

Basavarajeswari Group of Institutions

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

2022 SCHEME

USN

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Course Code

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Eighth Semester B.E. Degree Examinations, May 2026

MULTIMEDIA COMMUNICATION

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO: PI)</u>
<u>Module-1</u>			
1.	a. Explain digitization principles with the help of signal encoder design and associated waveforms.	10	(2 :1: 3.1.1)
	b. Explain color image capture with schematic diagram and RGB signal generation.	10	(2 :1: 3.1.1)
(OR)			
2.	a. Explain telephony over the Internet with a neat block diagram.	10	(2 :1: 3.1.1)
	b. Explain the interaction with a World Wide Web (WWW) server with a neat diagram.	10	(2 :1: 3.1.1)
<u>Module-2</u>			
3.	a. A source emits the characters E, N, T, W, and "." with the following probabilities: $P(E) = 0.3$, $P(N) = 0.3$, $P(T) = 0.2$, $P(W) = 0.1$, $P(.) = 0.1$ Encode the character string "WENT." using arithmetic coding.	10	(2 :2: 3.2.2)
	b. Explain briefly the various compression principles used in data compression systems.	10	(2 :2: 3.1.1)
(OR)			
4.	a. Describe the JPEG encoder with a neat block diagram and explain each stage briefly.	10	(2 :2: 3.1.1)
	b. Explain JPEG decoder with a neat block diagram.	10	(2 :2: 3.1.1)
<u>Module-3</u>			
5.	a. Explain the ADPCM sub-band encoder and decoder with neat block diagram.	10	(2 :3: 3.1.1)
	b. Explain the MPEG encoder, decoder implementation with neat block diagram.	10	(2 :3: 3.1.1)
(OR)			
6.	a. Explain in detail H.261 encoding formats.	10	(2 :3: 3.1.2)
	b. Explain MPEG-1, with an example frame structure.	10	(2 :3: 3.1.2)

Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI- Performance Indicator)

Module-4

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| 7. | a. | Explain the frame format of the Point-to-Point Protocol (PPP) at the link layer with a neat diagram. | 10 | (2 :4: 3.1.1) |
| | b. | Explain the DNS resource record format with a neat diagram. | 10 | (2 :4: 3.1.1) |

(OR)

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| 8. | a. | Explain the host device protocol stack of Internet telephony with a neat diagram. | 10 | (2 :4: 3.2.1) |
| | b. | Explain the structure of an E-mail message with a neat diagram. | 10 | (2 :4: 3.2.1) |

Module-5

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| 9. | a. | Explain the ATM switch architecture with a neat block diagram. | 10 | (2 :5: 3.1.1) |
| | b. | Explain satellite digital television channel interface with neat block schematic. | 10 | (2 :5: 3.1.1) |

(OR)

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|-----|----|--|----|---------------|
| 10. | a. | Explain digital broadcasting architecture with neat block diagram. | 10 | (2 :5: 3.1.1) |
| | b. | Compare live streaming and on-demand streaming. | 10 | (2 :5: 4.2.2) |

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