SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: ☐☐☐☐☐☐☐☐☐☐☐☐ Total number of pages:[1]

B.Tech. || CSE || 4th Sem
System Programming
Subject Code: BTCS405A
Paper ID:

Time allowed: 3 Hrs   Max Marks: 60

Important Instructions:
- **All questions are compulsory**
- **Assume any missing data**

PART A (10x 2marks)

Q. 1.   Short-Answer Questions:
    (a) What is a Debugger?
    (b) What is a Linker?
    (c) What is role of Automata in Lexical Analysis phase of a compiler?
    (d) What is a Loader?
    (e) What is a OPCODE?
    (f) What are assembler directives? Give two examples.
    (g) Define Intermediate code.
    (h) What is the difference between a pass and a phase?
    (i) What is LEX?
    (j) How a program is executed in C++?

PART B (5×8marks)

Q. 2. What is System Programming? Explain its various components.	CO1
OR	
What is an Editor? Draw its architecture.	CO1
Q. 3. Explain the functions of I-Pass Assembler. What is the use of TII Table?	CO2
OR	
Draw the flow chart of Pass-II of Assembler.	CO2
Q. 4. What is the function of a Macro processor? How they are used in C++?	CO3
OR	
What is Macro Expansion? What is the difference between a Function and a Macro call?	CO3
Q. 5. What is Parsing? Explain Top down parsing with example.	CO4
OR	
What do you mean by Code Optimization? Explain Machine independent Code Optimization techniques.	CO4
Q. 6. What is Linking? Explain Compile and Go Loader.	CO5
OR	
Explain various Debugging Techniques used in C++.	CO5