A1022

Name.....

Register No.....

NAIPUNNYA INSTITUTE OF MANAGEMENT AND INFORMATION TECHNOLOGY (AUTONOMOUS)

FIRST SEMESTER (FYUG) DEGREE EXAMINATION NOVEMBER 2025

COMPUTER APPLICATIONS

BCA1CJ101 - FUNDAMENTALS OF COMPUTERS AND COMPUTATIONAL THINKING

Time:Two Hours | Maximum:70 marks

Section A

Answer all questions.
Each question carries 3 marks. Ceiling 24 marks

1. What is an algorithm?	CO3
2. Write a brief note on transistor with a neat sketch.	CO2
3. Mention any three applications of QPU.	CO1
4. Compare APU and GPU.	CO1
5. Comment on capacitor. Draw the symbol also.	CO2
6. Name two types of storage devices.	CO4
7. Define logical thinking.	CO3
8. Write an algorithm to check the given number is odd or even.	CO3
9. Define parallel processing.	CO1
10. Give a description for cache memory.	CO5

Section B

Answer all questions.
Each question carries 6 marks. Ceiling 36 marks

11. Write a short note on dual core processor.	CO1
12. Summarize Von Neumann architecture.	CO1
13. Identify and explain three areas where computer science is used in the modern world.	CO3
14. Write a description on GPU.	CO1
15. Compare NTFS and FAT.	CO3
16. Describe the steps involved in a systematic problem-solving approach.	CO2
17. Explain the function of CPU, RAM, and Expansion slots (PCIe) on the motherboard.	CO4
18. Convert the following to BCD, XS-3 and Gray code: i) 6 ii) 25 iii) 97	CO1

Turn Over

Section C

Answer any one question

The question carries 10 marks.

19. Describe the different computer memory types — RAM (DRAM, SRAM, DDR SDRAM), ROM, and Cache memory — with their advantages and limitations. CO5

20. Discuss the role of BIOS/UEFI, SATA/NVMe interfaces, and Network/Ethernet/VGA/HDMI/USB ports in a computer system. CO4

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