

Basavarajeswari Group of Institutions

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT
 (Autonomous Institute under Visvesvaraya Technological University, Belagavi)

2025 SCHEME

USN

Course Code

1BESC104/204E

First /Second Semester B.E. Degree Examinations, July 2026

ESSENTIALS OF INFORMATION TECHNOLOGY

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>(RBT:CO: PI)</u>
<u>Module-1</u>			
1.	a. Demonstrate with a neat figure, how data is stored and accessed in optical storage systems.	08	(3:1: 1.7.1)
	b. Discuss the role of flip flop in data storage system with a neat diagram.	06	(2:1: 1.7.1)
	c. Explain the excess notation in floating point representation.	06	(2:1: 1.7.1)
(OR)			
2.	a. Demonstrate with a neat figure, the role of controllers in I/O operations.	08	(3:1: 1.7.1)
	b. Discuss the logical operations with applications.	06	(2:1: 1.7.1)
	c. Explain the stored procedure concept.	06	(2:1: 1.7.1)
<u>Module-2</u>			
3.	a. Illustrate with a neat figure, the role of process administration in handling process scheduling.	08	(3:2: 1.7.1)
	b. Discuss the concept of deadlocks in multitasking operating systems.	06	(3:2: 1.7.1)
	c. Explain real time processing and time sharing processing operating systems.	06	(2:2: 1.7.1)
(OR)			
4.	a. Demonstrate with an example, a formal algorithm to calculate the average of three numbers by ensuring all requirements.	08	(3:2: 1.7.1)
	b. Demonstrate with an example, an algorithm to check whether given number is prime or not.	06	(3:2: 1.7.1)
	c. Explain the characteristics of an algorithm.	06	(2:2: 1.7.1)
<u>Module-3</u>			
5.	a. Demonstrate with a neat figure, the Internet software layers.	08	(3:2: 1.7.1)
	b. Illustrate the operation of VoIP.	06	(3:2: 1.7.1)
	c. Explain the forms of malware attacks.	06	(2:2: 1.7.1)
(OR)			

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

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|----|----|---|----|--------------|
| 6. | a. | Discuss the basic information security model. | 08 | (2:5: 1.7.1) |
| | b. | Describe the ethical issues in information technology. | 06 | (2:5: 1.7.1) |
| | c. | Summarize the public domain and fair use in ethical issues. | 06 | (2:5: 1.7.1) |

Module-4

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| 7. | a. | Discuss the different software engineering methodologies. | 08 | (3:3: 1.7.1) |
| | b. | Demonstrate with a hospital management system, a sequence diagram. | 07 | (3:3: 1.7.1) |
| | c. | Outline the types of relationships in class diagrams with an example. | 05 | (2:3: 1.7.1) |

(OR)

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| 8. | a. | Demonstrate with an example, the modification, insertion and deletion anomalies. | 08 | (3:4: 1.7.1) |
| | b. | Discuss with an example, the insert, update and delete SQL commands. | 07 | (3:4: 1.7.1) |
| | c. | Explain the issues of relational design. | 05 | (2:4: 1.7.1) |

Module-5

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| 9. | a. | Discuss website design and storyboarding and their importance in website development. | 07 | (3:3: 1.7.1) |
| | b. | Demonstrate with an example, the inline, internal and external CSS. | 07 | (2:3: 1.7.1) |
| | c. | Outline with a suitable example, to create lists and tables in HTML. | 06 | (3:3: 1.7.1) |

(OR)

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|-----|----|---|----|--------------|
| 10. | a. | Discuss the cloud computing services. | 07 | (2:2: 1.7.1) |
| | b. | Explain the characteristics, advantages and disadvantages of cloud computing. | 07 | (2:2: 1.7.1) |
| | c. | Illustrate with a neat figure, the basic principle of refraction. | 06 | (3:1: 1.7.1) |

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