

Sant Gadge Baba Amravati University, Amravati Summer -2020 Examination
HVP Mandal's College of Engineering and Technology , Amravati
Course: Computer Science and Engineering

BE Four Year Fifth Semester (Computer Science and Engineering) Summer 2020 Exam
5KS03 SYSTEM SOFTWARE

Assignment Only For Backlog Students

Marks 20

Note:

1. Solve any 2 questions
2. Each question carry 10 marks

Question No.1 (10 Marks)

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| A. What are the various phases of compilers. | (1) |
| B. Give an Example of Ambiguity of grammar. | (1) |
| C. Differentiate between TDP and BUP. | (2) |
| D. Define S-attributes in Syntax Directed Definitions. | (2) |
| E. What are various methods used for Code Optimization | (2) |
| F. Write 3 Address code of $a=c+d$ | (2) |

Question No.2 (10 Marks)

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| A. What is the significance of Semantic analysis phase. | (1) |
| B. Explain RMD and LMD with an Example. | (1) |
| C. Which is the most powerful BU parser ? Why ? | (2) |
| D. Define L-attributes in Syntax Directed Definitions. | (2) |
| E. Explain various Error Recovery strategies in Compilers | (2) |
| F. (2FAOC) 16 is equivalent to $(\text{_____})_2$ | (2) |

Question No.3 (10 Marks)

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| A. Explain how lexical analyzer works. | (2) |
| B. Calculate FIRST of following grammar
A-> XYZ X-> Pcd Y-> abc / fgh Z -> r/uiy P-> bcd | (2) |
| C. Explain Shift Reduce Parsing with Example | (2) |
| D. Write S-Attributed Syntax Directed Definition for Desk Calculator. | (2) |
| E. The main memory in a Personal Computer (PC) is made of _____ | (1) |
| a) Cache memory b) Static RAM c) Dynamic Ram d) Cache memory & RAM | |
| F. Why RAM memory is not suitable for permanent storage? | (1) |

Question No.4 (10 Marks)

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| A. What is Intermediate Code Generation in compilers. | (1) |
| B. Calculate FOLLOW of following grammar
A-> vdb X-> APc Y-> aXc / fXh Z -> r/Yyz P-> bcZ | (2) |
| C. Test Whether Grammar is LR(0) or not .
S-> CC S->cC C->d | (2) |
| D. Write S-Attributed Syntax Directed Definition for Syntax Tree Generator. | (2) |
| E. Give Symbol table structure. | (1) |
| F. In computers, subtraction is generally carried out by _____ | (1) |
| a) 9's complement b) 10's complement c) 1's complement d) 2's complement | |