

Loyola



COMPUTER APPLICATIONS

12

This special guide is prepared on the basis of New Syllabus and Govt. Key

Loyola

Publications

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Less Strain Score More

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PREFACE

“Loyola Computer Applications “ is in your hands.

Students with average IQ always struggle to cope up studies. They always seek for the best, sources to learn and score high marks.

The pattern of the question being asked in the exams has changed dramatically and the difficulty level has also increased considerably. To succeed in board exams and to actualize your dream, you are required to prepare strategically and study in a focused manner.

This book gives important tips which covers the entire chapter.

Loyola serves the above cited purpose in perfect manner.

- Specially designed for coaching students of different levels.
(Slow learners, average and Topper students)
- Lot of additional questions are given for toppers
- The “EC Computer Applications” is prepared with due care on the lines of the Govt. Examination Valuation, the easy method of studying, the lesson and the perfect way of answering the questions.
- The answers are well prepared, briefly and easily for the students to study without any difficulty and stress.
- Simplified text matter
- Focused on coverage of textbook.
- MCQ’s are framed based on new pattern.
- Included Govt. question papers with their key.
- Comprehensive questions are designed for average and above average students based on key points.

Wish you All the Best

Loyola Publication

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1 Chapter

Multimedia

Multimedia - An Overview

Multimedia and their features:

Multimedia is an integration of many types of media like text, graphics, images, audio, animation, Video on a single medium in the same information unit.

Features:

- Multimedia allows the users to combine and change data from various sources like image, text, graphics, video, audio and video to a single platform.
- Multimedia has become the latest enriching experience in the field of information sector.
- Multimedia application plays vital role in terms of presenting information to the users.

Multimedia Components:

Multimedia has five major components namely text, images, sound, video and animation.

Text:

Text is the basic components of multimedia and most common ways of communicating information to other person.

Text is of two types namely

- ✓ Static Text
- ✓ Hypertext

Animation:

Animation is the process displaying still images so quickly so that they give the impression of continuous movement.

Features:

- In animation the screen object is a vector image in animation.
- Using numerical transformations the movement of that image along its paths is calculated for their defining coordinates.
- The least frame rate of at least 16 frames per second gives the impression of smoothness and for natural looking it should be at least 25 frames per second.
- Animations may be in two or three dimensional.
- Animation tools are very powerful and effective.
- The two basic types of animations are Path animation and Frame animation.

Image file formats:

- TIFF (Tagged Image File Format)
- BMP (Bitmap)
- DIB (Device Independent Bitmap)
- GIF (Graphics Interchange Format)
- JPEG (Joint Photographic Experts Group)
- TGA (Tagra)
- PNG (Portable Network Graphics)

Audio file formats:

- WAV (Waveform Audio File Format)
- MP3 (MPEG Layer-3 Format)
- OGG

- AIFF (Audio Interchange File Format)
- WMA (Windows Media Audio)
- RA (Real Audio Format)

Video file formats:

- AVI (Audio/Video Interleave)
- MPEG (Moving Picture Experts Group)
- WMV (Windows Media Video)
- FLV (Flash Video)
- MKV (Matroska Video)

Multimedia Production:

- Multimedia Production is an efficient planning which assures that the project will be proceed smoothly and certainly ensures that the information reaches the target audience.
- The two basic types of animations are Path animation and Frame animation.
 - ✓ Path animation involves moving an object on a screen that has a constant background.
 - ✓ In frame animations, multiple objects are allowed to travel Simultaneously

Web Master:

- The responsibility of the web master is to create and maintain an Internet web page.
- They convert a multimedia presentation into a web page.

The various file formats in multimedia are

- 1) Text Formats 2) Image Formats 3) Audio File Formats 4) Video File Formats

1) Text Formats:

RTF:

Rich Text Format is the primary file format introduced in 1987 by Microsoft with the specification of their published products and for cross-platform documents interchange.

Plain text:

- Plain text files can be opened, read, and edited with most text editors.
- Commonly used are Notepad (Windows), Gedit or nano (Unix, Linux), TextEdit (Mac OSX) and so on.

Image Formats:

TIFF (Tagged Image File Format):

- TIFF format is common in desktop publishing world (high quality output), and is supported by almost all software packages.
- Recent versions of TIFF allow image compression, and the format is comfortable for moving large files between computers.

BMP (Bitmap):

- Initially BMP format is in use with Windows 3.1.
- BMP is quite large and uncompressed.
- BMP is used for the high-resolution or large images.

DIB (Device Independent Bitmap):

This format which is similar to BMP, allows the files to be displayed on a variety of devices.

GIF (Graphics Interchange Format):

- GIF is a compressed image format.
- Most of the computer color images and backgrounds are GIF files.

JPEG (Joint Photographic Experts Group):

- JPEG was designed to attain maximum image compression. It uses lossy compression technique, where a compression method is referred that loses some of the data required for the image reconstruction.
- JPEG works good with photographs, naturalistic artwork, and similar material but functions less on lettering, live drawings or simple cartoons.

TGA (Tagra):

- TGA is the first popular format for high resolution images.
- TGA is supported by Most of the video-capture boards.

PNG (Portable Network Graphics):

- An extensible file format for the less loss, portable and well compressed storage of raster images.
- PNG acts as replacement for GIF and also replaces multiple common uses of TIFF.

Digital Audio File Formats:**WAV (Waveform Audio File Format):**

- WAV is the most popular audio file format in windows for storing uncompressed sound files.
- In order to attain the reduced file size it can also be converted to other file formats like MP3.

MP3 (MPEG Layer-3 Format):

- MPEG Layer-3 format is the most popular format for storing and downloading music.
- The MP3 files are roughly compressed to one-tenth the size of an equivalent WAV file.

OGG:

- A free, open source container format that is designed for obtaining better streaming and evolving at high end quality digital multimedia.
- OGG can be compared to MP3 files in terms of quality.

AIFF (Audio Interchange File Format):

A standard audio file format used by Apple which is like a WAV file for the Mac.

WMA (Windows Media Audio):

WMA is a popular windows media audio format owned by Microsoft and designed with Digital Right Management (DRM) abilities for copyright protection.

RA (Real Audio Format):

- Real Audio format is designed for streaming audio over the Internet.
- The digital audio resources are usually stored as a computer file in computer's hard drive or CD/DVD.

Digital Video File Formats:**AVI (Audio/Video Interleave):**

- AVI is the video file format for Windows.
- In AVI sound and picture elements are stored in alternate interleaved chunks in the file.

MPEG (Moving Picture Experts Group):

MPEG is a standard for generating digital video and audio compression under the International Standards Organization (ISO) by the group of people.

PART I - TEXT BOOK EVALUATION

Part - I Choose the correct answer

- What is multimedia?
 - a type of computer hardware
 - a type of computer software
 - a type of computer network
 - the use of multiple forms of media to communicate information

Ans: (d) the use of multiple forms of media to communicate information
- _____ has five major components like text, images, sound, video and animation.
 - Multimedia
 - Master Page
 - Master item
 - Multi-word

Ans: (a) Multimedia
- What is a raster image?
 - a type of image made up of pixels
 - a type of image made up of geometric shapes
 - a type of image made up of text
 - a type of image made up of sound waves

Ans: (a) a type of image made up of pixels
- What is a vector image?
 - a type of image made up of pixels
 - a type of image made up of geometric shapes
 - a type of image made up of text
 - a type of image made up of sound waves

Ans: (b) a type of image made up of geometric shapes
- Which of the following is a raster image file format?
 - JPEG
 - EPS
 - CDR
 - SVG

Ans: (a) JPEG
- Which of the following is a vector image file format?
 - PSD
 - JPEG
 - EPS
 - BMP

Ans: (c) EPS

- RTF (Rich Text Format) file format was introduced by _____.
 - TCS
 - Microsoft
 - Apple Inc.
 - IBM

Ans: (b) Microsoft
- The expansion of JPEG is
 - Joint Photographic Experts Group
 - Joint Photo Experts Group
 - Join Photon Experts Group
 - joint photographic express group

Ans: (a) Joint Photographic Experts Group
- AIFF file format was developed by _____.
 - TCS
 - Microsoft
 - Apple Inc.
 - IBM

Ans: (c) Apple Inc.
- Which of the following is an audio file format?
 - MP3
 - AVI
 - MPEG
 - PNG

Ans: (a) MP3

Part - II Short Answers

- Define Multimedia. **Mar 2023**
Multimedia:
 Multimedia is an integration of many types of media like text, graphics, images, audio, animation, Video on a single medium in the same information unit.
- List out Multimedia Components.
 Multimedia has five major components namely text, images, sound, video and animation.
- Classify the TEXT components in multimedia.
Text:
 Text is the basic components of multimedia and most common ways of communicating information to other person.
 Text is of two types namely
 - ✓ Static Text
 - ✓ Hypertext

Static Text:

- ✓ Static text, the text or the words will remain static as a heading or in a line, or in a paragraph.
- ✓ The words are given along with the images to explain about the images.
- ✓ In static text the words will either give information or support an image or a video.

Hypertext:

- ✓ A hypertext is a system which consists of nodes, the text and the links between the nodes, which defines the paths the user needs to follow for the text access in non-sequential ways.

4. Classify the IMAGE components in multimedia.**Image :**

- Images acts as a vital components in multimedia.
- These images are generated by the computer in two ways namely
 1. Bitmap or raster images
 2. Vector images.

5. Define Animation.**Animation:**

Animation is the process displaying still images so quickly so that they give the impression of continuous movement.

Part - III Explain in Brief Answer**1. List out image file formats.**

- TIFF (Tagged Image File Format)
- BMP (Bitmap)
- DIB (Device Independent Bitmap)
- GIF (Graphics Interchange Format)
- JPEG (Joint Photographic Experts Group)
- TGA (Tagra)
- PNG (Portable Network Graphics)

2. List out audio file formats

- WAV (Waveform Audio File Format)
- MP3 (MPEG Layer-3 Format)

- OGG
- AIFF (Audio Interchange File Format)
- WMA (Windows Media Audio)
- RA (Real Audio Format)

3. List out video file formats

- AVI (Audio/Video Interleave)
- MPEG (Moving Picture Experts Group)
- WMV (Windows Media Video)
- FLV (Flash Video)
- MKV (Matroska Video)

Part - IV Explain in detail**1. Explain in detail about production team roles and responsibilities.**

The fine quality high-end multimedia production application requires a specialized team comprising of the members namely:

- ✓ Production Manager
- ✓ Content Specialist
- ✓ Script Writer
- ✓ Text Editor
- ✓ Multimedia Architect
- ✓ Computer Graphic Artist
- ✓ Audio and Video Specialist
- ✓ Computer Programmer
- ✓ Web Master

Production Manager:

- In a multimedia production, the role of production manager is to define and coordinate the production of the multimedia project in time and with full quality.
- The production manager should be an expertise in the technology expert, good at proposal writing, good communication skills and budget management skills.
- The production manager must have experience in human resource management and act as an efficient team leader.

Content Specialist:

- Content specialist is responsible for performing all research activities

concerned with the proposed application's content.

- Program content refers to projects information, graphics, data or facts presented through the multimedia production.

Script Writer:

- Video and film scripts represent a linear sequence of events.
- The script writer visualizes the concepts in three dimensional environments and if needed uses the virtual reality integration into the program.

Text Editor:

- The content of a multimedia production always must flow logically and the text should always be structured and correct grammatically.
- Text and narration is an integrated part of the application.

Multimedia Architect:

The multimedia architect integrates all the multimedia building blocks like graphics, text, audio, music, video, photos and animation by using authoring software.

Computer Graphic Artist:

The role of Computer Graphic Artist is to deal with the graphic elements of the programs like backgrounds, bullets, buttons, pictures editing, 3-D objects, animation, and logos etc.

Audio and Video Specialist:

- The roles of these specialists are needed for dealing with narration and digitized videos to be added in a multimedia presentation.
- They are responsible for recording, editing sound effects and digitizing.

Computer Programmer:

- The computer programmer writes the lines of code or scripts in the appropriate language.

- These scripts usually develop special functions like developing the software to give the size and shape of video windows, controlling peripherals and so on.

Web Master:

- The responsibility of the web master is to create and maintain an Internet web page.
- They convert a multimedia presentation into a web page.
- Final multimedia product is ready for consultation is a joint effort of the entire team.
- Initially, the production manager identifies the project content, while the web master provides access to a wide range of community through web-services.

2. Explain in detail about different file formats in multimedia files.

The various file formats in multimedia are

- a) Text Formats
- b) Image Formats
- c) Audio File Formats
- d) Video File Formats

a) Text Formats:

RTF:

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Plain text:

- Plain text files can be opened, read, and edited with most text editors.
- Commonly used are Notepad (Windows), Gedit or nano (Unix, Linux), TextEdit (Mac OSX) and so on.
- Other computer programs are also capable of reading and importing plain text.
- Plain text is the original and popular way of conveying an e-mail.

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- Most of the computer color images and backgrounds are GIF files.
- GIF file format is best suitable for graphics that uses only limited colors, and it is the most popular format used for online color photos.
- 13-bit Color look up table is used by the GIF format to identify its color values.
- GIF format is supported widely.

JPEG (Joint Photographic Experts Group):

- JPEG was designed to attain maximum image compression. It uses lossy compression technique, where a compression method is referred that loses some of the data required for the image reconstruction.
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PNG (Portable Network Graphics):

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- PNG acts as replacement for GIF and also replaces multiple common uses of TIFF.
- PNG works good with online viewing applications like worldwide web.
- So it is fully streamable with a best display option.

c) Digital Audio File Formats:**WAV (Waveform Audio File Format):**

- WAV is the most popular audio file format in windows for storing uncompressed sound files.
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d) WMA (Windows Media Audio):

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RA (Real Audio Format):

- Real Audio format is designed for streaming audio over the Internet.
- The digital audio resources are usually stored as a computer file in computer's hard drive or CD/DVD.
- Besides the variety of audio file formats available, the most common formats are wave files (.WAV) and MPEGLayer-3 files (.MP3), WMA and RA.

Digital Video File Formats:**AVI (Audio/Video Interleave):**

- AVI is the video file format for Windows.
- In AVI sound and picture elements are stored in alternate interleaved chunks in the file.

MPEG (Moving Picture Experts Group):

- MPEG is a standard for generating digital video and audio compression under the International Standards Organization (ISO) by the group of people.
- The group has developed MPEG-1, the standard on which Video CD and MP3 are based, MPEG-2, the standard that supports products as Digital Television set top boxes and DVD, MPEG-4, the standard for multimedia and mobile web. MPEG-7, the standard for search of audio and visual content.

PART II - ADDITIONAL QUESTIONS**Part - I Choose the correct answer**

1. _____ refers to any type of application that involves more than one type of media such as text, graphics video animation and sound

- (a) an executable file
- (b) desktop publishing
- (c) multimedia
- (d) hypertext

Ans: (c) multimedia

2. One of the disadvantages of the multimedia is its _____

- (a) cost
- (b) adaptability
- (c) usability
- (d) relativity

Ans: (a) cost

3. You need hardware, software and _____ to make multimedia

- (a) network
- (b) compact disk drive
- (c) good idea
- (d) programming knowledge

Ans: (d) programming knowledge

4. Match the following by choosing the right one

- i) Text - TGA
- ii) Image - MIDI

iii) Sound - MPEG

iv) Video - RTF

- (a) i, ii, iii, iv
- (b) ii, iii, iv, i
- (c) iv, i, ii, iii
- (d) iii, iv, i, ii

Ans: (b) ii, iii, iv, i

5. Find the odd one on the following which is not an image format

- (a) TIFF
- (b) BMP
- (c) RTF
- (d) JPEG

Ans: (c) RTF

6. _____ is the process displaying still images they give continuous movement

- (a) Text formats
- (b) Sound
- (c) MP3
- (d) Animation

Ans: (d) Animation

7. The live telecasting of real time program through Internet is known as _____

- (a) web casting
- (b) web hosting
- (c) data manipulation
- (d) none of the above

Ans: (a) web casting

8. GIF use _____ color look up table

- (a) 8 bit
- (b) 8 KB
- (c) 8 MB
- (d) 13bit

Ans: (d) 13bit

9. _____ is the process of conducting conference between more than two participants at different sites by using computer networks
 (a) Video conferencing (b) Web casting
 (c) Web hosting (d) All of the above
Ans: (a) Video conferencing
-
10. _____ is a free-standing furnished equipped multimedia computer that allow users to retrieve information via a touch screen.
 (a) Kiosk (b) Maya
 (c) PHP (d) Python
Ans: (a) Kiosk
-
11. Rich Text Format is the primary file format introduced in _____.
 (a) 1989 (b) 1999
 (c) 1997 (d) 1987
Ans: (d) 1987
-
12. _____ image format is used for the high-resolution or large images
 (a) TIFF (b) GIF
 (c) BMP (d) JPEG
Ans: (c) BMP
-
13. Copyright issues are considered in _____ phase.
 (a) Conceptual Analysis and Planning
 (b) Project design
 (c) Pre-production
 (d) Budgeting
Ans: (a) Conceptual Analysis and Planning
-
14. _____ phase includes the activities like background music selection, sound recording
 (a) Testing
 (b) Production
 (c) Delivering the Multimedia Product
 (d) Documentation **Ans: (b) Production**
-
15. The _____ visualizes the concepts in three dimensional environments and if needed use the virtual reality integration into the program.
 (a) Script writer
 (b) Production manager
 (c) Editor
 (d) Content specialist **Ans: (a) Script writer**
-
16. The _____ integrates all the multimedia building blocks
 (a) Script writer
 (b) Multimedia Architect
 (c) Editor
 (d) Web Master
Ans: (b) Multimedia Architect
-
17. Expansion of TIFF is :
 (a) Tagged Image File Format
 (b) Tag Image File Format
 (c) Tagged Image File Format
 (d) Tripple Image File Format
Ans: (a) Tagged Image File Format
-
18. _____ is the basic components of multimedia
 (a) Text (b) Animation
 (c) Audio (d) Video
Ans: (a) Text
-
19. Classifications of text are _____ and _____.
 (a) Static and Hypertext
 (b) Static and Text
 (c) Hyper and Text
 (d) All of the above
Ans: (a) Static and Hypertext
-
20. The powerful way to convey information in multimedia applications are _____.
 (a) Compression of video
 (b) Embedding of video
 (c) Displaying video
 (d) None of these
Ans: (b) Embedding of video
-
21. The responsibility of the _____ is to create and maintain an Internet web page
 (a) Script write
 (b) Multimedia Architect
 (c) Editor
 (d) Web Master **Ans: (d) Web Master**

22. Expansion of RTF is _____

- Rich Textual Format
- Rich Text Format
- Riche Text Format
- Rich Text Formate

Ans: b) Rich Text Format

23. Expansion of WAV _____

- Wide Audio Video
- Width Audio Video
- Waveform Audio File Format
- None of these

Ans: c) Waveform Audio File Format

24. The live telecasting of real time program through internet is known as _____ **Mar 23**

- web hosting
- data manipulation
- web casting
- none of the above

Ans: c) web casting

Part - II Short Answers

1. Write short notes on RTF.

RTF:

Rich Text Format is the primary file format introduced in 1987 by Microsoft with the specification of their published products and for cross-platform documents interchange.

2. Write short notes on TIFF.

TIFF (Tagged Image File Format):

- TIFF format is common in desktop publishing world (high quality output), and is supported by almost all software packages.
- Recent versions of TIFF allow image compression, and the format is comfortable for moving large files between computers.

3. Write short notes on DIB.

DIB (Device Independent Bitmap):

This format which is similar to BMP, allows the files to be displayed on a variety of devices.

4. Write short notes on Plain text.

Plain text:

- Plain text files can be opened, read, and edited with most text editors.

- Commonly used are Notepad (Windows), Gedit or nano (Unix, Linux), TextEdit (Mac OSX) and so on.

- Other computer programs are also capable of reading and importing plain text.

- Plain text is the original and popular way of conveying an e-mail.

5. Write short notes on GIF

GIF (Graphics Interchange Format):

- GIF is a compressed image format.

- Most of the computer color images and backgrounds are GIF files.

- GIF file format is best suitable for graphics that uses only limited colors, and it is the most popular format used for online color photos.

- 13-bit Color look up table is used by the GIF format to identify its color values.

- GIF format is supported widely.

6. Write short notes on BMP .

BMP (Bitmap):

- Initially BMP format is in use with Windows 3.1.

- BMP is quite large and uncompressed.

- BMP is used for the high-resolution or large images.

7. Write short notes on JPEG.

JPEG (Joint Photographic Experts Group):

- JPEG was designed to attain maximum image compression. It uses lossy compression technique, where a compression method is referred that loses some of the data required for the image reconstruction.

- JPEG works good with photographs, naturalistic artwork, and similar material but functions less on lettering, live drawings or simple cartoons.

8. Write short notes on PNG.

PNG (Portable Network Graphics):

- An extensible file format for the less loss, portable and well compressed storage of raster images.

- PNG acts as replacement for GIF and also replaces multiple common uses of TIFF.
- PNG works well with online viewing applications like worldwide web. so it is fully streamable with a best display option.

9. Write short notes on Digital Video File

Formats:

Digital Video File Formats:

AVI (Audio/Video Interleave):

- AVI is the video file format for Windows.
- In AVI sound and picture elements are stored in alternate interleaved chunks in the file.

MPEG (Moving Picture Experts Group):

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10. Write short notes on Digital Audio File Formats.

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MP3 (MPEG Layer-3 Format):

- MPEG Layer-3 format is the most popular format for storing and downloading music.
- The MP3 files are roughly compressed to one-tenth the size of an equivalent WAV file.

11. Write short notes on OGG, AIFF.

OGG:

- A free, open source container format that is designed for obtaining better streaming and evolving at high end quality digital multimedia.
- OGG can be compared to MP3 files in terms of quality.

AIFF (Audio Interchange File Format):

- A standard audio file format used by Apple which is like a WAV file for the Mac.

12. Write short notes on WMA, RA.

WMA (Windows Media Audio):

- WMA is a popular windows media audio format owned by Microsoft and designed with Digital Right Management (DRM) abilities for copyright protection.

RA (Real Audio Format):

- Real Audio format is designed for streaming audio over the Internet.
- The digital audio resources are usually stored as a computer file in computer's hard drive or CD/DVD.
- Besides the variety of audio file formats available, the most common formats are wave files (.WAV) and MPEG Layer-3 files (.MP3), WMA and RA.

13. Define: Hypertext.

A hypertext is a system which consists of nodes, the text and the links between the nodes, which defines the paths the user; need to follow for the text access in non-sequential ways.

14. Define: Analog Video.

- In Analog video, the video data's are stored in any non-computer media like video tape, laserdisc, film etc.
- It is divided further in two types as Composite and Component Analogue Video.

- Composite analog Video has all the video components like brightness, color, and synchronization combined into one signal.
- Due to the combining of the video components, the quality of the composite video resulted in color blending, low clarity and high generational loss.
- This recording format was used for customer analog video recording tape formats such as Betamax and VHS.

15. Write short notes on TGA.**TGA (Tagra):**

- TGA is the first popular format for high resolution images.
- TGA is supported by Most of the video-capture boards.

16. Define: Digital Audio.**Digital Audio**

- Sampled sound is a Digitized sound.
- A sample of sound is taken and stored every nth fraction of a second as digital information in bits and bytes.
- The quality of this recording depends on the sampling rate.
- Sampling rate is defined as how often the samples are taken and how many numbers are used to represent the value of each sample (bit depth, resolution and sample size).
- The finer the quality of the captured sound and the resolution is achieved while played back, when more often the sample is taken and the more data is stored about that sample.

17. Define: Musical Instrument Digital Identifier (MIDI).

Musical Instrument Digital Identifier (MIDI) is a standard communication tool developed for computers and electronic instruments.

18. Write a role of Multimedia in Education.

- Multimedia plays a vital role in offering an excellent alternative method to traditional teaching by allowing the students to explore and learn various concepts through animation.
- Students, teachers and the parents enjoy this multimedia mode of learning and multimedia learning materials.
- Many educators accept multimedia introduces new ways of thinking in the classroom.

19. Write a role of EDUSAT in India.

- In India, multimedia is used in different ways for teaching and learning like e-learning, distance learning, virtual learning and so on.
- EDUSAT (Education Satellite) is launched in India for serving the educational sector of the country for emulating virtual classroom in an effective manner.

20. Write a role of Multimedia in Entertainment.

- The remarkable advancement in the entertainment industry is due to the Multimedia Technology mainly.
- Multimedia technology is needed in all mode of entertainment like radio, TV, online gaming, video on demand etc.
- Video on demand or movies on demand is a service that provides movies to television sets on an individual basis at homes.
- Movies are stored in a central server and transmitted through a communication network.

21. Write a role of Multimedia in Medical Services.

- Medical services are grown drastically with the development of multimedia.

- Medical Students practices surgery methods via simulation prior to actual surgery.
- Tiny digital cameras are inserted in human body and it displays the inner scene of the body
- In this way the medical practitioners were able to see the inner part without dissecting it.

22. Write a role of Multimedia in Multimedia Conferencing.

Multimedia conferencing or video conferencing is a system that performs face-to-face interactions among participating users, located far from each other, as if they were sitting and discussing in a single room.

23. Define Multimedia Production

Multimedia Production is an efficient planning which assures that the project will be proceed smoothly and certainly ensures that the information reaches the target audience.

24. List out Multimedia Production team members

- Production Manager
- Content Specialist
- Script Writer
- Text Editor
- Multimedia Architect
- Computer Graphic Artist
- Audio and Video Specialist
- Computer Programmer
- Web Master

25. Define webcasting. Mar 2023

The live telecast of real time programs through internet is known as webcasting.

Part - III Explain in detail

1. Explain the applications of Multimedia.

- Multimedia is the most fast growing area in the field of information technology.

- A Multimedia is an application which is a collection of multiple media sources like text, images, sound/audio, animation and video on a single platform. Predominantly, Entertainment and Education are the fields where multimedia is used in majority.

1. Education:

- Multimedia plays a vital role in offering an excellent alternative method to traditional teaching by allowing the students to explore and learn various concepts through animation.

- Students, teachers and the parents enjoy this multimedia mode of learning and multimedia learning materials.

- Multimedia based teaching and learning system named as MODULO at GMU in Germany developed is a webbased environment that aims to provide students with flexible and decentralized learning environment based on their educational background.

- In India, multimedia is used in different ways for teaching and learning like e-learning, distance learning, virtual learning and so on.

- EDUSAT (Education Satellite) is launched in India for serving the educational sector of the country for emulating virtual classroom in an effective manner.

2. Entertainment:

- The remarkable advancement in the entertainment industry is due to the Multimedia Technology mainly.

- This technology is needed in all mode of entertainment like radio, TV, online gaming, video on demand etc. Video on demand or movies on demand is a service that provides movies to television sets on an individual basis at homes.

- Movies are stored in a central server and transmitted through a communication network.
- A set-top box connected to the communication network converts the digital information to analog signals and inputs it to the television set.

3. Business Systems:

- Business applications for multimedia include presentations, training, internet protocols and so on.
- The marketing and advertising agencies are using animation techniques for sales promotion.
- High resolution projectors are common for multimedia presentations on the road.
- Cell phones and personal digital assistants with Bluetooth and Wi-Fi communication technology make multimedia communication for business more efficiently.

4. Medical Services:

- Medical services are grown drastically with the development of multimedia.
- Medical Students practices surgery methods via simulation prior to actual surgery.
- Tiny digital cameras are inserted in human body and it displays the inner site of the body through which the medical practitioners can see the internal parts without actually dissecting it.

5. Public Places:

- Multimedia is available in many public places like trade shows, libraries, railway stations, museums, malls, airports, banks, hotels and exhibitions in the form of kiosks.
- It helps the customers by providing information to them.
- The information presented in kiosk are enriched with animation, video, still

pictures, graphics, diagrams, maps, audio and text. Banks uses kiosks in the form of ATM machines.

6. Multimedia Conferencing:

Multimedia conferencing or videoconferencing is a system that performs face-to-face interactions among participating users, located far from each other, as if they were sitting and discussing in a single room.

2. Explain in detail Process of Multimedia. Steps in Multimedia Production

Adequate time and efficient planning is required for multimedia production, which assures that the project will be proceed smoothly and certainly ensures that the information reaches the target audience.

Phases for development of complex multimedia projects are:

- ✓ Conceptual Analysis and Planning:
- ✓ Project design
- ✓ Pre-production
- ✓ Budgeting
- ✓ Multimedia Production Team
- ✓ Hardware/Software Selection
- ✓ Defining the Content
- ✓ Preparing the structure
- ✓ Production
- ✓ Testing
- ✓ Documentation
- ✓ Delivering the Multimedia Product

1. Conceptual Analysis and Planning:

- Conceptual analysis identifies an appropriate theme, budget and content availability on that selected theme.
- Copyright issues also are considered in this phase.

2. Project design:

Goals, Objectives are contribute to the Project design phase.

3. Pre-production:

Based on the planning and design, it is necessary to develop the project.

4. Budgeting:

Budgeting for each phases like consultants, hardware, software, travel, communication and publishing is estimated for all the multimedia projects.

5. Multimedia Production Team:

Script writer, Production manager, Editor, Graphics Architect, Multimedia Architect and Web Master are there in Multimedia Production Team

6. Hardware/Software Selection:

Hardware includes the selection of fastest CPU, RAM and huge monitors, sufficient disc for storing the records.

7. Defining the Content:

Content is the “stuff” provided by content specialist to the multimedia architect

8. Preparing the structure:

This structure defines the activities, responsible person for each activity and the start/end time for each activity.

9. Production:

In the multimedia application, after the pre-production activities, the production phase starts. This phase includes the activities like background music selection, sound recording and so on.

10. Testing:

The complete testing of the pilot product is done before the mass production to ensure that everything is in place,. There by avoiding the failure after launch.

11. Documentation:

The documentation has all the valuable information's starting from the system requirement till the completion of testing.

12. Delivering the Multimedia Product:

Multimedia applications are best delivered on CD/DVD or in the website

3. Explain in detail Techniques of Animation.

Animation is the process displaying still images so quickly so that they give the impression of continuous movement.

Features:

- In animation the screen object is a vector image in animation.
- Using numerical transformations the movement of that image along its paths is calculated for their defining coordinates.
- The least frame rate of at least 16 frames per second gives the impression of smoothness and for natural looking it should be at least 25 frames per second.

Techniques:

- Animations may be in two dimensional or three dimensional.
- The two dimensional animation, bring an image alive, that occur on the flat X and Y axis of the screen.
- In three dimensional animations it occurs along the three axes X, Y and Z.
- Animation tools are very powerful and effective.
- The two basic types of animations are Path animation and Frame animation.
 - ✓ Path animation involves moving an object on a screen that has a constant background.
 - ✓ In frame animations, multiple objects are allowed to travel simultaneously.

4. Briefly explain about Multimedia Components.

Multimedia has five major components namely text, images, sound, video and animation.

Text:

Text is the basic components of multimedia and most common ways of communicating information to other person.

Text is of two types namely

- Static Text
- Hypertext

Static Text:

- Static text, the text or the words will remain static as a heading or in a line, or in a paragraph.
- The words are given along with the images to explain about the images.
- In static text the words will either give information or support an image or a video.

Hypertext:

A hypertext is a system which consists of nodes, the text and the links between the nodes, which defines the paths the user needs to follow for the text access in non-sequential ways.

Image:

- Images acts as a vital component in multimedia.
- Images are generated by the computer in two ways, as bitmap or raster images and as vector images.

3) Sound:

Sound is a meaningful speech in any language and is the most serious element in multimedia, providing the pleasure of music, special effects and so on.

4) Video:

Video is defined as the display of recorded event, scene .

5) Animation:

Animation is the process displaying still images so quickly so that they give the impression of continuous movement.

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Chapter

An Introduction to Adobe PageMaker

An Introduction to Adobe PageMaker-An Overview

Desktop publishing:

- Desktop publishing (abbreviated DTP) is the creation of page layouts for documents using DTP software.

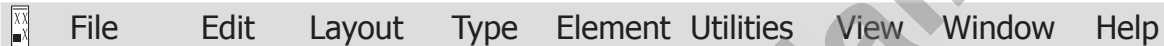
Pasteboard in PageMaker:

- When we create a document a document page is displayed within a dark border.
- The area outside of the dark border is referred to as the pasteboard.

Menu bar of PageMaker:

- Menu bar of PageMaker contains File, Edit, Layout, Type, Element, Utilities, View, Window, Help menus.
- When we click on a menu item, a pull down menu appears.
- There may be sub-menus under certain options in the pull-down menus.

Menu bar



Text editing:

- Entering a new text or modifying the existing text in a document is called as text editing.

Text block:

- A text block contains text you type, paste, or import.
- We cannot see the borders of a text block until we select it with the pointer tool.

Threading text blocks:

- A Text block can be connected to other text block so that the text in one text block can flow into another text block.
- Text blocks that are connected in this way are threaded.

Threading text:

- The process of connecting text among Text blocks is called threading text.

Components of Menu bar:

- | | |
|-----------|---------------|
| ➤ Toolbar | ➤ Scroll bars |
| ➤ Ruler | ➤ Text area. |

Menu options available in Menu bar:

- | | |
|-----------|-------------|
| ➤ File | ➤ Utilities |
| ➤ Edit | ➤ View |
| ➤ Layout | ➤ Window |
| ➤ Type | ➤ Help. |
| ➤ Element | |

Story.

- Text that flows through one or more threaded blocks is called a story.

Master Pages:

- Master Pages commonly contain repeating logos, page numbers, headers, and footers.