UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 2nd Semester Examination, 2022

GE1-P2-COMPUTER SCIENCE

Time Allotted: 2 Hours   Full Marks: 40

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

The question paper contains GE2A and GE2B.
The candidates are required to answer any *one* from *two* courses.
Candidates should mention it clearly on the Answer Book.

GE2A
PROGRAMMING IN C
GROUP-A

Answer any *five* questions   1×5 = 5

1. What are keywords and reserved words? Point out the difference between them.

2. Who was the founder of C?

3. Discuss the identifier naming conventions in C.

4. What is an array? How are elements of an array extracted?

5. What are built in functions? Name a few.

6. What is a prototype of a function in C?

7. How is Binary search different from linear search?

8. Differentiate between "=" and "= =" in C.

GROUP-B

Answer any *three* questions   5×3 = 15

9.   What is the working principle of prefix and postfix operators? Give examples.

10. Discuss multiway decision statement in C.

11. What is nesting of loops? What is the degree to which nesting can be done? Explain a small program which uses nested loops.

12. Describe header files and its usage in C programming.

13. What are the different operators present in C programming language?

GROUP-C

Answer any *two* questions
10×2 = 20

14. Discuss the different types of iterative statements (loops) available in C. Give examples.

15. Differentiate between structures and unions in C. Give examples to illustrate your answer.

16. Discuss the different string handling functions in C.

17. Discuss operator precedence and associativity with appropriate examples.

GE2B
MICROPROCESSOR
GROUP-A

Answer any *five* questions
1×5 = 5

1. What is the clock frequency of 8085 microprocessor?

2. State the function of XTHL instruction.

3. Name any two maskable interrupt lines of a 8085 microprocessor.

4. What are the components of flag registers?

5. Find the vector address of RST 6.5 interrupt line.

6. Write down the function of $IO/\overline{M}$ line.

7. Explain the function of accumulator.

8. List the 16-bit registers of 8085 microprocessor.

GROUP-B

Answer any *three* questions
5×3 = 15

9. Discuss the special purpose registers of 8085 microprocessor.

10. Explain I/O interface of a microprocessor.

11. Elaborate the memory write operation of a 8085 microprocessor.

12. Discuss direct and indirect addressing modes.

13. Explain the control bus lines of a microprocessor.

GROUP-C

Answer any *two* questions
10×2 = 20

14. Explain the interrupt structure of a 8085 microprocessor.

15. Write a note on data movement instructions of assembly language. Elaborate with examples.

16. Write an assembly language program to rotate a 32-bit number.

17. Write a note on instruction formats.

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