M4.2-R4: INTRODUCTION TO MULTIMEDIA

NOTE:

1.   There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.

2.   **PART ONE** is to be answered in the **TEAR-OFF ANSWER SHEET** only, attached to the question paper, as per the instructions contained therein. **PART ONE** is **NOT** to be answered in the answer book.

3.   Maximum time allotted for **PART ONE** is **ONE HOUR**. Answer book for **PART TWO** will be supplied at the table when the answer sheet for **PART ONE** is returned. However, candidates, who complete **PART ONE** earlier than one hour, can collect the answer book for **PART TWO** immediately after handing over the answer sheet for **PART ONE**.

TOTAL TIME: 3 HOURS   **TOTAL MARKS: 100**
                                                                                   (PART ONE – 40; PART TWO – 60)

PART ONE
(Answer all the questions)

1.   **Each question below gives a multiple choice of answers.   Choose the most appropriate one and enter in the "tear-off" answer sheet attached to the question paper, following instructions therein.   (1x10)**

1.1   A multimedia project is said to be _____ and user-interactive when users are given navigational control.
A)   Hypertext
B)   Linear
C)   Non-linear
D)   Plug-in

1.2   What does GUI stand for?
A)   Gaming User Interface
B)   Geometric User Interface
C)   Graphical User Interface
D)   Guidance User

1.3   The native language of web, _____, was originally designed to display simple text documents on computer screens.
A)   DHTML
B)   HTML
C)   Java
D)   XHTML

1.4   The processing of drawing a series of frames between keyframes is called _____
A)   Morphing
B)   Storyboarding
C)   Tweening
D)   Tweaking

1.5   _____ protection applies to the original works of authorship fixed in any tangible medium of expression.
A)   Copyright
B)   Governmental
C)   Police
D)   Public Domain

1.6   Which of the following statements about output is incorrect?
A)   Displaying information on screen is an example of output
B)   Output is always printed out on paper
C)   Output from some ICT systems could be sound
D)   It is possible for the output from one ICT system to be used as the input for a different ICT system

1.7   Raster images are also known as
A)   bitmap images
B)   vector images
C)   clip art images
D)   multimedia images

1.8   Multimedia can contain
A)   graphics, animation, video, music and voice
B)   only numeric-type data
C)   numeric, text and picture data
D)   databases, that in turn, contain

1.9   A(n) _____ is design tool that shows the overall flow of a multimedia presentation.
A)   link
B)   graphical map
C)   storyboard
D)   Gantt chart

1.10   A specialized program used to create multimedia presentations is a _____.
A)   Web authoring program
B)   Desktop publishing program
C)   Multimedia authoring program
D)   Illustration program

2. **Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the "tear-off" sheet attached to the question paper, following instructions therein.** (1x10)

2.1 Bar graphs commonly have the independent variable on both the vertical and horizontal axes.

2.2 The World Wide Web is a multimedia-based collection of information, services and Web sites supported by a database.

2.3 A graphic image file name is tree.eps. This file is a bitmap image.

2.4 With an appropriate software and more then one GIF image, you can create a GIF animation.

2.5 Tweening creates the in-between frames when you create the start and end points of the animation.

2.6 .MOV is a video file extension.

2.7 Vector images use pixels to represent images.

2.8 The next generation of e-Commerce will have greater interactive and multimedia capabilities.

2.9 DVD-RAM is a writable version of DVD.

2.10 Images made up of thousands of pixels are called story boards.

3. **Match words and phrases in column X with the closest related meaning/ word(s)/phrase(s) in column Y. Enter your selection in the "tear-off" answer sheet attached to the question paper, following instructions therein.** (1x10)

X			Y	
3.1	Playing Audio or Video in Real Time	**A.**	VIDEO DIGITIZER
3.2	Transforming an Audio Signal into a Sound File	**B.**	STREAMING
3.3	Expanding a file into its Original Form	**C.**	JPEG
3.4	Density of Pixels on a Screen	**D.**	QUANTIZING
3.5	A Lossless Compression Codec	**E.**	SAMPLING
3.6	Altering the Output Level of the Computer Monitor	**F.**	DECOMPRESSING
3.7	Images that are available without copyright restrictions	**G.**	RESOLUTION
3.8	Full Colour Image Compression	**H.**	CLIP ART
3.9	Files with extension .FLA , .SWF used in Vector Graphics	**I.**	GAMMA CORRECTION
3.10	Converts Analog Video Signal from Video Tape into Digital Data	**J.**	FLASH
		K.	MORPHING
		L.	PIXEL DEPTH
		M.	FLAC

4. **Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the "tear-off" answer sheet attached to the question paper, following instructions therein.** (1x10)

A.	MULTIMEDIA	B.	DITHERING	C.	EMBED
D.	RASTER	E.	DECOMPRESSION	F.	WAP
G.	DATA COMPRESSION	H.	JPEG	I.	MORPHING
J.	THUMBNAIL	K.	WMA	L.	MIDI
M.	BITMAP				

4.1 A Standard Interface that is used to send commands to instruments and sound sources is _____.

4.2 The term _____ refers to a combination of text, graphics, animations, video, music and sound effects used to communicate a message.

4.3 Appropriate movie file formats include _____.

4.4 A smaller version of an image is called _____.

4.5 The HTML tag used for inserting a Flash movie in the web page is _____.

4.6 All except _____ can squeeze music files into a fraction of their original size.

4.7 The process that condenses files so they can be stored in less space and transmitted over the Internet at a faster rate is called _____.

4.8 When a video clip merges and transform into another image, it is known as _____.

4.9 Bitmapped Graphics are called _____.

4.10 The process that uses digital noise to smooth out colours in digital graphics is called _____.

PART TWO
(**Answer any FOUR** questions)

5.
a)   Explain the components of Multimedia.
b)   What are the types of sound objects that can b used in multimedia?
c)   What is MIDI? How is a basic MIDI message structured?

$\hspace{11cm}$ **(6+5+4)**

6.
a)   What is animation? Explain the difference between 2D animation and 3D animation?
b)   What are the major constraints for online transmission and broadcast of multimedia? Name any three techniques employed to address this problem.
c)   Explain in brief the following terms:
   i)   Vector Graphics
   ii)   Colour Attributes

$\hspace{11cm}$ **(5+5+5)**

7.
a)   How will you compress movie files? Explain in brief.
b)   How RIFF file format is different from TIFF file Format?
c)   Differentiate Lossy and Lossless compression mechanism.

$\hspace{11cm}$ **(5+5+5)**

8.
a)   What is Authoring System? Explain the features of Macromedia Director.
b)   What is the key difference between I-frame, P-frame and B-Frame in MPEG-2 video compression?
c)   Explain in brief the following:
   i)   White Balance
   ii)   Dithering

$\hspace{11cm}$ **(5+5+5)**

9.
a)   Explain in detail the application of Multimedia in the field of EDUCATION and ENTERTAINMENT.
b)   Explain in brief the following:
   i)   Tweaking
   ii)   Morphing

$\hspace{11cm}$ **(9+6)**