



**PILLAI COLLEGE OF ENGINEERING, NEW PANVEL**  
 (Autonomous) (Accredited 'A+' by NAAC)  
**END SEMESTER EXAMINATION**  
 May 2023

SEM-VI

BRANCH: Computer Engineering

Subject:- System Programming Compiler Construction

Time: 02.00 Hours

Max. Marks: 60

Date: 02/05/2023

N.B 1. Q.1 is compulsory

Subject Code CE 311

2. Attempt any two from the remaining three questions

3. Each Question carry 20 marks.

Q.1.	Attempt All	Marks
a)	Differentiate between system software & application software?	5
b)	Explain forward reference problem and how it is handled in assembler design.	5
c)	Explain conditional macro with example	5
d)	What are different functions of loader? Explain in detail	5
<b>Q.2.</b>	<b>Attempt All</b>	
a)	Draw flowchart and explain with databases the working pass 2 of assembler.	10
b)	With reference to macro processor, explain the following tables with suitable example (i) MNT (ii) MDT (iii) ALA	10
<b>Q.3.</b>	<b>Attempt All</b>	
a)	Differentiate Top-down and Bottom-up parsing techniques. Explain shift reduce parser steps in detail and Perform Shift Reduce parsing for input string 32423  E → 2E2 E → 3E3 E → 4	10
b)	Draw Pass-1 and Pass-2 flowchart of Direct Linking Loader	10
<b>Q.4.</b>	<b>Attempt All</b>	
a)	Explain the different phases of compiler. Illustrate all the output after each phase for the Following statement: Position=Initial + rate *60	10
b)	What are different ways of representing Intermediate code? Explain with example	10