

2022

INTRODUCTION TO MULTIMEDIA COMMUNICATIONS

Full Marks: 100

Time: Three hours

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

Answer **Question No. 1** and *any four* from the rest.

1. A) Fill in the blanks: (10x1 = 10)
- i. _____ first coined the term 'multimedia'.
 - ii. Windows 10 is a _____ software.
 - iii. Analog signals are denoted by _____ waves.
 - iv. A binary tree can be created using the _____ encoding algorithm.
 - v. _____ are symbolic representation of objects and processes.
 - vi. The smallest unit on a digital image is called a _____.
 - vii. A 1-bit digital image is made up of _____ colours.
 - viii. Sounds higher than 20 kHz are called _____.
 - ix. The standard television broadcast system used in India is _____.
 - x. The network connecting two or more campus area networks within a city is _____.
- B) State True or False: (1 x 10 = 10)
- i) Static media are time dependant.
 - ii) Sampling takes place during DAC.
 - iii) In a binary tree, left branches are assigned 1 and right branches are assigned 0.
 - iv) Arial Narrow and Arial Black belongs to the same font style.
 - v) In multimedia, symbols are treated as text.
 - vi) 24-bit coloured images are also called hi-colour images.
 - vii) Pink colour is considered as a warm colour.
 - viii) Most adults are unable to hear sounds above 16 kHz.
 - ix) All current television broadcast systems are analog in nature.
 - x) Chat messengers are also called instant messengers.

2. A) What is a software? Describe the different types of software with examples. (5)
B) What are the different types of data compression? Explain with examples. (5)
C) Describe any two data compression algorithms. (5+5=10)
3. A) Briefly describe the different cases in text. (4)
B) What is case sensitive and case insensitive? Explain with examples. (4)
C) Differentiate symbols and icons with appropriate diagrams. (6)
D) What are emoticons? Draw a few of them to illustrate your answer. (6)
4. A) Describe the characteristics of colour. (6)
B) Differentiate between tints, shades and tones. (6)
C) Write short notes on the following: (2x4=8)
i. Dithering
ii. Anti-aliasing
5. A) What is human sound perception? What are the limits of perception? (4)
B) How are musical sounds different from noise? (4)
C) State the differences between Digital Audio and MIDI. (12)
6. A) Briefly describe the different types of video camera. (4)
B) Explain what are Component video and Composite video. (10)
C) What are the different types of stereoscopic videos? Describe them briefly. (6)
7. Write short notes on the following: (4x5 = 20)
A) PAN
B) Chat Messengers
C) CAVE
D) Augmented Reality.
