



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

FIFTH SEMESTER – APRIL 2023

16/17/18UCS5ES03 – SYSTEMS PROGRAMMING

Date: 11-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

PART – A

(10 x 2 = 20 Marks)

Q. No Answer ALL questions

- 1 Define System programs. Give examples.
- 2 Compare Compiler and Interpreter.
- 3 What is Pseudo-op?
- 4 List the functions of Assembler.
- 5 What are the basic tasks of macro instruction processor?
- 6 Define Argument List Array
- 7 State the functions of Loader.
- 8 Define Absolute Loaders.
- 9 What is Symbol table?
- 10 Define syntax analysis.

PART – B

(5 x 8 = 40 Marks)

Answer ALL the questions

- 11 a) Write in detail about the components of System Programming.
(OR)
b) Draw the flow chart for ADD instruction.
- 12 a) Write short notes on Machine Operation Table and Pseudo Operation Table.
(OR)
b) Write in brief about the Data structures used in design of an Assembler.
- 13 . a) Write short notes on macro instructions. Give an example code for macro instruction with arguments.
(OR)
b) Elaborate about Macro calls within Macro.
- 14 . a) Explain any four loader schemes in detail with examples.
(OR)
b) Write short notes on Subroutine linkages.
- 15 a) Write short notes on the intermediate form of a Compiler.
(OR)
b) Explain lexical analysis phase with example code.

PART – C

(2 x 20 = 40 Marks)

Answer any TWO questions

16. a) Briefly explain the databases used in pass1 and pass2 of assembler design and draw the flowcharts.
 b) Explain the general machine structure of IBM 360 with neat diagram.
17. a) Elaborate about Macro Processor two pass algorithm with flow charts.
 b) Explain direct linking loader scheme with example program.
18. a) Explain about the phases of Compiler.
 b) Discuss about the different types of instruction formats used in IBM 360 machine

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