

**First Year B.Sc (MRT) Degree Supplementary Examinations  
September 2023**

**Computer Science**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers
- Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

**Essay**

**(2x20=40)**

1. Describe the working of pass by value and pass by reference. Write a C program to sort names of 'N' students stored in an array using pass by reference method.
2. Explain different applications of Health Information Technology and highlight the opportunities and challenges.

**Short notes:**

**(8x5=40)**

3. List different types of multiprocessor operating systems, give any two examples.
4. What are the advantages of using a DBMS.
5. Explain viruses and different types of viruses.
6. Differentiate between global and static variable in C.
7. Difference between structure and union data type in C.
8. Explain LAN, MAN and WAN.
9. Explain with example two pre-processor directives in C programming.
10. Types of IPR and its advantages.

**Answer briefly:**

**(10x2=20)**

11. List four file handling commands in Linux.
12. Define distributed system.
13. What are the basic data types associated with C.
14. Explain a pointer in C programming language.
15. Explain a static variable in C.
16. Define DBMS.
17. Functions of a firewall.
18. Differentiate input and output devices.
19. List two advantages of wireless networks.
20. PACS.