

U.G. 3rd Semester Examination-2024

COMPUTER SCIENCE

[Multidisciplinary Course (MDC)]

Course Code : CS-MU-T-03&01

[NEP-2020]

Full Marks : 35

Time : 90 Minutes

Instructions to the Candidates:

- Candidates will be provided with a question cum answer booklet.
- The booklet contain 2 options. Option A & B. Each option contain 35 multiple choice questions, carrying 1 mark.

Option – A – AI for Everyone

Option – B – Computer Science for Beginners

- Candidate will attempt all the questions from Option 'A' OR Option 'B'.
- Candidates must fill up his/her Registration Number, Year & Roll Number in the space provided.
- Do not make any rough work on the answer booklet.
- At the end of the examination please return the answer booklet to the invigilator.

Registration No.

Year

Roll Number

Signature of the Invigilator

[Turn Over]

OPTION-A**Course Code : CS-MU-T-03****(AI for Everyone)****[Marks : 35]**

Answer all the following questions. [Choose the correct option and put tick (✓) mark beside given box]:

1×35=35

1. Who first coined the term "Artificial intelligence?"
 - a) Charles Babbage ☐
 - b) John McCarthy ☐
 - c) Alan Turing ☐
 - d) Allen Newell ☐
2. Which is not the limitation of human intelligence (HI)?
 - a) Unreliability ☐
 - b) Reasoning/ Intuition ☐
 - c) Speed ☐
 - d) Memory ☐
3. Artificial intelligence is defined as a field aiming to
 - a) make humans more intelligent. ☐
 - b) develop intelligent machines. ☐
 - c) improve security. ☐
 - d) mine data. ☐
4. In which machine learning technique does the model learn from labeled data?
 - a) Supervised learning ☐
 - b) Unsupervised learning ☐
 - c) Reinforcement learning ☐
 - d) None of the above ☐
5. What is the primary goal of supervised learning?
 - a) Minimize errors in predictions ☐
 - b) Maximize computational efficiency ☐
 - c) Predict future events ☐
 - d) Learn from unlabeled data ☐

[Turn Over]

6. Which of the following is an example of an unsupervised learning algorithm?
- a) K-Means Clustering ☐
 - b) Linear Regression ☐
 - c) Decision Trees ☐
 - d) Support Vector Machines ☐
7. An agent that acts to achieve the best outcome is called
- a) Automatic agent ☐
 - b) Simple Reflex Agents ☐
 - c) Rational agent ☐
 - d) Autonomous agent ☐
8. What is the key difference between supervised and unsupervised learning?
- a) The presence of labeled data in supervised learning ☐
 - b) The use of deep neural networks in unsupervised learning ☐
 - c) The requirement for large datasets in supervised learning ☐
 - d) The absence of algorithms in unsupervised learning ☐
9. In a neural network, what is the role of the activation function?
- a) Defines the learning rate ☐
 - b) Sets the number of neurons in each layer ☐
 - c) Controls the initialization of weights ☐
 - d) Determines whether a neuron should be activated or not ☐
10. _____ was originally called "the imitation game".
- a) The Turning Test ☐
 - b) Travelling salesperson problem ☐
 - c) The Halting problem ☐
 - d) None of the above ☐
11. AI agents can interact with their environment using _____.
- a) only actuators ☐
 - b) only sensors ☐
 - c) actuators and sensors ☐
 - d) None of the above ☐

12. Which of the following is NOT a subfield of AI?
- a) Machine Learning ☐
 - b) Robotics ☐
 - c) Statistics ☐
 - d) Operating system ☐
13. Which of the following is an example of AI in daily life?
- a) Autonomous vehicles ☐
 - b) Smart assistants like Alexa or Gemini ☐
 - c) Personalized recommendations on streaming platforms ☐
 - d) All of the above ☐
14. What does "NLP" stand for in AI?
- a) Natural Language Programming ☐
 - b) Non-linear Programming ☐
 - c) Natural Logic Processing ☐
 - d) Natural Language Processing ☐
15. What is a common risk associated with AI?
- a) Increased efficiency ☐
 - b) Improved customer experiences ☐
 - c) Data privacy and security concerns ☐
 - d) Faster problem-solving ☐
16. ChatGPT is an advanced AI language model developed by
- a) Microsoft ☐
 - b) Google ☐
 - c) OpenAI ☐
 - d) Apple ☐

22. What is the "black box" problem in AI?
- a) AI systems working in complete darkness ☐
 - b) AI running out of power suddenly. ☐
 - c) AI systems breaking physical barriers ☐
 - d) AI decisions being difficult to interpret or explain ☐
23. Which AI principle promotes transparency in decision-making?
- a) Explainability ☐
 - b) Fairness ☐
 - c) Accountability ☐
 - d) Bias ☐
24. Which regulation aims to protect user privacy and data rights in AI systems?
- a) GDPR (General Data Protection Regulation) ☐
 - b) COPPA (Children's Online Privacy Protection Act) ☐
 - c) HIPAA (Health Insurance Portability and Accountability Act) ☐
 - d) PCI DSS (Payment Card Industry Data Security Standard) ☐
25. What is Reinforcement Learning?
- a) Learning based on rewards and penalties ☐
 - b) Learning from labeled data ☐
 - c) Learning without any feedback ☐
 - d) Learning only with images ☐
26. Which algorithm is best suited for a binary classification problem?
- a) Logistic Regression ☐
 - b) K-Means Clustering ☐
 - c) Principal Component Analysis (PCA) ☐
 - d) Apriori Algorithm ☐

27. What is Overfitting in Machine Learning?
- a) When a model performs equally well on training and test data ☐
 - b) When a model performs well on training data but poorly on test data ☐
 - c) When a model underperforms on both training and test data ☐
 - d) When a model ignores patterns in data ☐
28. Which of the following is a type of supervised learning?
- a) K-Means Clustering ☐
 - b) Principal Component Analysis (PCA) ☐
 - c) Decision Tree ☐
 - d) DBSCAN ☐
29. Which AI technology is widely used in fraud detection for banking?
- a) Reinforcement Learning ☐
 - b) Expert Systems ☐
 - c) Machine learning ☐
 - d) Genetic Algorithms ☐
30. Which of the following is an AI-powered recommendation system?
- a) Google Docs ☐
 - b) MS Paint ☐
 - c) Windows Calculator ☐
 - d) Netflix movie suggestions ☐
31. Self-driving cars use which AI technology for object detection?
- a) Speech Recognition ☐
 - b) Heuristic Search ☐
 - c) Computer Vision ☐
 - d) Expert Systems ☐
32. The goal of computer vision is to make _____.
- a) computer able to see ☐
 - b) people visualize computer better ☐
 - c) decide objects from sensed images ☐
 - d) visualize image properly ☐

33. Intra-cluster distance is dissimilarity between objects of
- a) different clusters ☐
 - b) same clusters ☐
 - c) neighbouring clusters ☐
 - d) interesting clusters ☐
34. Which AI-based technology helps doctors diagnose diseases from X-rays and MRIs?
- a) Optical Character Recognition ☐
 - b) Text Mining ☐
 - c) Chatbots ☐
 - d) Computer Vision ☐
35. AI-driven _____ technology can be misused to create fake images, videos, or audio.
- a) deeptech ☐
 - b) deepseek ☐
 - c) faketechnology ☐
 - d) deepfake ☐

5. What does ROM stand for?
- a) Read Online Memory ☐
 - b) Random Online Memory ☐
 - c) Read-Only Memory ☐
 - d) Random Output Memory ☐
6. What is the smallest unit of data in a computer?
- a) Byte ☐
 - b) Bit ☐
 - c) Nibble ☐
 - d) Word ☐
7. Which of the following is an input device?
- a) Monitor ☐
 - b) Keyboard ☐
 - c) Printer ☐
 - d) Speaker ☐
8. What is the primary function of an operating system?
- a) Manage software resources ☐
 - b) Manage hardware resources ☐
 - c) Provide a user interface ☐
 - d) All of the above ☐
9. What is the base of the binary number system?
- a) 8 ☐
 - b) 2 ☐
 - c) 10 ☐
 - d) 16 ☐

15. Which technology is used to store data on CDs?
- a) Magnetic ☐
 - b) Optical ☐
 - c) Electrical ☐
 - d) Laser ☐
16. What does BIOS stand for?
- a) Basic Integrated Operating System ☐
 - b) Binary Input Output System ☐
 - c) Basic Input Output System ☐
 - d) Binary Integrated Output System ☐
17. Which of the following is not an operating system?
- a) Windows ☐
 - b) Linux ☐
 - c) Android ☐
 - d) Microsoft Office ☐
18. What is the main function of the Control Unit in a CPU?
- a) Store data ☐
 - b) Perform calculations ☐
 - c) Control operations of the processor ☐
 - d) Manage system memory ☐
19. Which of the following represents a kilobyte in binary terms?
- a) 1000 bytes ☐
 - b) 1024 bytes ☐
 - c) 100 bytes ☐
 - d) 10240 bytes ☐

20. What type of memory is used for cache?
- a) ROM ☐
 - b) SRAM ☐
 - c) DRAM ☐
 - d) PROM ☐
21. Which of the following is an example of primary memory?
- a) SSD ☐
 - b) RAM ☐
 - c) DVD ☐
 - d) Hard Drive ☐
22. What does GUI stand for in computer terminology?
- a) Graphical User Interface ☐
 - b) General Utility Interface ☐
 - c) Graphic Utility Information ☐
 - d) General User Integration ☐
23. Which key is used to enter the BIOS setup?
- a) F1 ☐
 - b) F10 ☐
 - c) F12 ☐
 - d) It varies by manufacturer ☐
24. What is the primary purpose of a hard disk drive?
- a) Process data ☐
 - b) Store data permanently ☐
 - c) Provide temporary storage ☐
 - d) Enhance graphics ☐
25. What does SSD stand for in computer storage?
- a) Solid-State Drive ☐
 - b) Super Storage Disk ☐
 - c) Systematic Storage Device ☐
 - d) Small Storage Device ☐

26. What is the hexadecimal representation of the decimal number 255?
- a) FF ☐
 - b) FE ☐
 - c) 100 ☐
 - d) A0 ☐
27. What is the 2's complement of the binary number 1010?
- a) 0101 ☐
 - b) 1011 ☐
 - c) 0110 ☐
 - d) 0110 ☐
28. What is the binary representation of -10 in 1's complement using 8 bits?
- a) 11110101 ☐
 - b) 00001010 ☐
 - c) 11110110 ☐
 - d) 11110111 ☐
29. Which of the following is NOT a function of an operating system?
- a) Memory management ☐
 - b) Processor scheduling ☐
 - c) Compiling programs ☐
 - d) File management ☐
30. Which of the following is NOT an operating system?
- a) Windows ☐
 - b) MacOS ☐
 - c) Linux ☐
 - d) Google Docs ☐

31. Which part of the operating system directly interacts with hardware?

- a) Shell
- b) Kernel
- c) Application software
- d) Compiler

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32. What does DBMS stand for?

- a) Data Backup Management System
- b) Database Management System
- c) Digital Business Management Software
- d) Dynamic Base Management System

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33. Which of the following is an example of a database management system?

- a) MS Excel
- b) MySQL
- c) Photoshop
- d) Notepad

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34. What is a database?

- a) A collection of web pages
- b) A storage system for files
- c) A structured collection of data
- d) A type of programming language

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35. What is the full form of SQL?

- a) Structured Query Language
- b) Simple Question Language
- c) Sequential Query Logic
- d) Standard Query List

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