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2023-24 Edition

Author :

Mr. E.Srinivasan

(Post Graduate Teacher, Chennai)

Edited by :

Mrs. K. Priyadharshini M.Sc.

Coimbatore

Reviewed by :

Mr. V. Rajan M.Sc., M.Phil.

Chennai

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PREFACE

" The woods are lovely, dark and deep. "
But I have promises to keep, and
miles to go before I sleep - Robert Frost

Respected Principals, Correspondents, Head Masters / Head Mistresses, Teachers,

From the bottom of our heart, we at SURA Publications sincerely thank you for the support and patronage that you have extended to us for more than a decade.

It is in our sincerest effort we take the pride of releasing **SURA's Computer Applications Guide** for +2 Standard – Edition 2023-24. This guide has been authored and edited by qualified teachers having teaching experience for over a decade in their respective subject fields. This Guide has been reviewed by reputed Professors who are currently serving as Head of the Department in esteemed Universities and Colleges.

With due respect to Teachers, I would like to mention that this guide will serve as a teaching companion to qualified teachers. Also, this guide will be an excellent learning companion to students with exhaustive exercises and in-text questions in addition to precise answers for textual questions.

In complete cognizance of the dedicated role of Teachers, I completely believe that our students will learn the subject effectively with this guide and prove their excellence in Board Examinations.

I once again sincerely thank the Teachers, Parents and Students for supporting and valuing our efforts.

God Bless all.

Subash Raj, B.E., M.S.
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All the Best

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CHAPTER

1

MULTIMEDIA AND
DESKTOP PUBLISHING

EVALUATION

Chapter 1

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.

[Govt. MQP-'19; July-'22]

(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. Expand JPEG   *[Aug-'21; May-'22]*

(a) Joint Photo Experts Gross

(b) Joint Photographic Experts Group

(c) Joint Processor Experts Group

(d) Joint Photographic Expression Group

[Ans. (b) Joint Photographic Experts Group]

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

(a) network

(b) compact disk drive

(c) good idea

(d) programming knowledge

[Ans. (b) compact disk drive]

5. Match the following by choosing the right one

[Aug-'21]

1. Text – TGA
2. Image – MIDI
3. Sound – MPEG
4. Video – RTF

(a) 1, 2, 3, 4   (b) 2, 3, 4, 1

(c) 4, 1, 2, 3   (d) 3, 4, 1, 2

[Ans. (c) 4, 1, 2, 3]

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

(a) TIFF   (b) BMP

(c) RTF   (d) JPEG

[Ans. (c) RTF]

7. _____ is the process displaying still images with continuous movement

(a) Text formats   (b) Sound

(c) MP3   (d) Animation

[Ans. (d) Animation]

8. The live telecasting of real time program through Internet is known as ____

[HY-'19; FRT-'22]

(a) web casting   (b) web hosting

(c) data manipulation   (d) none of the above

[Ans. (a) web casting]

9. GIF use _____ color look up table

(a) 8 bit   (b) 13 bit

(c) 8 MB   (d) 13 MB

[Ans. (b) 13 bit]

10. RTF file format was introduced by _____

(a) TCS   (b) Microsoft

(c) Apple   (d) IBM

[Ans. (b) Microsoft]

PART - II

SHORT ANSWERS

1. Define Multimedia and their features.

[Sep-2020]

Ans. The word multimedia consists of two words "multi" and "media" which means that multiple forms of media are combined to gather and provide services like storage, communication, presentation and Input/ output interactions of text, video, image, graphics and audio.

Features of Multimedia :

(i) The information they handle is represented digitally.

(ii) Multimedia systems are integrated computer controlled and usually interactive.

2. List out Multimedia Components.

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

3. Classify the TEXT component in multimedia

Ans. (i) Static Text

(ii) Hyper Text

4. Classify the IMAGE component in multimedia.

Ans. (i) Raster or Bitmap Images

(ii) Vector Images

5. Define Animation and their features.

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

Features :

(i) In animation the screen object is a vector image.

(ii) The least frame rate of at least 16 frames per second gives the impression of smoothness and for natural looking it should be atleast 25 frames per second.

(iii) Animation tools are very powerful and effective.

6. List out image file formats. *[Aug-'21; FRT-'22]*

Ans. (i) TIFF – Tagged Image File Format

(ii) BMP – Bitmap

(iii) DIB – Device Independent Bitmap

(iv) GIF – Graphic Interchange Format

(v) JPEG – Joint Photographic Experts Group

(vi) TGA – Tagra

(vii) PNG – Portable Network Graphics

7. List out audio file formats. *[Govt. MQP-'19]*

Ans. (i) WAV – Wave form Audiofile Format

(ii) MP3 – MPEG Layer - 3 Format

(iii) OGG

(iv) AIFF – Audio Interchange File Format

(v) WMA – Windows Media Audio

(vi) RA – Real Audio Format

8. List out video file formats. *[May-'22]*

Ans. (i) AVI – Audio / Video Interleave

(ii) MPEG – Moving Picture Experts Group

9. Define Multimedia Production. *[July-'22]*

Ans. (i) 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.

(ii) Text is incorporated using OCR software, Pictures shot by digital camera, Video clips are shot, edited and compressed.

10. List out Multimedia Production team members.

Ans. The team comprises of members playing various roles and responsibilities like Script writer, Production manager, Editor, Graphics Architect, Multimedia Architect and Web Master.

PART - III

EXPLAIN IN BRIEF ANSWER

1. Briefly explain about Multimedia Components.

Ans. Components of Multimedia:

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

Image : Images acts as an vital component in multimedia. These images are generated by the computer in two ways, as bitmap or raster images and as vector images.

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

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.

Video : Video is defined as the display of recorded event, scene etc. The powerful way to convey information in multimedia applications are embedding of video.

2. Describe the features and techniques of animation.

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

(ii) The least frame rate of at least 16 frames per second gives the impression of smoothness.

(iii) Natural looking should be at least 25 frames per second.

(iv) Animations may be in two or three dimensional.

(a) A two dimensional animation, brings an image alives that occur on the flat X and Y axis of the screen.

(b) Three dimensional animation it occurs along the three axis X, Y and Z.

(v) The two basic types of animations are,

(a) Path animation involves moving an object on a screen that has a constant background

(b) In frame animations, multiple objects are allowed to travel simultaneously and the background or the objects also changes.

Multimedia and Desktop Publishing

3. Write roles and responsibilities of Production team members.

Ans. (i) 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.

(ii) Content Specialist: Content specialist is responsible for performing all research activities concerned with the proposed application's content.

(iii) Script Writer: The script writer visualizes the concepts in three dimensional environments and if needed uses the virtual reality integration into the program.

(iv) Text Editor: The Text Editor checks the flow of text, structure and correct it grammatically.

(v) Multimedia Architect: The multimedia architect integrates all the multimedia building blocks using an authoring tools.

4. Describe the various file formats in multimedia. *[HY-'19; July-'22]*

Ans. (i) Text File Formats
    (a) RTF(Rich Text Format)
    (b) Plain text

(ii) Image File Formats
    (a) TIFF (Tagged Image File Format)
    (b) BMP (Bitmap)
    (c) DIB (Device Independent Bitmap)
    (d) GIF (Graphics Interchange Format)
    (e) JPEG (Joint Photographic Experts Group)
    (f) TGA (Tagra)
    (g) PNG (Portable Network Graphics)

(iii) Digital Audio File Formats
    (a) WAV (Waveform Audio File Format)
    (b) MP3 (MPEG Layer-3 Format)
    (c) OGG
    (d) AIFF (Audio Interchange File Format)
    (e) WMA (Windows Media Audio)
    (f) RA (Real Audio Format)

(iv) Digital Video File Formats
    (a) AVI (Audio/Video Interleave)
    (b) WMV (Windows Media Video)
    (c) FLV (Flash Video)
    (d) 3GP
    (e) MPEG (Moving Picture Experts Group)

5. Explain animation industry and their scope.

Ans. (i) The Indian animation industry encompasses traditional 2D animation, 3D animation and visual effects for feature films.

(ii) In 1956, Disney studios animator clair weeks who had worked on Bambi, was invited to Films Division of India in Mumbai to establish and train the country's first animation studio as part of the American technical co-operation mission.

(iii) Indian animation industry is anticipated to grow faster than the IT industry.

(iv) The industry has grown to a multibillion net worth standard.

(v) The manpower crunch needs to be decreased with animators.

(vi) There are hundreds and thousands of job opportunities lying around open for animators.

(vii) Work opportunities for quality animators and related professionals exist in the following sectors :-
    (a) Advertising
    (b) Online and Print News Media
    (c) Film & Television
    (d) Cartoon production
    (e) Theater
    (f) Video Gaming
    (g) E-learning

PART - IV

EXPLAIN IN DETAIL:

1. Explain in detail Process of Multimedia.
[QY-'19; Sep-2020; FRT-'22]

Ans. Following are the phases for development of complex multimedia projects.

(1) Conceptual Analysis and Planning :
    (i) The process of multimedia making begins with a conceptual ignition point.
    (ii) Conceptual analysis identifies a appropriate theme, budget and content availability on that selected theme.
    (iii) Additional criteria like copyright issues also are considered in this phase.

Chapter 1

Multimedia and Desktop Publishing

(2) Project design :

(i) Once the theme is finalized objectives, goals, and activities are drawn for the multimedia project.

(ii) General statements are termed as goals. The specific statements in the project is known as the objectives.

(iii) Activities are series of actions performed to implement an objective. These activities 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 :

(i) The production team for a high end multimedia project requires a team efforts.

(ii) The team comprises of members playing various roles and responsibilities like Script writer, Production manager, Editor, Graphics Architect, Multimedia Architect and Web Master.

(6) Hardware/Software Selection :

(i) All multimedia Application requires appropriate tools to develop and playback the application.

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

(7) Preparing the structure:

(i) A detailed structure must have information about all the steps.

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

2. Explain in detail Techniques of Animation.

Ans. Animation : *[Mar-2020]*

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

(ii) In animation the screen object is a vector image.

(iii) Using numerical transformations the movement of that image along its paths is calculated for their defining coordinates.

(iv) 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.

(v) Animations may be in two or three dimensional.

(vi) A two dimensional animation, brings an image alive, that occur on the flat X and Y axis of the screen.

(vii) While in three dimensional animation it occurs along the three axis X, Y and Z. Animation tools are very powerful and effective.

(viii) The two basic types of animations are Path animation and Frame animation.

Path Animation : *[Mar-2020]*

(i) Path animation involves moving an object on a screen that has a constant background.

(ii) E.g. a cartoon character may move across the screen regardless of any change in the background or the character.

Frame Animation :

In frame animations, multiple objects are allowed to travel simultaneously and the background or the objects also changes.

3. Explore the opportunities Animation filed movie industry. *[QY-'19]*

Ans. (i) In the past, students that complete an animation course or a visual effects course could find job opportunities only in the film industry.

(ii) In India, the VFX domain, or the animation and visual effects industry, has been growing stronger and stronger in recent years.

(iii) Animation and visual effects requirements for massive international projects such as HBO's top TV series and Marvel's hits Infinity War and Black Panther was outsourced to Indian companies in Mumbai and Pune.

(iv) The surge in demand for animation and visual effects experts has led to a significant increase in the number of students enrolling for a VFX course.

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Chapter 1

(v) As such, a student that completes a 3D animation course can hope to build a rewarding and satisfying career in the Media and Entertainment field these days.

(vi) The timeless classics Tom and Jerry and Mickey Mouse created a milestone but the legacy is not disappointing.

(vii) Indian animation has risen from an amateur piece of craft like "The Banyan Deer" to the million rupees project "Chhota Bheem".

(viii) POGO, the leading cartoon channel in India is the most successful entertainment channel for kids.

(ix) Indian animation industry is anticipated to grow faster than the IT industry.

(x) The industry has grown to a multibillion net work standard.

(xi) As a result of the growing demand in industry, the scope of animation course in tremendous.

(xii) The number of VFX artists and animators that worked on Baahubali was around 750.

(xiii) Ex. For Top animates Movies : Spider-Man, Incredibles 2, Zootopia, Inside Out, Toy Story 3, Finding Nemo, Frozen, etc.

4. Explain in detail about production team Roles and Responsibilities. *[HY-'19; Aug-'21; July-'22]*

Ans. Production Manager:

(i) 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.

(ii) The production manager should be an expertise in the technology, good at proposal writing, good communication skills and budget management skills.

(iii) Also must have experience in human resource management and act as an efficient team leader.

Content Specialist :

(i) Content specialist is responsible for performing all research activities concerned with the proposed application's content.

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

Script Writer :

(i) Video and film scripts represents a linear sequence of events.

(ii) The script writer visualizes the concepts in three dimensional environments and if needed uses the virtual reality integration into the program.

Text Editor :

(i) The content of a multimedia production always must flow logically and the text should always be structured and correct grammatically.

(ii) 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 an 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 :

(i) The roles of these specialists are needed for dealing with narration and digitized videos to be added in a multimedia presentation.

(ii) They are responsible for recording, editing sound effects and digitizing.

5. Explain about different file formats in multimedia files. *[Mar-2020]*

Ans. File Formats for Multimedia : The following is an outline of current file formats used for the production and delivery of multimedia data.

(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 :

(i) Plain text files can be opened, read, and edited with most text editors.

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

(2) Image Formats :

TIFF (Tagged Image File Format) :

(i) This format is common in desktop publishing world (high quality output), and is supported by almost all software packages.

(ii) Recent versions of TIFF allows image compression, and the format is comfortable for moving large files between computers.

DIB (Device Independent Bitmap) :

A device independent bitmap contains a colour table. The colour describes how pixel values corresponds to RGB colour values, which describes colors that are produced by emitting light.

GIF (Graphics Interchange Format) :

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

(ii) This file format is best suitable for graphics that uses only limited colors, and it is the most popular format used for online color photos.

TGA (Tagra) :

It is the first popular format for high-resolution images. TGA files are common in animation video industry.

PNG (Portable Network Graphics) :

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

(ii) PNG acts as replacement for GIF and also replaces multiple common uses of TIFF.

(3) **Digital Audio File Formats :**

WAV (Waveform Audio File Format)

(i) WAV is the most popular audio file format in windows for storing uncompressed sound files.

(ii) In order to attain the reduced file size it can also be converted to other file formats like MP3.

MP3 (MPEG Layer-3 Format) :

(i) MPEG Layer-3 format is the most popular format for storing and downloading music.

(ii) The MP3 files are roughly compressed to one-tenth the size of an equivalent WAV file.

(4) **Digital Video File Formats :**

AVI (Audio/Video Interleave) :

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

MPEG (Moving Picture Experts Group) :

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

(ii) Simply MPEG is the standards for digital video and audio compression.

Multimedia and Desktop Publishing

GOVERNMENT EXAM QUESTIONS AND ANSWERS

CHOOSE THE CORRECT ANSWER **1 MARK**

1. _____ involves moving an object on a screen that has a constant background. *[QY-'19]*
(a) Animation
(b) Frame Animation   (c) Path Animation
(d) Image Animation **[Ans. (c) Path Animation]**

2. In which of the following pair / pairs is/are wrong *[QY-'19]*
1) DIB ----- Allows the files to be displayed on a variety of devices
2) RA ----- It is designed for streaming audio over the internet
3) RTF -----Introduced by APPLE
4) TGA ----- It is supported by most of the video capture boards
(a) both 1 and 2 (b) both 2 and 3
(c) 3 only   (d) 4 only   **[Ans. (c) 3 only]**

3. Write the expansion of MIDI: *[Mar-2020]*
(a) Musical Instrument Digital Interpreter
(b) Musical Information Digital Information
(c) Musical Intelligent Digital Interface
(d) Musical Instrument Digital Identifier
[Ans. (d) Musical Instrument Digital Identifier]

4. Which is not an image format? *[Sep-2020]*
(a) AIFF   (b) GIF   (c) TIFF   (d) JPEG
[Ans. (a) AIFF]

5. The least frame rate of at least _____ frames in Multimedia Animation. *[Sep-2020]*
(a) 10   (b) 12   (c) 15   (d) 16
[Ans. (d) 16]

6. ------------- is the first popular format for high resolution images. *[FRT-'22]*
(a) GIF   (b) TIFF
(c) DIB   (d) TGA
[Ans. (d) TGA]

VERY SHORT ANSWERS **2 MARKS**

1. Write roles and responsibilities of computer programmer. *[QY-'19]*

Ans. (i) The computer programmer writes the lines of code or scripts in the appropriate language.

(ii) These scripts usually develops special functions like developing the software to give the size and shape of video windows, controlling peripherals and so on.

SHORT ANSWERS — 3 MARKS

1. Explain the following file formats : *[FRT-'22]*
   (a) TGA   (b) OGG   (c) MPEG

Ans. (a) **TGA :** It is the first popular format for high-resolution images. TGA is supported by Most of the video-capture boards.

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

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

ADDITIONAL QUESTIONS AND ANSWERS

CHOOSE THE CORRECT ANSWER — 1 MARK

1. Which of the following is not a multimedia source?
   (a) Text   (b) Pagemaker
   (c) Graphics   (d) Video **[Ans. (b) Pagemaker]**

2. Which of the following is becoming more popular among the user in the terms of its uses and applications?
   (a) Multimedia   (b) Pagemaker
   (c) Computer   (d) Images **[Ans. (a) Multimedia]**

3. Multiple forms of media are combined together called
   (a) Media
   (b) Computerized applications
   (c) Image media   (d) Multimedia
   [Ans. (d) Multimedia]

4. How many major components are there in multimedia?
   (a) 4   (b) 3   (c) 5   (d) 2 **[Ans. (c) 5]**

5. Which of the following is not a major component of multimedia?
   (a) Text   (b) Pagemaker
   (c) Video   (d) Animation
   [Ans. (b) Pagemaker]

6. Which of the following is not a dynamic element of multimedia?
   (a) Video   (b) Animation
   (c) Audio   (d) Text **[Ans. (d) Text]**

7. Which of the following is a static element?
   (a) Graphics   (b) Video
   (c) Animation   (d) Audio
   [Ans. (a) Graphics]

8. How many types of elements are there in multimedia?
   (a) 3   (b) 4   (c) 2   (d) 5
   [Ans. (c) 2]

9. Which of the following is a basic components of multimedia?
   (a) Video   (b) Text
   (c) Graphics   (d) Audio
   [Ans. (b) Text]

10. The most common ways of communicating information to other person is
   (a) Audio   (b) Text
   (c) Graphics   (d) Images
   [Ans. (b) Text]

11. How many types of text used in multimedia?
   (a) 4   (b) 3   (c) 2   (d) 5
   [Ans. (c) 2]

12. Which of the following type of text not used in multimedia?
   (i) Static Text   (ii) Hyper Text
   (iii) Multi Text   (iv) Interactive Text
   (a) i, ii   (b) ii
   (c) iii   (d) iii and iv
   [Ans. (d) iii and iv]

13. Which of the following text will give information or support an image or an video?
   (a) Static   (b) Hyper
   (c) Multi   (d) Information
   [Ans. (a) Static]

14. Which text defines the paths the user need to follow for the text access in non-sequential ways?
   (a) Static   (b) Multi
   (c) Hyper   (d) None of these
   [Ans. (c) Hyper]

15. Which of the following acts as an vital component in multimedia?
   (a) Text   (b) Image
   (c) Video   (d) Audio
   [Ans. (b) Image]

16. How many ways the images are generated by the computer?

(a) 4 (b) 5 (c) 3 (d) 2

[Ans. (d) 2]

17. Which of the following is a type of image not generated by computer?

(a) Bitmap (b) Raster
(c) Hyper (d) Vector

[Ans. (c) Hyper]

18. The common form of storing images in a computer is

(a) Raster (b) Bitmap
(c) Vector (d) a or b

[Ans. (d) a or b]

19. The image formed by pixel is

(a) Bitmap (b) Vector
(c) GIF (d) JPG

[Ans. (a) Bitmap]

20. How many colors are there in each pixel?

(a) 1 (b) 2 (c) 256 (d) more

[Ans. (d) more]

21. Which of the following is used to determine the number of colors in images?

(a) Bits (b) Bytes
(c) Megabytes (d) Gigabytes

[Ans. (a) Bits]

22. Which types of image is used to create line, rectangle?

(a) Raster (b) Vector
(c) Bitmap (d) GIF

[Ans. (b) Vector]

23. Which types of images is useful for storing large number of images and speeding transmission for network application?

(a) Raster (b) Bitmap
(c) Animated Gif (d) Vector

[Ans. (d) Vector]

24. Which of the following is not a compression format image?

(a) GIF (b) MPEG
(c) TIFF (d) JPEG

[Ans. (b) MPEG]

25. Which of the following is the process displaying still images in continuous movement?

(a) Images (b) Graphics
(c) Animation (d) Video

[Ans. (c) Animation]

26. The least frame rate that gives the impression of animation smoothness is

(a) 16 (b) 25 (c) 9 (d) 20

[Ans. (a) 16]

27. The least frame rate that gives the impression of animation in natural is

(a) 16 (b) 25 (c) 20 (d) 21

[Ans. (b) 25]

28. How many types of animation are there?

(a) 1 (b) 2 (c) 3 (d) 5

[Ans. (b) 2]

29. Which of the following is not a types of animation?

(a) Vector (b) Path
(c) Frame (d) All of these

[Ans. (a) Vector]

30. Which tools are very powerful and effective?

(a) Animation (b) Image
(c) Text (d) None of these

[Ans. (a) Animation]

31. In which type of animation there is not change in the background?

(a) Frame (b) Path
(c) Dynamic (d) Vector

[Ans. (b) Path]

32. In which type of animations, multiple objects are allowed to travel simultaneously?

(a) Vector (b) Raster
(c) Frame (d) Path

[Ans. (c) Frame]

33. In which type of animation, the background changes according to the object?

(a) Frame (b) Vector
(c) Raster (d) Path

[Ans. (a) Frame]

34. Which of the following is the most serious element in multimedia?

(a) Text (b) Image
(c) Animation (d) Sound

[Ans. (d) Sound]

35. The pressure level of sound is

(a) Frequency (b) Decibels
(c) Analog (d) Digital

[Ans. (b) Decibels]

36. Which of the following is a meaning full speech in any language?

(a) Animation (b) Sound
(c) Image (d) Graphics

[Ans. (b) Sound]

Multimedia and Desktop Publishing

9

CHAPTER

2

AN INTRODUCTION TO
ADOBE PAGEMAKER

CHAPTER SNAPSHOT

21

EVALUATION

Chapter 2

PART - I

CHOOSE THE CORRECT ANSWER

1. DTP stands for _____
- (a) Desktop Publishing
- (b) Desktop Publication
- (c) Doctor To Patient
- (d) Desktop Printer

[Ans. (a) Desktop Publishing]

2. _____ is a DTP software.
- (a) Lotus 1-2-3
- (b) PageMaker
- (c) Maya
- (d) Flash

[Ans. (b) Pagemaker]

3. Which menu contains the New option?
- (a) File menu
- (b) Edit menu
- (c) Layout menu
- (d) Type menu

[Ans. (a) File menu]

4. In PageMaker Window, the area outside of the dark border is referred to as _____. *[Govt. MQP-'19]*
- (a) page
- (b) pasteboard
- (c) blackboard
- (d) dashboard

[Ans. (b) pasteboard]

5. Shortcut to close a document in PageMaker is _____
- (a) Ctrl + A
- (b) Ctrl + B
- (c) Ctrl + C
- (d) Ctrl + W

[Ans. (d) Ctrl + W]

6. A _____ tool is used for magnifying the particular portion of the area. *[Aug-'21]*
- (a) Text tool
- (b) Line tool
- (c) Zoom tool
- (d) Hand tool

[Ans. (c) Zoom tool]

7. _____ tool is used for drawing boxes.
- (a) Line
- (b) Ellipse
- (c) Rectangle
- (d) Text

[Ans. (c) Rectangle]

8. Place option is present in _____ menu.
- (a) File
- (b) Edit
- (c) Layout
- (d) Window

[Ans. (a) File]

9. To select an entire document using the keyboard, press _____ *[HY-'19; Sep-2020]*
- (a) Ctrl + A
- (b) Ctrl + B
- (c) Ctrl + C
- (d) Ctrl + D

[Ans. (a) Ctrl + A]

10. Character formatting consists of which of the following text properties? *[May-'22]*
- (a) Bold
- (b) Italic
- (c) Underline
- (d) All of these

[Ans. (d) All of these]

11. Which tool lets you edit text?
- (a) Text tool
- (b) Type tool
- (c) Crop tool
- (d) Hand tool

[Ans. (a) Text tool]

12. Shortcut to print a document in Pagemaker is _____. *[July-'22]*
- (a) Ctrl + A
- (b) Ctrl + P
- (c) Ctrl + C
- (d) Ctrl + V

[Ans. (b) Ctrl + P]

13. Adobe PageMaker is a _____ software.

[Ans. Page layout]

14. _____ Bar is the topmost part of the PageMaker window. **[Ans. Title]**

15. _____ is the process of moving up and down or left and right through the document window. **[Ans. Scrolling]**

16. _____ tool is used to draw a circle. *[FRT-'22]* **[Ans. Ellipse]**

17. The Insert pages option is available on clicking the _____ menu. *[FRT-'22]* **[Ans. Layout]**

18. Match the following.

Cut	- (i) Ctrl + Z
Copy	- (ii) Ctrl + V
Paste	- (iii) Ctrl + X
Undo	- (iv) Ctrl + C

[Ans. (iii), (iv), (ii), (i)]

19. Choose the odd man out.
- i. Adobe PageMaker, QuarkXPress, Adobe InDesign, Audacity
- ii. File, Edit, Layout, Type, Zip
- iii. Pointer Tool, Line tool, Hide Tool, Hand Tool
- iv. Bold, Italic, Portrait, Underline

[Ans. (i) - Audacity , (ii) - Zip, (iii) - Hide Tool, (iv) - Portrait]

20. Choose the correct statement.
    i. (a) Text can be selected using mouse only.
       (b) Text can be selected using mouse or the keyboard.
    ii. (a) DTP is an abbreviation for Desktop publishing.
       (b) DTP is an abbreviation for Desktop publication.   **[Ans. i - b, ii - a]**

21. Choose the correct pair
    (a) Edit and Cut   (b) Edit and New
    (c) Undo and Copy   (d) Undo and Redo

                    [Ans. (d) Undo and Redo]

PART - II

SHORT ANSWERS

1. **What is desktop publishing?**   *[Sep-2020]*
Ans. Desktop publishing (abbreviated DTP) is the creation of page layouts for documents using DTP software.

2. **Give some examples of DTP software.**
Ans. The popular DTP software are **Adobe PageMaker, Adobe InDesign, Quark XPress**, etc.

3. **Write the steps to open PageMaker.**
Ans. In the Windows 7 operating system, we can open Adobe PageMaker using the command sequence **Start→All Programs → Adobe → Pagemaker 7.0 → Adobe PageMaker 7.0**.

4. **How do you create a New document in PageMaker?**
Ans. To create a new document,
    (i) Choose **File → New** in the menu bar. (or) Press Ctrl + N in the keyboard. Now **Document Setup dialog box** appears.
    (ii) Enter the appropriate settings for your new document in the Document Setup dialog box.
    (iii) Click on **OK**.

5. **What is a Pasteboard in PageMaker?**
                    [QY-'19; HY-'19]
Ans. (i) A document page is displayed within a dark border.
    (ii) The area outside of the dark border is referred to as the pasteboard.
    (iii) Anything that is placed completely in the pasteboard is not visible when the document is printed.
    (iv) The use of pasteboard is to temporarily hold elements while designing document.

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

7. **Differentiate Ellipse tool from Ellipse frame tool.**
Ans.

Ellipse tool	⊙	+	Used to draw circles and ellipses.
Ellipse frame tool	⊗	+	Used to create elliptical placeholders for text and graphics.

8. **What is text editing?**   *[Mar-2020]*
Ans. Editing means making changes to the text. Editing may be inserting and deleting words and phrases, correcting errors, and moving and copying text to different places in the document.

9. **What is text block?**   *[Aug-'21; May-'22]*
Ans. A text block contains text you type, paste, or import. The borders of a text block cannot be seen until it select with the pointer tool.

10. **What is threading text blocks?**
                    [Govt. MQP-'19; Aug-'21; FRT-'22]
Ans. 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**.

11. **What is threading text?**   *[July-'22]*
Ans. The process of connecting text among Text blocks is called **threading text**.

12. **How do you insert a page in PageMaker?**
Ans. To insert pages
    (i) Go to the page immediately before the page to be inserted.
    (ii) Choose **Layout →Insert Pages** in the menu bar. The **Insert Pages** dialog box appears.
    (iii) Type the number of pages want to be insert.
    (iv) To insert pages after the current page, choose 'after' from the pop-up menu.
    (v) Click on Insert.
    (vi) The new pages are inserted in publication.

An Introduction to Adobe Pagemaker

PART - III

EXPLAIN IN BRIEF ANSWER

1. **What is PageMaker? Explain its uses.** *[July-'22]*

Ans. **(i)** Adobe PageMaker is a page layout software.

(ii) It is used to design and produce documents that can be printed.

(iii) A simple business card to a large book can be created.

(iv) Page layout software includes tools that allows to easily position text and graphics on document pages.

For example, using PageMaker, create a newsletter that includes articles and pictures on each page.

(v) Pictures and text next to each other, on top of each other, or beside each other can be placed.

2. **Mention three tools in PageMaker and write their keyboard shortcuts.** *[HY-'19]*

Ans.

S.No.	Tools	Keyboard Short Cut
1.	Pointer Tool	F9
2.	Rotating Tool	Shift + F2
3.	Line Tool	Shift + F3

3. **Write the use of any three tools in PageMaker along with symbols.**

Ans. **(i)** ◣ Line Tool – Used to create a straight line.

(ii) ◯ Ellipse Tool – Used to draw an Ellipse a circle shape.

(iii) ⬡ Polygon Tool – Used to draw polygon shape.

4. **How do you rejoin split blocks?**

Ans. To rejoin the two text blocks

(i) Place the cursor on the bottom handle of the second text block, click and drag the bottom handle up to the top.

(ii) Then place the cursor on the bottom handle of the first text block, and click and drag the bottom handle down if necessary.

5. **How do you link frames containing text?**

Ans. To link Frames containing text

(i) Draw a **second frame** with the Frame tool of your choice.

(ii) Click the **first frame** to select it.

(iii) Click on the **red triangle** to load the text icon.

(iv) Click the **second frame**. PageMaker flows the text into the second frame.

6. **What is the use of Master Page?**

[QY-'19; Mar-2020; FRT-'22]

Ans. **(i)** Any text or object that you place on the master page will appear on all the document pages to which the master is applied.

(ii) It shortens the amount of time because you don't have to create the same objects repeatedly on subsequent pages.

(iii) Master pages commonly contain repeating logos, page numbers, headers and footers.

7. **How to you insert page numbers in Master pages?** *[FRT-'22; May-'22]*

Ans. **(i)** Click on Master Pages icon.

(ii) Then click on Text Tool. Now the cursor changes to I - beam.

(iii) Then Click on the left Master page where you want to put the page number.

(iv) Press Ctrl + Alt + P.

(v) The page number displays as 'LM' on the left master page.

(vi) Similarly click on the right Master page where you want to put the page number.

(vii) Press Ctrl + Alt + P.

(viii) The page number displays as 'RM' on the right master page, but will appear correctly on the actual pages.

Chapter **2**

PART - IV

EXPLAIN IN DETAIL

1. Explain the tools in PageMaker toolbox.

Ans. *[Govt. MQP-'19; QY-'19; HY-'19; Mar-2020]*

Tool Box Usage			
Tool	**Toolbox**	**Cursor**	**Use**
Pointer Tool	▸	▸	Used to select, move, and resize text objects and graphics.
Text tool	T	Ⲭ	Used to type, select, and edit text.
Rotating tool	↻	✳	Used to select and rotate objects.
Cropping tool	🀫	🀫	Used to trim imported graphics.
Line tool	╲	╋	Used to draw straight lines in any direction.
Constrained line tool	⊢	╋	Used to draw vertical or horizontal lines.
Rectangle tool	▢	╋	Used to draw squares and rectangles.
Rectangle frame tool	⊠	╋	Used to create rectangular placeholders for text and graphics.
Ellipse tool	◯	╋	Used to draw circles and ellipses.
Ellipse frame tool	⊗	╋	Used to create elliptical placeholders for text and graphics.
Polygon tool	⬡	╋	Used to draw polygons.
Polygon frame tool	⊗	╋	Used to create polygonal placeholders for text and graphics.
Hand tool	✋	✋	Used to scroll the page (an alternative to the scroll bar)
Zoom tool	🔍	🔍	Used to magnify or reduce an area of the page.

An Intoduction to Adobe Pagemaker

CHAPTER

3

INTRODUCTION TO
DATABASE MANAGEMENT SYSTEM

CHAPTER SNAPSHOT

EVALUATION

PART - I

CHOOSE THE CORRECT ANSWER

1. Which language is used to request information from a Database?

(a) Relational   (b) Structural

(c) Query   (d) Compiler

[Ans. (c) Query]

2. The _____ diagram gives a logical structure of the database graphically.

[Govt. MQP-'19; May-'22]

(a) Entity-Relationship   (b) Entity

(c) Architectural Representation

(d) Database   **[Ans. (a) Entity-Relationship]**

3. An entity set that does not have enough attributes to form primary key is known as

[Aug-'21]

(a) Strong entity set   (b) Weak entity set

(c) Identity set   (d) Owner set

[Ans. (b) Weak entity set]

4. _____ Command is used to delete a database.

(a) Delete database database_name

(b) Delete database_name

(c) drop database database_name

(d) drop database_name

[Ans. (d) drop database_name]

5. MySQL belongs to which category of DBMS?

[FRT-'22]

(a) Object Oriented   (b) Hierarchical

(c) Relational   (d) Network

[Ans. (c) Relational]

6. MySQL is freely available and is open source.

(a) True   (b) False

[Ans. (a) True]

7. _____ represents a "tuple" in a relational database?

(a) Table   (b) Row

(c) Column   (d) Object

[Ans. (b) Row]

8. Communication is established with MySQL using

(a) SQL   (b) Network calls

(c) Java   (c) API's

[Ans. (a) SQL]

9. Which is the MySQL instance responsible for data processing?

(a) MySQL Client   (b) MySQL Server

(c) SQL

(d) Server Daemon Program

[Ans. (b) MySQL Server]

10. The structure representing the organizational view of entire database is known as_____ in MySQL database.

(a) Schema   (b) View

(c) Instance   (d) Table

[Ans. (a) Schema]

PART - II

SHORT ANSWERS

1. Define Data Model and list the types of data model used.

Ans. A data model shows the logical structure of a database, including the relationships and constraints that determine how data can be stored and accessed.

Types of Data Model :

(i) Hierarchical database model

(ii) Relational model

(iii) Network model

(iv) Entity – relationship model

(v) Object – oriented database model

2. List few disadvantages of file processing system.

Ans. (i) Data Duplication : Same data is used by multiple resources for processing, thus created multiple copies of same data wasting the spaces.

(ii) High Maintenance : Access control and verifying data consistency needs high maintenance cost.

(iii) Security : Less security provided to the data.

3. Define Single and multi valued attributes.

[FRT-'22]

Ans. Single valued attributes:

A single valued attribute contains only one value for the attribute and they don't have multiple numbers of values.

Single Valued Attributes	
Attributes	**Values**
Age	3
Roll no	85

Multi valued attributes:

A multi valued attribute has more than one value for that particular attribute.

Attributes and Values	
Attributes	**Values**
Degree	B.Tech, MBA
Bank_Account	SBI, HDFC

4. List any two DDL and DML commands with its Syntax. [QY-'19]

Ans. DDL Commands :

(i) CREATE

Syntax : CREATE database databasename;

(ii) DROP

Syntax : DROP database databasename;

DML Commands :

(i) INSERT

Syntax : INSERT INTO tablename (column1, column2, column 3)

VALUES: (Value 1, value 2, value3);

(ii) UPDATE

Syntax : UPDATE tablename

SET column 1 = "new value"

Where column2="value2";

5. What are the ACID properties?

Ans. ACID Properties : [Govt. MQP-'19]

(i) The acronym stands for Atomicity, Consistency, Isolation and Durability.

(ii) Atomicity follows the thumb rule "All or Nothing", while updating the data in database for the user performing the update operation.

(iii) Consistency ensures that the changes in data value to be constant at any given instance. Isolation property is needed during concurrent transaction.

(iv) Durability is defined as the system's ability to recover all committed transactions during the failure of storage or the system.

6. Which command is used to make permanent changes done by a transaction?

Ans. COMMIT Command is used to make permanent changes done by a transaction.

7. What is view in SQL?

Ans. In a database, a view is the result set of a stored query on the data, which the database users can query just as they would in a persistent database collection object.

8. Write the difference between SQL and MySQL. [May-'22]

Ans.

Sl. No.	SQL	MySQL
1.	It is used in the accessing, updating and manipulation of data in a database.	It is an RDBMS that allows keeping the data that exists in a database organized.
2.	SQL is a structured query language.	MySQL is a database software.
3.	SQL does not provide connectors.	MySQL offers an integrated tool called 'MySQL Workbench' to design and develop databases.

9. What is Relationship and List its types. [July-'22]

Ans. There exists a relationship between two tables when the foreign key of one table references primary key of other table.

Types :

(i) One – to – One relationship

(ii) One – to – Many relationship

(iii) Many – to – Many relationship

10. State few advantages of Relational databases.

Ans. Advantages :

(i) High Availability

(ii) High Performance

(iii) Robust Transactions and Support

(iv) Ease of Management

(v) Less Cost

PART - III

EXPLAIN IN BRIEF ANSWER

1. Explain on Evolution of DBMS.

Ans. Evolution of DBMS:

(i) The concept of storing the data started before 40 years in various formats.

(ii) In earlier days they have used punched card technology to store the data. Then files were used.

(iii) The file systems were known as predecessor of database system.

(iv) Various access methods in file system were indexed, random and sequential access. The file system had more limitations like

Chapter 3

Data Duplication : Same data is used by multiple resources for processing, thus created multiple copies of same data wasting the spaces.

High Maintenance : Access control and verifying data consistency needs high maintenance cost.

Security : Less security provided to the data.

(v) So database systems became popular to overcome the above limitations of file system.

2. What is relationship in databases? List its types. *[FRT-'22; May-'22]*

Ans. In ER Model, relationship exists between two entities. Three types of relationships are available and the Entity-Relationship(ER) diagram is based on the three types listed below.
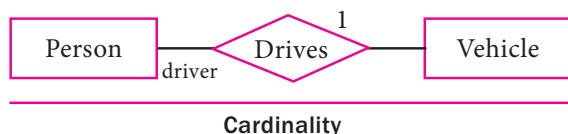
(i) **One-to-One relationship:** Consider two entities A and B. One-to-one (1:1) relationship is said to exist in a relational database design, if 0 or 1 instance of entity A is associated with 0 or 1 instance of entity B, and 0 or 1 instance of entity B is associated with 0 or 1 instance of entity A.

(ii) **One-to-Many relationship:** Consider two entities A and B. One-to-many (1:N) relationship is said to exist in a relational database design, for 1 instance of entity A there exists 0 or 1 or many instances of entity B, but for 1 instance of entity B there exists 0 or 1 instance of entity A.

(iii) **Many-to-Many relationship:** Consider two entities A and B. many-to-many (M:N) relationship is said to exist in a relational database design, for 1 instance of entity A there exists 0 or 1 or many instances of entity B, and for 1 instance of entity B there exists 0 or 1 or many instance of entity A.

3. Discuss on Cardinality in DBMS.

Ans. Cardinality is defined as the number of items that must be included in a relationship (i.e) number of entities in one set mapped with the number of entities of another set via the relationship. Three classifications in Cardinality are one-to-one, one-to-many and Many-to-Many.

Cardinality

If we consider the current vehicle, the driver is operating, then we have one-to-one relationship between Person and Vehicle.

Cardinality Relation 1 to n

In the above example, Customer places the Order is a one-to-many relationship. Here the customer can place multiple orders and the order is related to only one customer.

Cardinality Relation n to n

The example of many-to-many relationship is Students registering the Courses. A student can register more than one courses and A course can be registered by many students. Hence it is many-to-many.

4. List any 5 privileges available in MySQL for the User.

Ans. List of privileges available in MySQL :

Privileges	Action Performed (If Granted)
Select_priv	User can select rows from database tables.
Insert_priv	User can insert rows into database tables.
Update_priv	User can update rows of database tables.
Delete_priv	User an delete rows of database tables.
Create_priv	User can create new tables in database
Alter_priv	User can make changes to the database structure.

5. Write few commands used by DBA to control the entire database.

Ans. (i) **USE Database :** This command is used to select the database in MySQL for working.
Syntax :
mysql>use test;
Database changed
mysql>

(ii) **SHOW Database :** Lists all the databases available in the database server.
Syntax :
mysql>show databases;

(iii) **SHOW Tables :** Lists all the tables available in the current database we are working in.
mysql>show tables;

Introduction to Database Management System

PART - IV

EXPLAIN IN DETAIL

1. **Discuss on various database models available in DBMS.** *[Govt. MQP-'19; HY-'19]*

Ans. The database technology came into existence in terms of models with relational and object-relational behavior. The major database models are listed below:

1. Hierarchical Database Model :

[Govt. MQP-'19]

(i) The famous Hierarchical database model was IMS (Information Management System), IBM's first DBMS.

(ii) In this model each record has information in parent/ child relationship like a tree structure.

(iii) The collection of records was called as record types, which are equivalent to tables in relational model. The individual records are equal to rows.
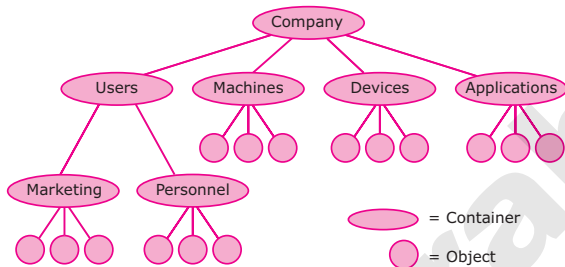
Hierarchical Database Model

2. Network model :

(i) The first developed network data model was IDS (Integrated Data Store) at Honeywell.

(ii) Network model is similar to Hierarchical model except that in this model each member can have more than one owner.

(iii) The many to many relationships are handled in a better way.
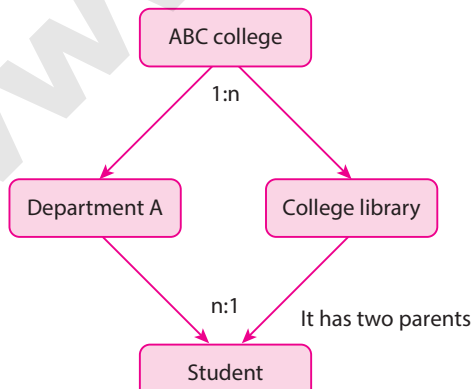

Network Model

Network Schema: Schema defines all about the structure of the database.

Sub Schema : Control on views of the database for the user.

Language : Basic procedure for assessing the database. The major advantage of this model is the ability to handle more relationship types, easy data access, data integrity and independence. The limitation of network model is difficulty in design and maintenance.
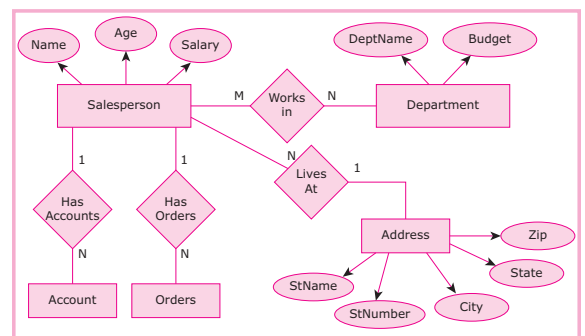
3. Relational model :

Oracle and DB2 are few commercial relational models in use Relational model is defined with two terminologies Instance and Schema.
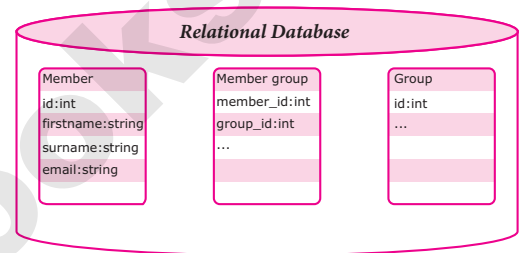
Relational Database Model

4. Object - oriented database model :

(i) This model incorporates the combination of Object Oriented Programming (OOP's) concepts and database technologies.

(ii) Practically, this model serves as the base of Relational model. Object oriented model uses small, reusable software known as Objects.

(iii) These are stored in object oriented database. This model efficiently manages large number of different data types.

(iv) Moreover complex behaviors are handled efficiently using OOP's concepts.

Object-oriented Database Model

2. List the basic concepts of ER Model with suitable example. *[Aug-'21]*

Ans. ER Modeling basic concepts: The basic concepts of ER model consists of

1. Entity or Entity type
2. Attributes
3. Relationship

These are the general concepts which help to create an ER diagram and produce an ER model. With the help of these any database design can be created and viewed to know the concept in that database design.

1. Entity or Entity type :

(i) An Entity can be anything a real-world object or animation which is easily identifiable by anyone even by a common man.

(ii) Eg: In a company's database Employee, HR, Manager are considered as entities, where each of these entity will be having their own attributes. An entity is represented by a rectangular box.

Employee	Manager

Types of Entity :

(a) Strong Entity
(b) Weak Entity
(c) Entity Instance

2. Attributes:

An attribute is the information about that entity and it will describe, quantify, qualify, classify, and specify and entity. An attribute will always have a single value, that value can be a number or character or string.

Types of attributes :

(i) Key Attribute
(ii) Simple Attributes
(iii) Composite Attributes
(iv) Single Valued Attribute
(v) Multi Valued Attribute

3. Relationship Type:

In ER Model, relationship exists between two entities. Three types of relationships are available and the Entity- Relationship(ER) diagram is based on the three types listed below.

(i) One-to-One relationship: Consider two entities A and B. one-to-one (1:1) relationship is said to exist in a relational database design, if 0 or 1 instance of entity A is associated with 0 or 1 instance of entity B, and 0 or 1 instance of entity B is associated with 0 or 1 instance of entity A.

(ii) One-to-Many relationship: Consider two entities A and B. one-to-many (1:N) relationship is said to exist in a relational database design, for 1 instance of entity A there exists 0 or 1 or many instances of entity B, but for 1 instance of entity B there exists 0 or 1 instance of entity A.

(iii) Many-to-Many relationship: Consider two entities A and B. many-to-many (M:N) relationship is said to exist in a relational database design, for 1 instance of entity A there exists 0 or 1 or many instances of entity B, and for 1 instance of entity B there exists 0 or 1 or many instance of entity A.

In reality one-to-one are in less usage, where as one-to-many and many-to-many are commonly used. However in relational databases, many-to-many are converted into one-to-many relationships.

3. Discuss in detail on various types of attributes in DBMS. *[QY-'19; FRT & July-'22]*

Ans. Types of attributes :

1. Key Attribute
2. Simple Attributes
3. Composite Attributes
4. Single Valued Attribute
5. Multi Valued Attribute

1. Key Attribute : Generally a key attribute describes a unique characteristic of an entity.

2. Simple Attribute :

(i) The simple attributes cannot be separated it will be having a single value for their entity.

(ii) Ex: Let us consider the name as the attribute for the entity employee and here the value for that attribute is a single value.
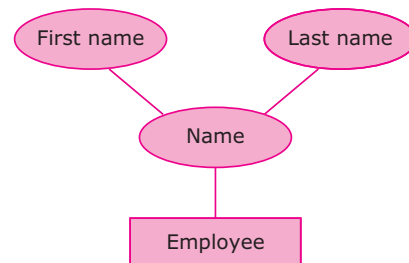
Simple Attribute

INTRODUCTION TO
HYPERTEXT PRE-PROCESSOR

CHAPTER SNAPSHOT

EVALUATION

PART - I

CHOOSE THE CORRECT ANSWER

1. What does PHP stand for?
- (a) Personal Home Page
- (b) Hypertext Preprocessor
- (c) Pretext Hypertext Processor
- (d) Pre-processor Home Page

[Ans. (b) Hypertext Preprocessor]

2. What does PHP files have a default file extension? *[HY-'19; FRT-'22; May-'22]*
- (a) .html
- (b) .xml
- (c) .php
- (d) .ph

[Ans. (c) .php]

3. A PHP script should start with _____ and end with _____:
- (a) <php>
- (b) < ? php ?>
- (c) < ? ? >
- (d) < ?php ? >

[Ans. (d) < ?php ? >]

4. Which of the following must be installed on your computer so as to run PHP script?
- (a) Adobe
- (b) windows
- (c) Apache
- (d) IIS

[Ans. (c) Apache]

5. We can use _____ to comment a single line? *[Mar-2020]*
- i) /?
- ii) //
- iii) #
- iv) /* */
- (a) Only (ii)
- (b) (i), (iii) and (iv)
- (c) (ii), (iii) and (iv)
- (d) Both (ii) and (iv)

[Ans. (c) (ii), (iii) and (iv)]

6. Which of the following PHP statement will store 41 in variable num?
- i) num = 41
- ii) num = 41
- iii) echcho num
- iv) echo 41
- (a) Both (i) and (ii)
- (b) All of the above
- (c) Only (ii)
- (d) Only (i)

[Ans. (a) Both (i) and (ii)]

7. What will be the output of the following PHP code?
```
< ?php
$num = 1;
$num1 = 2;
print $num . "+". $num1 ;
?>
```
- (a) 3
- (b) 1+2
- (c) 1.+.2
- (d) Error

[Ans. (b) 1+2]

8. Which of the following PHP statements will output Hello World on the screen? *[Govt. MQP-'19; July-'22]*
- (a) echo ("Hello World");
- (b) print ("Hello World");
- (c) printf ("Hello World");
- (d) sprintf ("Hello World");

[Ans. (a) echo ("Hello World");]

9. Which statement will output $x on the screen?
- (a) echo "\$x";
- (b) echo "$$x";
- (c) echo "/$x";
- (d) echo "$x;

[Ans. (a) echo "\$x";]

10. Which of the below symbols is a newline character?
- (a) \r
- (b) \n
- (c) /n
- (d) /r

[Ans. (b) \n]

PART - II

SHORT ANSWERS

1. **What are the common usages of PHP?**
Ans. (i) It is very simple and lightweight open source server side scripting language.
(ii) It can easily embed with HTML and other client side scripting languages like CSS (Cascading Style Sheets) and Java script.
(iii) It also creates dynamic and interactive Webpages in the real time Web development projects.

2. **What is Webserver?**
Ans. A Web server is a Software that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users.

3. **What are the types scripting language?**
Ans. Web scripting languages are classified into two types,
(i) Client side scripting language
(ii) Server side scripting language.

4. **Difference between Client and Server.** *[QY-'19]*
Ans.

Client	Server
A client machine is a small computer with a basic hardware configuration.	A server machine is a high-end computer with an advanced hardware configuration.

A client is a simple and less powerful machine.	A server is a powerful expensive machine.
A client is used for simple tasks.	A server is used for storing huge data files and applications.

5. Give few examples of Web Browser.

Ans. (i) UC Browser

(ii) Opera

(iii) Google chrome

(iv) Internet Explorer

(v) Firefox

(vi) Safari

6. What is URL? *[Sep-2020]*

Ans. URL means Uniform Resource Locator. It is the address of a resource on the internet. A URL indicates the location of a resource as well as the protocol used to access it.

Eg. : http://www.google.com

7. Is PHP a case sensitive language? *[May-'22]*

Ans. (i) Yes, PHP is a case sensitive language both upper and lower case are treated differently.

(ii) Example: $x and $X are different variable names.

8. How to declare variables in PHP?

[Aug-'21; July-'22]

Ans. The variable in PHP begins with a dollar ($) symbol and the assignment activity implemented using "=" operator, finally the statement ends with semi colon ";" The semicolon indicates the end of statement.

Eg. : $a=5; $b=10

9. Define Client Server Architecture. *[FRT-'22]*

Ans. A server is a computer or a device that provides functionality for other programs or devices, called "clients". This architecture is called the client server model, and a single overall computation is distributed across multiple processes or devices.

10. Define Webserver.

Ans. (i) Web server software is available as open source or licensed version in the market.

(ii) A Web server is a Software that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users.

PART - III

EXPLAIN IN BRIEF ANSWER

1. Write the features of server side scripting language.

Ans. (i) Server-side scripting prevents increasing of the load as it does not require browser scripting technology.

(ii) It is used to create pages dynamically on the fly, based on the user interaction

(iii) Server-side scripting is necessary to run dynamic pages on browsers.

(iv) Server-side scripting does not depend on browser processing as all the processing is performed on the server side.

(v) Loading time of the web pages is often reduced with Server-side scripting.

(vi) An increased security is ensured for user privacy.

2. Write is the purpose of Web servers.

[Mar-2020]

Ans. (i) A web server's main purpose is to store web files and broadcast them over the internet for you site visitor's to see.

(ii) In-essence, a web server is simply a powerful computer that stores and transmits data via the internet.

(iii) When someone visits a web page on your site their browser communicates with your web server, sending and receiving information that ultimately dictates what appears on the visitor's computer screen. Thus, the main purpose of a web server is to store and transfer web site data upon the request of a visitor's browser.

3. Differentiate Server side and Client Side Scripting language. *[Govt. MQP-'19]*

Ans.

Basis for comparison	Server-side scripting	Client-side scripting
Basic	Works in the back end which could not be visible at the client end.	Works at the front end and script are visible among the users.
Processing	Requires server interaction.	Does not need interaction with the server.

Languages involved	PHP, ASP.net, Ruby on Rails, ColdFusion, Python, etcetera.	HTML, CSS, JavaScript, etc.
Affect	Could effectively customize the web pages and provide dynamic websites.	Can reduce the load to the server.
Security	Relatively secure.	Insecure

4. In how many ways you can embed PHP code in an HTML page? *[FRT-'22]*

Ans. (i) There are two ways to use HTML on your PHP page.

(ii) The first way is to put the HTML outside of your PHP tags. You can even put it in the middle if you close and reopen the tags.

(iii) The second way to use HTML with PHP is by using PRINT or ECHO. By using this method you can include the HTML inside of the PHP tags.

5. Write short notes on PHP operator.
[HY-'19; Sep-2020; May-'22]

Ans. Operator is a symbol which is used to perform mathematical and logical operations in the programing languages. Different types of operator in PHP are:

(i) Arithmetic operators,

(ii) Assignment operators,

(iii) Comparison operators,

(iv) Increment/Decrement operators,

(v) Logical operators.net, and

**(vi)** String operators.

PART - IV

EXPLAIN IN DETAIL

1. Explain client side and server side scripting language.

Ans. Web scripting languages are classified into two types, client side and server side scripting language.

Server Side Scripting Language :

(i) PHP is a Server Side Scripting Language used in a server machine.

(ii) PHP (Hypertext Pre-processor) is a one of the important server side Web and general purpose scripting language invented by Rasmus Lerdorf in 1994.

(iii) It is very simple and lightweight open source server side scripting language.

(iv) It can easily embed with HTML and other client side scripting languages like CSS and Java script.

(v) It also creates dynamic and interactive Webpages in the real time projects.

(vi) It is a competitor for other server side scripting languages like Microsoft ASP and JSP.

(vii) PHP is completely different from Client side scripting language like Java script.

(viii) The PHP code entirely executes on Webserver which is installed in the remote machine and it is generating HTML code which is sent to the user.

(ix) The user receives the HTML code and sees the Website contents via Internet browser in their machine.

(x) PHP also supports OOPs concepts.
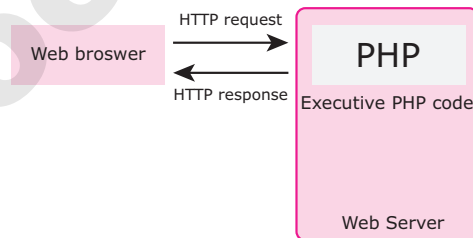
Website Request and Response from Web server to Browser

Client Side Scripting Language:

(i) Using HTML we can develop a static web pages.

(ii) To develop a interactive pages (Dynamic Web page) we need a scripting language.

(iii) JavaScript is a Client Side Scripting Language used in a client machine.

(iv) JavaScript programming language is embed into the html.

(v) JavaScript includes such items as Textboxes, Buttons, drag-and-drop components and sliders to give a Rich Interface to site visitors.

2. Discuss in detail about Website development activities.

Ans. Web development concept describes in detail about Website development and hosting through network (Internet/Intranet). The process of development also includes Web content generation, Web page designing, Website security and so on.

Introduction to Hypertext Pre-Processor

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Chapter 4

1. PHP Script Work :

(i) Website or Web page is developed by the programmer using PHP script. Finally the entire Website codes are moved to Web server path in a remote server machine.

(ii) From client side, the end user opens a browser, types the URL of the Website or Webpage and initiates the request to remote server machine over the network.

(iii) After receiving the request from client machine the Web server tries to compile and interpret the PHP code which is available in remote machine.

(iv) Next a response will be generated and sent back to the client machine over the network from Webserver.

(v) Finally the browser which is installed in the client machine receives the response and displays the output to user.

Client to server Request
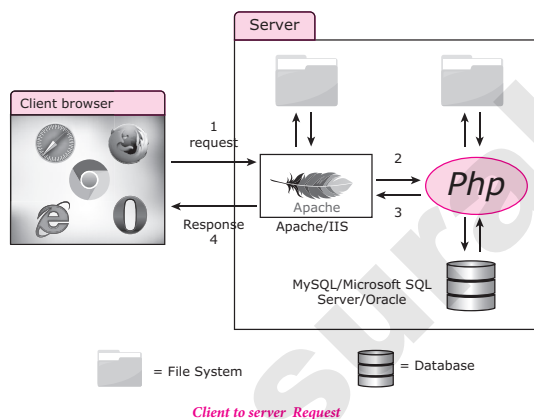
3. **Explain the process of Webserver installation.**

Ans. The following are the steps to install and configure Apache Httpd Webserver and PHP module in windows server machine.

(i) **Step 1:** Go to Apache foundation Website and download the Httpd Webserver Software.

https://httpd.apache.org/download.cgi

(ii) **Step 2:** After downloading .MSI file from Apache foundation Website, user launches the .MSI file and clicks next and next button to finish the installation on server machine. The software takes default port number 130 or 130130. Once the user finished, the Web server software is installed and configured on server hardware machine as a service.

(iii) **Step 3:** To test the installation of Apache Httpd Webserver, enter the following URL from your Web browser which is installed in your client machine.

https://localhost:130/ or
https://localhost:130130

The output page that says "Its works"

(iv) **Step 4:** Administrator user can start, stop and restart the Web server service at any time via windows Control panel. Once the services stops, the client machine will not receive the response message from server machine.

(v) **Step 5:** Webserver's configuration setting file "httpd.conf" is located in the **conf** directory under the apache installation directory. Edit this file and enable the PHP module to run PHP scripting language.

4. **Discuss in detail about PHP data types.**

[QY-'19; May & July-'22]

Ans. PHP scripting language supports 13 primitive data types. Data Types plays important role in all programing languages to classify the data according to the logics. PHP supports the following data types.

(i) String
(ii) Integer
(iii) Float
(iv) Boolean
(v) Array
(vi) Object
(vii) NULL
(viii) Resource

(i) **String :** String is a collection of characters within the double or single quotes like "Computer Application" or 'Computer Application'. Space is also considered as a character.

Example:

$x = "Computer Application!";

(ii) **Integer:** Integer is a data type which contains non decimal numbers.

Example:

$x = 59135;

(iii) **Float:** Float is a data type which contains decimal numbers.

Example:

$x = 19.15;

12th Standard

COMPUTER APPLICATIONS

PRACTICAL

EXERCISE

1

PageMaker
– Page Formatting

Practicals

AIM:

To create a new document using the default given options.

1. Open Pagemaker 7.0 and create a new document layout which includes the following setup options:
   - Page size – A4.
   - Number of Pages – 4.
   - Margins 1.25 inches- top, and .75 inches - all other sides.

2. Type the following text:

   HAPPINESS

   Happiness is often confused with fun, good living, and riches. Sometimes fun is equated with happiness. Fun is what we experience while doing an activity, whereas happiness is a residual and long-lasting feeling. The path to happiness is long and full of challenges. Happiness requires life-long pursuit.

3. Set the heading 'HAPPINESS' in 18 points, Arial font, bold and alignment centre.

4. Format the paragraph as follows:
   (a) Font – Arial
   (b) Font size – 12
   (c) Alignment – Justified
   (d) Leading – 20
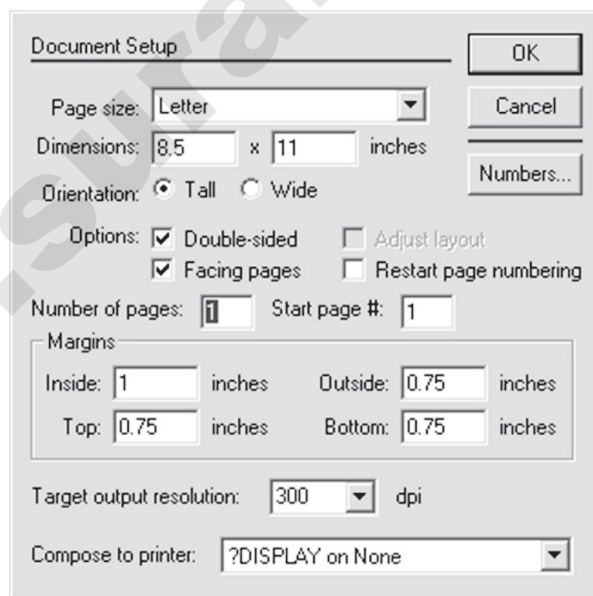
5. Save the document as 'happiness'.

Procedure

1. Start the PageMaker using the following commands.

   Start -> All Programs -> Adobe -> PageMaker 7.0 -> Adobe PageMaker 7.0. The Adobe PageMaker window will be opened as shown in Figure.
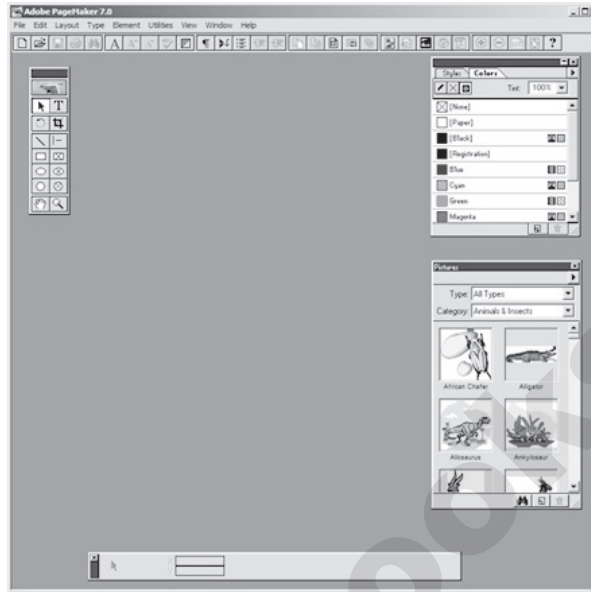
2. Choose File → New in the menu bar. (or) Press **Ctrl + N** in the keyboard.

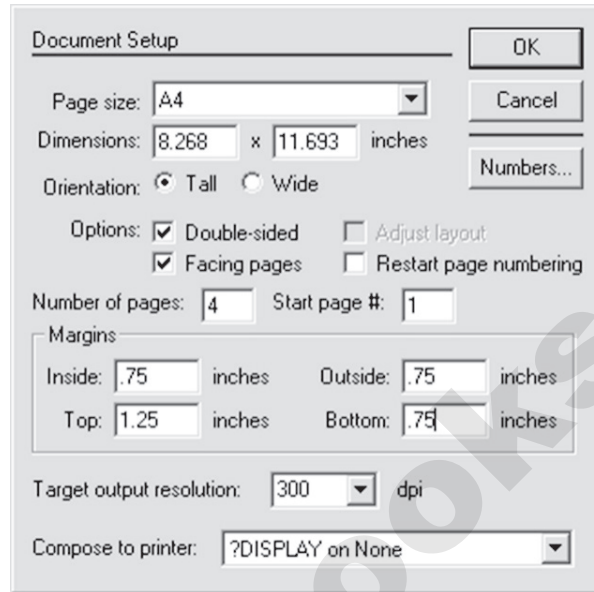   This opens the Document Setup dialog box.

   Click the Page Size drop down list box and select A4 size.

   In the Number of pages text box, type 4.

   Set the values in the Margins sections as follows :

Practicals

Inside	–	0.75 inches
Outside	–	0.75 inches
Top	–	1.25 inches
Bottom	–	0.75 inches

3. Click on OK. Now a new document called Untitled – 1 will appear on the screen as shown in Figure.
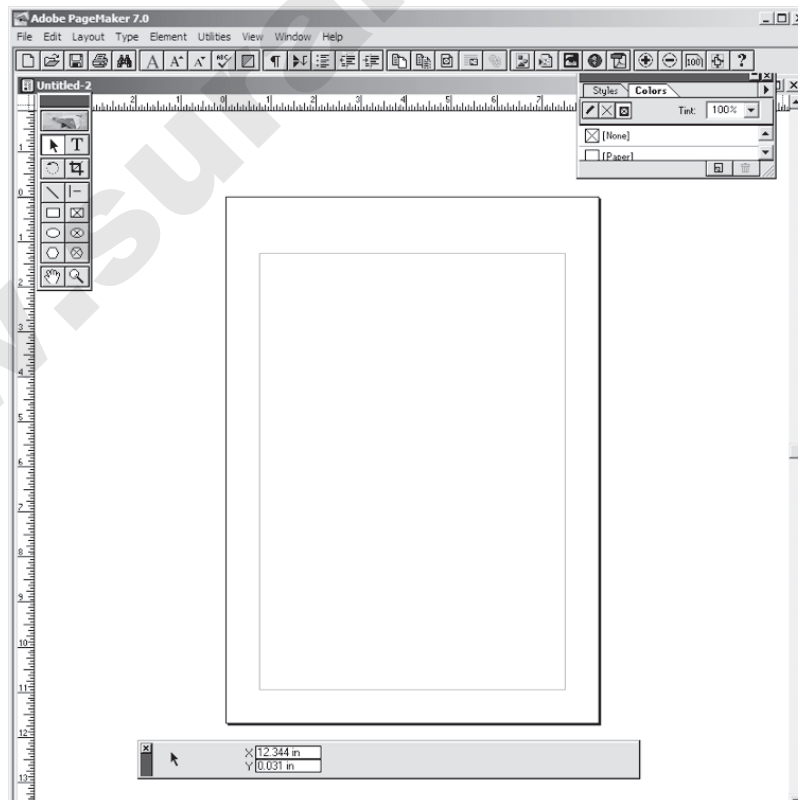
4.   Click on the Text tool and create a text block. Then type the following text in the text block.

HAPPINESS

Happiness is often confused with fun, good living, and riches. Sometimes fun is equated with happiness. Fun is what we experience while doing an activity, whereas happiness is a residual and long-lasting feeling. The path to happiness is long and full of challenges. Happiness requires life-long pursuit.

5.   Select the word **'HAPPINESS'** with Text tool. Using **Character Control Palette**, change the font to Arial, font size to 18, and Leading 22. Then click on **Bold** button. Then press **Shift + Ctrl + C** for centre alignment.
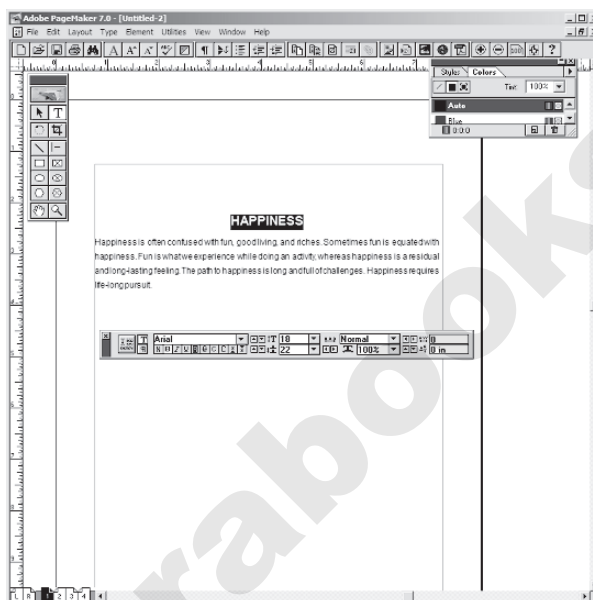
6.   Select the paragraph with Text tool. Using **Character Control Palette**, change the font to Arial, font size to 12, and Leading 20. Then press **Shift + Ctrl + J** for Justify.

Practicals

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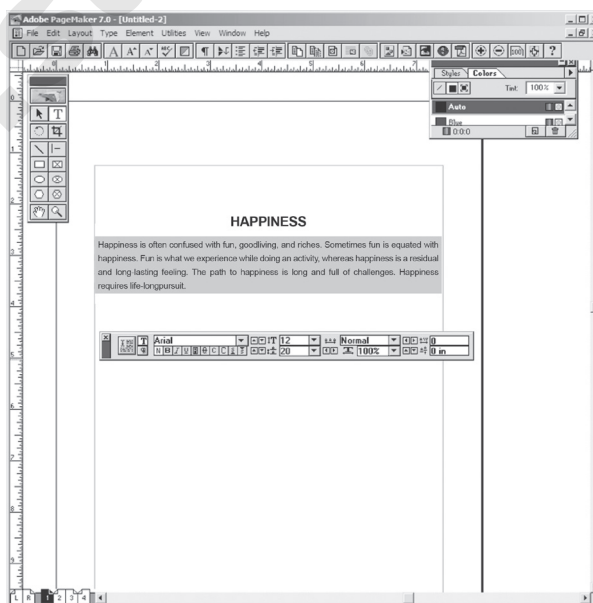
EXERCISE

9

String Functions

Practicals

AIM

To create and execute String Functions in PHP

Procedure

1. Start Xampp server (Apache)
2. Goto virtual path folder (C:\xampp\htdocs)
3. Create funtion.php file and type the program
4. Execute the program on your Web browser using by this URL link

```
(http://localhost/ funtion.php)
<html>
<body>
<?php
// Displays the length of the string
echostrlen("Hello world!");
//Counting number of words in a String
echo str_word_count("Good Morning All");
// Reversing a string
echo strrev("welcome");
// calculates position of strong
echo strpos("Hello world!", "world");
// replacing the text
echo str_replace("Hi", "Hello", "Hi Everyone");
define("GREETING", "Good Morning!!!");
echo GREETING;
```

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```
// changes the color of the first character of a word
$text = 'PHP Tutorial';
$text = preg_replace('/(\b[a-z])/i",<span style="color:red;">\1</span>',$text);
echo $text;
?>
</body>
</html>
```

OUTPUT
```
12
3
emoclew
6
```

Hello Everyone

Good Morning!!!

PHP Tutorial

Practicals

12th STD

PUBLIC EXAM MAY - 2022

PART - III

Reg. No. ☐☐☐☐☐☐☐

TIME ALLOWED : 3.00 Hours]   **COMPUTER APPLICATIONS** (with Answers)   [MAXIMUM MARKS : 70

Instructions :
1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
2) Use **Blue** or **Black** ink to write and underline and pencil to draw diagrams

PART - I

Note : (i) **All** questions are **compulsory. (15×1=15)**
(ii) Choose the most appropriate answer from the given **four** alternatives and write the option code and the corresponding answer.

1. Expand JPEG :
   (a) Joint Processor Experts Group
   (b) Joint Photo Exports Gross
   (c) Joint Photographic Expression Group
   (d) Joint Photographic Experts Group

2. Character formatting consists of which of the following text properties?
   (a) Italic   (b) Underline
   (c) Bold   (d) All of the above

3. The _____ diagram gives a logical structure of the database graphically.
   (a) Entity-Role
   (b) Entity-Relationship
   (c) Entity-Database   (d) Entity-Key

4. What is the default extension for PHP?
   (a) .php   (b) .html   (c) .ph   (d) .xml

5. _____ stores more than one value of the same data type in single array variable.
   (a) Indexed array   (b) Array
   (c) Multi-Dimensional array
   (d) Function

6. The loop exclusively used for array is _____.
   (a) for   (b) While
   (c) for each   (d) Do while

7. SQL can be expanded as _____.
   (a) Script Query Language
   (b) Special Query Language
   (c) Server Query Language
   (d) Structured Query Language

8. Which of the following will be an easy way to use Internet and the public telecommunication system to securely share business's information with suppliers, partners and customers?
   (a) Arpanet   (b) Extranet
   (c) Arcnet   (d) Intranet

9. WWW was invented by _____.
   (a) Tim Berners Lee   (b) Blaise Pascal
   (c) John Napier   (d) Charles Babbage

10. **Assertion (A) :** The web-sites of the first wave dotcom companies were only in English.
    Reason (R) : The dotcom companies of the first wave are mostly American companies.
    (a) **(A)** is true and **(R)** is false.
    (b) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**.
    (c) **(A)** is false and **(R)** is true.
    (d) Both **(A)** and **(R)** are correct and **(R)** is not the correct explanation of **(A)**.

11. Pick the odd one in credit card transaction.
    (a) Marketing Manager   (b) Card Holder
    (c) Acquirer   (d) Merchant

12. The websites secured by SSL - Secure Socket Layer protocols can be identified using _____.
    (a) htmls:/ /   (b) html:/ /
    (c) https:/ /   (d) http:/ /

13. The versions of EDIFACT are also called as _____.
    (a) Directories   (b) Message Types
    (c) Folders   (d) Subsets

14. PHP is a _____ programming language.
    (a) Object side   (b) Client side
    (c) File side   (d) Server side

15. Statement which is used to make choice between two options and only option is to be performed is written as:
    (a) then else statement   (b) if statement
    (c) else one statement   (d) if else statement

PART - II

Note : Answer **any six** questions. Q.No. **24** is **compulsory.**   **(6 × 2 = 12)**

16. List out video file formats with exapnsion.

17. Write the Syntax of Switch... case statement in php.

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18. Write the difference between SQL and MYSQL.
19. List out the looping structure in PHP.
20. Write a note on Parameterized functions inPHP.
21. Write the difference between wired and wireless networks.
22. Is PHP a case sensitive language?
23. Differentiate Check box and Radio button.
24. Write the command and shortcut key to cut and paste a block of a document in Abode PageMaker.

PART - III

Note :   Answer **any six** questions. Q.No. **33** is **compulsory**.   (6 × 3 = 18)

25. How will you insert page numbers in Master Page?
26. What is the relationship in databases? List its types.
27. Write short notes on PHP operator.
28. Differentiate if statement and if elseif else statement.
29. What is electronic fund transfer?
30. Expand ARPANET, STP and USB.
31. Write any 3 uses of Open Source Network Software.
32. Compare Internet, Intranet and Extranet.
33. Write the output of the following PHP code.
```
<?php>
$S=array(11, 333, 7777);
foreach($S as $V)
        print $V "<br>";
<?>
```

PART - IV

Note :   Answer **all** of the following questions.
(5 × 5 = 25)

34. (a) Explain the functions of conditional statements in PHP.
    (OR)
    (b) (i) Define a Text block.
        (ii) How will you create and move a Text Block?
35. (a) Explain the PHP Data Types with examples.
    (OR)
    (b) Compare and contrast Credit Card, Debit Card and Stored Value Card.
36. (a) Write a PHP code to do the following:
        (i) If the given number 'n' is divisible by 3, then print "DIVISIBLE BY 3".
        (ii) Otherwise, check whether the number 'n' is odd or even.
            - if even print "EVEN NUMBER"
            - if odd print "ODD NUMBER"

(OR)

(b) What is domain name space? Explain.
37. (a) Explain the multi-Dimensional array in PHP with any suitable example program.
    (OR)
    (b) Define a key and primary key. Explain the types of key.
38. (a) Explain the Form Handling methods in PHP.
    (OR)
    (b) Write a PHP code to print all the odd numbers from 3 to 15 using foreach loop.

★★★

Answers

PART - I

1. (d) Joint Photographic Experts Group
2. (d) All of the above
3. (b) Entity-Relationship
4. (a) .php
5. (b) Array
6. (c) for each
7. (d) Structured Query Language
8. (b) Extranet
9. (a) Tim Berners Lee
10. (b) Both (A) and (B) are correct and (R) is the correct explanation of (A).
11. (a) Marketing Manager
12. (c) https: //
13. (a) Directories
14. (d) Server side
15. (d) if else statement

PART - II

16. (i) AVI – Audio / Video Interleave
    (ii) MPEG – Moving Picture Experts Group

17.
```
switch (n) {
    case label1:
        code to be executed if n=label1;
        break;
    case label2:
        code to be executed if n=label2;
        break;
    case label3:
        code to be executed if n=label3;
        break;
    ...
```