Turn Over

QP CODE: 24001167

Reg No:Name:

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

Sixth Semester

B.Sc Information Technology Model III

CORE COURSE - IT6CRT06 - SYSTEM SOFTWARE

2017 Admission Onwards

EB18DE42

Time: 3 Hours

Max. Marks : 80

Part A

Answer any **ten** questions. Each question carries **2** marks.

- 1. Explain the term Application domain, PL domain and Execution domain.
- 2. What is Forward reference problem?
- 3. Give the representation of a Programming Language grammar.
- 4. Write are the Production rules for generating a language that consists of equal number of a's and b's.
- 5. Explain about Single pass translation.
- 6. Define Data structures.
- 7. Define DFA.
- 8. Define an abstract syntax tree.
- 9. Define continuation check in top down parsing.
- 10. What is the use of bottom-up parsing.
- 11. Define macro.
- 12. Define linker.

(10×2=20)

Part B

Answer any **six** questions. Each question carries **5** marks.

13. Explain various Program execution models.





- 14. What are the various elements of Assembly Language programming?
- 15. Explain briefly about Symbol table and Mnemonic tables with suitable examples.
- 16. Explain about Functions and its calling conventions.
- 17. Discuss about finite state automation(FSA).
- 18. What is meant by parsing? Explain.
- 19. Write detailed note on operator precedence parsing.
- 20. What is a nested macro call and how is it expanded? Explain with an example.
- 21. Differentiate between linker and loader.

(6×5=30)

Part C

Answer any **two** questions. Each question carries **15** marks.

- 22. 1) Write the format of an Assembly language statement. Explain.
 - 2) Write in detail about the use of a Location Counter in Assembly Language translation.
 - 3) Write the difference between Assembly language and Machine language.
- 23. Explain various Intermediate Code forms for expressions used in Compilers with suitable examples.
- 24. Explain in detail :
 - a) Recursive descent parser
 - b) Table driven parser
- 25. What are loaders? What are the different type of loaders? Explain.

(2×15=30)