



**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.**

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