Total No. of printed pages = 4

BMD 161203

Roll No. of candidate ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

2019

B.Des. 2ⁿᵈ Semester End-Term Examination

Multimedia Communication and Design

INTRODUCTION TO MULTIMEDIA COMMUNICATIONS

(Old Regulations)

Full Marks – 100   Time – Three hours

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The figures in the margin indicate full marks
for the questions.

Answer question No. 1 and any *six* from the rest.

1. Choose the correct answers from the following
    questions: $(10 \times 1 = 10)$

    (i)   The term 'multimedia' was first coined by:

          (a)   David Sawyer

          (b)   Tay Vaughan

          (c)   Iris Sawyer

          (d)   Bobb Goldstein

(ii) Staff training applications are associated with the field of:

(a) Military

(b) Education

(c) Business

(d) Mathematical and scientific research

(iii) Which among these is a lossy data compression algorithm?

(a) Huffman Algorithm

(b) RLE

(c) LZW

(d) JPEG

(iv) The ASCII character set is made up of how many bits?

(a) 7 bits   (b) 8 bits

(c) 127 bits   (d) 128 bits

(v) Which among the following is not a Graphics?

(a) Photographs

(b) Buttons

(c) Charts

(d) Movies

(vi) In a RGB colour system, adding Red and Blue gives:

(a) Yellow   (b) Cyan

(c) Magenta   (d) Black

(vii) The frequency range of normal human beings are between:

(a) 20 Hz — 20,000 KHz

(b) 20 KHz — 20,000 KHz

(c) 20 Hz — 20,000 Hz

(d) 20 KHz — 20,000 Hz

(viii) The frame rate of a picture in NTSC broadcast system is:

    (a) 24Hz   (b) 25 Hz

    (c) 29Hz   (d) 30Hz

(ix) Which among the following is a web browser?
    (a) Windows 10
    (b) Adobe Flash
    (c) Safari
    (d) Google

(x) The game 'Pokémon Go' implements the following type of VR system:
    (a) Immersive
    (b) Non-immersive
    (c) Augmented
    (d) Text-based

2. (a) State with examples, the various fields where multimedia can be applied. (10)

   (b) Mention five differences between Analog Signals and Digital Signals. (5)

3. (a) Explain what is data compression and why do we need it in multimedia? (5)

   (b) What are the different types of data compression? Give examples. (5 + 5 = 10)

4. (a) What are the 'cases' in Text? Explain them briefly. (2 + 2 = 4)

   (b) Write brief notes on: (2 × 3 = 6)

    (i) The ASCII Character Set and

    (ii) The Extended Character Set.

   (c) How can you differentiate between symbols and icons? (5)

5. (a) What are the differences between Vector Graphics and Raster Graphics? (4)

(b) What is an alpha channel and what are the benefits of using it? (1+4 = 5)

(c) Describe the characteristics of colour. (6)

6. (a) What are the various tasks you can do by using layers in Photoshop? (7)

(b) Write briefly about coloured inkjet and laser printers and how they work. (8)

7. (a) What are the differences between MIDI and Digital Audio? (6)

(b) Describe the characteristics of musical sound. (6)

(c) Explain 'noise' and provide examples to support your answer. (3)

8. (a) What are interlaced and progressive video? (3 + 3 = 6)

(b) Write short notes on the following video formats: (3 × 3 = 9)

(i) FLV

(ii) MP4

(iii) MOV

9. (a) Describe LAN and WAN networks with diagrams. (3 + 3 + 2 = 8)

(b) What are the different tools associated with Virtual Reality? (7)