



‘সমানো মন্ত্র: সমিতি: সমানী’

UNIVERSITY OF NORTH BENGAL
B.Sc. Minor 1st Semester Examination, 2023

UCMSMIN10001-COMPUTER SCIENCE

FUNDAMENTALS OF COMPUTERS AND PROBLEM SOLVING

Time Allotted: 2 Hours 30 Minutes

Full Marks: 60

*The figures in the margin indicate full marks.
All symbols are of usual significance.*

GROUP-A

Answer any four of the following

3×4 = 12

1. What is a system bus? Explain different types of system buses.
2. What is an operating system, and why is it essential for a computer?
3. Explain the differences between software and firmware.
4. Describe what the term “booting” means in the context of computer systems. Differentiate between a warm boot and a cold boot.
5. Define the purpose of each of the following DOS commands: CLS, DIR, COPY.
6. Describe the primary functions of system software, application software and utility software.

GROUP-B

Answer any four of the following

6×4 = 24

7. Differentiate between digital and analog computers. Discuss their respective advantages and limitations.
8. Define an algorithm. Provide an example of a simple algorithm and describe the characteristics.
9. Explain the functions of ALU and Control unit of a digital Computer.
10. Discuss the fundamental differences between compilers, interpreters and assemblers.
11. Explain different types of ROMs available along with their merits and demerits.
12. List and explain the essential characteristics of a computer.

GROUP-C

Answer any two of the following

12×2 = 24

13. Describe the four generations of computers, including their characteristics.
14. Compare and contrast unstructured, structured, procedure-oriented and object-oriented programming languages.
15. Explain various areas of application of computers with suitable examples.
16. Trace the evolution of computing devices from the Abacus to the Mark-I computer, highlighting the innovations along the way.

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