

**ST. JOSEPH'S EVENING COLLEGE (AUTONOMOUS)**  
**IV SEMESTER BCA EXAMINATIONS - APRIL 2018**

**SYSTEM PROGRAMMING**

**Duration: 2.5 Hours**

**Max. Marks: 70**

**SECTION - A**

**I) Answer any SIX of the following questions. (6x3=18)**

1. What is system programming? Give any two differences between System Program and Application Program.
2. Differentiate between Compiler and Interpreter.
3. Write four advantages of assembly language rather than machine language.
4. Write the format of Symbol table for pass1 and pass 2 Assembler.
5. Write two conditional macro processor pseudo-ops. Give example program.
6. Define Overlays and Dynamic Loading.
7. Define code generation and write the process of Assembly Phase in compiler.
8. Write the rules for converting an arithmetic statement into a parse tree.

**SECTION - B**

**II) Answer any FOUR of the following questions. (4x8=32)**

9. Draw the General Machine Structure of IBM 360/370. Explain the following:
  - a. Memory and Registers
  - b. Data and Instructions
10. Define Assembler. Explain the following:
  - a. Statement of problem
  - b. Format of Databases
  - c. Pass1 algorithm
11. Explain General Loader Scheme and Absolute loader scheme with diagram.
12. Explain the following:
  - a. Macro calls within Macros
  - b. Linear search with suitable example.
13. Explain Machine dependent and Machine independent optimization.
14. Explain lexical and syntax phases of compiler.

**SECTION - C**

**III) Answer any TWO of the following questions. (2x10=20)**

15. Explain the implementation of Two Pass Macro Processor Algorithm.
16. Explain the design of Direct Link Loader.
17. Explain the following:
  - a. Recognizing basic Elements in compiler
  - b. Intermediate form