

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

AGENTIC AI

(Artificial Intelligence & Machine Learning)

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.	Describe the self-governance, agency, and autonomy in the context of agentic systems.	10	(2:1:1.2.1)
b.	Outline the key attributes of Intelligent agents.	10	(2:1:1.2.2)
(OR)			
2. a.	Explain the hybrid architectural patterns for agentic systems.	10	(2:1: 1.2.3)
b.	Outline the use cases of MASs in various domains, demonstrating their applicability and effectiveness in solving complex problems.	10	(2:1: 1.2.3)
<u>Module-2</u>			
3. a.	Describe with a neat diagram the deductive logical reasoning to intelligently manipulate and make use of knowledge.	10	(2:2: 1.2.1)
b.	Describe the agent capabilities enhancement through the usage of Generative AI.	10	(2:2: 1.2.3)
(OR)			
4. a.	Describe the importance of reflection in agents.	10	(2:2: 1.2.2)
b.	Explain variety of algorithms and strategies for dynamic resource allocation for effective travel agent use case.	10	(2:2: 1.2.1)
<u>Module-3</u>			
5. a.	Describe the flow between an LLM agent, tool, and the agent controller with the help of a diagram with a pseudo-code.	10	(2:3: 1.2.2)
b.	Outline on the fast-forward planning algorithms used in agents with the help of a simple code snippet.	10	(2:3: 1.2.2)
(OR)			
6. a.	Explain with a diagram the Coordinator Worker and Delegator (CWD) model for the basic travel planner interaction mechanisms in a multi-agent systems.	10	(2:3: 1.2.2)
b.	Outline the theoretical framework for communication and collaboration in a typical CWD-based travel planning multi-agent system.	10	(2:3: 1.2.2)

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

Module-4

7. a. Describe the three primary types of memory architecture in agent systems and justify the importance of maintaining effective agent behaviour. 10 (2:4: 1.2.3)
- b. Explain with diagram the differences between sequential and parallel processing in agentic workflows. 10 (2:4: 1.2.3)

(OR)

8. a. Explain the impact of uncertainty and bias on generative AI system. 10 (2:4: 1.2.3)
- b. Describe the steps practiced by organizations to improve user trust in AI-generated outputs. 10 (2:4: 1.2.3)

Module-5

9. a. Outline the unique challenges the agentic systems pose for data privacy compared to traditional generative AI systems, and how should organizations address these challenges. 10 (2:5: 1.2.2)
- b. Describe the intellectual property risks that evolve when moving from generative AI to agentic systems, and what new approaches are needed to address these risks. 10 (3:5: 1.2.2)

(OR)

10. a. Explain how different agents collaborate to solve complex information retrieval problems using the enterprise knowledge management. 10 (2:5: 1.2.2)
- b. Discuss with an example, the differences between agentic systems in creative applications and traditional generative AI tools. 10 (2:5: 1.2.2)

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