface properties of materials

(D) Augmented reality objects

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1   18.   Multimedia applications aimed at handicapped persons, particularly those with poor

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3 Therefore, Director is often a viable choice with students for creating a final project in multimedia courses—it provides the desired power without the inevitable pain of using a full-blown C++ program. The competing technology is likely Actionscripts in Flash.

1.4   Multimedia in the Future   21

vision and the elderly, are a rich field of endeavor in current research, too. Another

Which group of people are multimedia applications for the handicapped primarily aimed at?

Ⓐ Elderly people   Ⓑ People with poor vision

Ⓒ People with hearing impairments   Ⓓ Children with developmental disabilities

___
1   19.   related example is *Google Glass*, which, equipped with an optical head-mounted display, enables interactive, smartphone-like information display for its users. Wire-

What is Google Glass equipped with?

Ⓐ Virtual reality technology   Ⓑ Augmented reality display

Ⓒ Optical head-mounted display   Ⓓ Smartphone-like interface

___
1   20.   ject. Another example is "Digital fashion," which aims to develop smart clothing that can communicate with other such enhanced clothing using wireless communication, so as to artificially enhance human interaction in a social setting. The vision here is

What is one application area of multimedia research that aims to develop smart clothing for enhanced human interaction?

Ⓐ Crowdsourcing for multimedia   Ⓑ Executable academic papers

Ⓒ Digital Fashion   Ⓓ Animated lifelike virtual agents

21. Symbols can be either composed from other symbols, drawn, or imported into Flash. Flash is able to import several audio, image, and video formats into the symbol library. Symbols can take on one of three behaviors: a *button*, a *graphic*, or a *movie*.

_1_

To bring extrnal files into both flash and premiere, you would perform this function:

(A) import   (B) insert

(C) locate   (D) capture

22. "Executable papers." The idea here is that results discussed in a published paper are often difficult to reproduce. The reason is that datasets being used and programming code working on that data are typically not supplied as part of the publication. The

_1_

What is the concept of 'executable papers' in multimedia research?

(A) A method for analyzing sentiment in social media   (B) Publishing academic papers with reproducible code and data

(C) Developing lifelike virtual educators   (D) Extracting relevant video segments and generating hyperlinks

23. *Animated Lifelike Virtual Agents* e.g. virtual educators, in particular as social partners for special needs children; and various other roles that are designed to demonstrate emotion and personality and with a variety of embodiments. The objective is flexibility as opposed to a fixed script.

_1_

Which trend in multimedia research focuses on creating lifelike virtual agents with flexible behavior and personalities?

(A) Crowdsourcing for multimedia   (B) Executable academic papers

(C) Digital fashion   (D) Animated lifelike virtual agents

24. • Social Event Detection for Social Multimedia: discovering social events planned and attended by people, as indicated by collections of multimedia content that was captured by people and uploaded to social-media sites.

_1_

What is one of the grand challenges in multimedia research related to discovering social events through multimedia content?

(A) Social Event Detection for Social Multimedia   (B) Search and Hyperlinking of Television Content

(C) Geo-coordinate Prediction for Social Multimedia   (D) Violent Scenes Detection in Film