Section A –

Unit 1: Fundamentals of Artificial Intelligence (AI)

11. Explain the history of AI and its evolution.
12. Describe the best-first search algorithm with an example.
13. What are the different approaches to AI? Explain Cybernetics and Symbolic AI.
14. Discuss the impact of AI on jobs and society.

Unit 2: Fundamentals of Machine Learning (ML)

15. Explain different forms of learning in ML with suitable examples.
16. What are the applications of Machine Learning in Engineering?
17. Describe the role of feature selection and extraction in ML.
18. Explain data normalization and scaling in data preprocessing.

Section B –

Unit 1: Fundamentals of Artificial Intelligence (AI)

19. Compare and contrast heuristic search and best-first search techniques.
20. Discuss in detail the regulatory and policy issues related to AI.
21. Explain the complete problem-solving process in AI with an example.

Unit 2: Fundamentals of Machine Learning (ML)

22. Describe the entire process of data preprocessing, including data cleaning, feature selection, and normalization.
23. Explain supervised, unsupervised, and reinforcement learning with real-world applications.
24. Discuss various real-world applications of Machine Learning in different industries.