

2022

ELEMENTS OF MULTIMEDIA

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. Hardware and software are two basic _____ of multimedia.
 - ii. Device drivers are _____ software.
 - iii. Digital signals are represented by binary numbers _____ and _____.
 - iv. The full form of JPEG is _____.
 - v. In the past, before the invention of paper, text was written on _____ tablets.
 - vi. In text, boldface is a type of _____ style.
 - vii. Image resolution is the number of _____ in a digital image.
 - viii. _____ cells are better for low-light vision.
 - ix. The full form of MIDI is _____.
 - x. Number of frames per second in a video is called _____.
- B) State True or False: (1 x 10 = 10)
- i) Animation is an element of multimedia.
 - ii) Hand gestures are signals which conveys information only in presence of light.
 - iii) The 'No Smoking' symbol can be considered as an icon.
 - iv) The Korean Hangeul script works for two languages.
 - v) Images reflect the intensity of light.
 - vi) 32-bit coloured images are also called true colour images.
 - vii) Tones between 4 and 16 Hz can be perceived via the body's sense of touch.
 - viii) Television screens use progressive-scan technology.
 - ix) In video, luma represents the brightness in an image.
 - x) Opera is an internet search engine.

2. A) Define multimedia. Why do we need multimedia? (3+4=7)
B) What is a software? Describe the different types of software with examples. (2+6=8)
C) What are the different types of data compression? Explain with examples. (5)
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) State the differences between raster and vector graphics. (8)
C) Explain how musical sounds differ from noise. Give examples. (6)
5. A) In a video, what do you understand by a field? How is related to a frame? (5)
B) Describe the process of interlacing. (5)
C) Differentiate between a component video and a composite video. (10)
6. A) Explain the differences between web browsers and search engines. (5)
B) What is a chat messenger? Give three examples of chat messengers. (5)
C) Define virtual reality. What are the tools associated with Virtual Reality? (3+7=10)
7. Write short notes on the following: (4x5 = 20)
A) Static and Continuous Media
B) Dithering
C) Anti-aliasing
D) Amplifier.
