

SRINIX COLLEGE OF ENGINEERING, BALASORE

1ST INTERNAL EXAMINATION 2021-22

SUBJECT –AI&ML

SEMESTER- 5th

BRANCH-CSE

FULL MARK-60

TIME- 2HOURS

SECTION A (Answer any 10 questions)

2 × 10 = 20

1. What is artificial intelligence?
2. Define agent.
3. Define environment.
4. What is PEAS description of an agent?
5. State the role of sensors and actuators.
6. Differentiate between fully and partially observable environments.
7. Define stochastic environment.
8. Differentiate between supervised and unsupervised learning.
9. What is a rational agent?
10. What is reinforcement learning?
11. What are labeled data?
12. What is full joint probability distribution?
13. Define uncertainty.
14. Define heuristic search.
15. Differentiate between episodic and sequential environment.

SECTION B (Answer Any Four)

5 × 4 = 20

16. Explain simple reflex agent with schematic diagram and program.
17. Differentiate between conditional & unconditional probability. State Baye's theorem.
18. Differentiate between uninformed & informed search strategies.
19. Explain BFS.
20. Explain model-based reflex agent with schematic diagram and program.
21. Explain the four components of a problem.

SECTION C (Answer Any Two)

10 × 2 = 20

22. Explain A* algorithm in details.
23. Define Machine learning. Explain supervised, unsupervised, semi supervised and reinforcement learning in details.
24. State Kolmogorov's axioms. State Baye's rule and its uses.
25. Discuss various definitions of AI & its applications.

******* ALL THE BEST *******