D 130969 **(Pages : 2)** **Name.....**

Reg. No.....

THIRD SEMESTER B.VOC. DEGREE EXAMINATION, NOVEMBER 2025

Data Science and Analytics

SDC3DS11—ARTIFICIAL INTELLIGENCE

(2021 Admissions)

Time : Two Hours and a Half Maximum : 80 Marks

Section A

All questions can be answered.

(*Each question carries* 2 *marks*)

Ceiling 25 *marks.*

1. Define intelligence.
2. What are agents ?
3. What is task environment ?
4. Define PEAS.
5. Define inference in first order logic.
6. What is prolog representation in AI ?
7. What is AI based matching algorithms ?
8. Define backward chaining.
9. What are decision trees ?
10. What is meant by supervised learning ?
11. What is meant by NLP ?
12. What is meant by uncertainty ?
13. Mention some of the applications of AI.

Turn over

14. What is meant by clustering ?

15. What are Turing machines ?

Section B (Paragraph)

All questions can be answered.
(*Each question carries* 5 *marks*)
Ceiling 35 *marks.*

16. How do agents interact with environment ?

17. Explain the four basic kinds of agent programs for an intelligent system.

18. Explain nearest neighbor algorithms.

19. Explain the need of Probabilistic reasoning in AI.

20. Explain neural network models.

21. Explain informed and uninformed search strategies.

22. Explain the general model of learning agent.

23. Explain the simple reflex agents.

Section C (Essays)

Answer any **two** *of the following.*

24. Explain the history of artificial intelligence.

25. Explain properties of task environment.

26. Explain the forward chaining algorithm in AI.

27. Explain expert systems in AI.

(2 × 10 = 20 marks)