

**Name of the Institute:** DPU Dr. D. Y. Patil Institute of Technology, Pimpri, Pune-18

**Name of the Department:** Computer Engineering Department

**Class & Division:** T.E. – A/B/C/D

**Subject:** System Programming and Operating System

**Name:** Adsure Sharad Sampat / S. Patil, / A. Dhepe / V. Harkal

**Assignment No:** 01 **Batch No:** T1: Q1,2,3,8,9,13 T2: Q3,4,6,7,8,10,14 T3: Q3,5,6,8,11,12,13

**Maximum marks for Assignment:** \_\_\_\_7

**Assignment Declaration Date:** 21/7/2025

**Assignment Submission Date:** ( 4/8/2025 )

**Assignment assessment declaration Date by faculty:** (4/8/2025 )

Q. NO	Question Statement	Level of mapping & NO.			Blooms Level	Marks
		CO	PO	PSO		
Q1.	Define language processors also explain language processing tools.	CO1 & 3	PO1		2	4
Q2	Write algorithm for pass-II assembler.	CO1	PO2 & 3		2	5
Q3	Explain following directives with respect to Pass-I and Pass-II 1. LTORG 2. ORIGIN 3. EQU	CO1	PO1		1	6
Q4	Explain the following in detail : 1. Linkage editor 2. Dynamic linking 3. Bootstrap loaders	CO1 & 3	PO1		2	4
Q5	How literals are processed by assembler	CO1	PO1		1	4
Q.6	Explain different data structures used in designing Pass-I and Pass-II assembler.	CO1	PO1 & 2		2	3
Q.7	What are the tasks of analysis and synthesis phase of language translator	CO1	PO1		2	4
Q.8	What is the difference between literal and immediate operand. How the assembler handles them. Give an example	CO1	PO1,4		4	4
Q.9	Explain in brief imperative statements, assembler directives, declaration statements with help of assembly language	CO1	PO1		1	4
Q.10	Design a Pass 1 of two pass assemblers.	CO1	PO1 & 4		2	4
Q.11	What is forward reference? How is it handled in a single pass assembler?	CO1	PO1		2	2
Q.12	Difference between Literal & Immediate operand (Constant).	CO1	PO1		2	2
Q.13	Explain the output of pass-I of two pass Assembler with respect to the given program: START 600 READ A READ B LOOP MOVER AREG, A MOVER CREG, B SUB AREG,='I' BC GT,LOOP STOP A DS 1 B DS 2 END	CO1	PO1,P O2		3	7
Q14	Consider the following Assembly code and show output of pass-I of two pass Assembler with entries in Mnemonic Opcode Table, Pseudo Opcode Table, Symbol Table, Literal Table and Pool Table. PROG START 50 USING PROG+2, 15 L1, FIVE AI, = F '2' LTORG	CO1	PO1,P O2		3	7

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	ST 1, RES FIVE DC F '4' RES DS F '4' RES DS IF END																	
Blooms level no																		
6	<div><h2>Bloom's Taxonomy</h2><table><tr><td><b>create</b></td><td>Produce new or original work <i>Design, assemble, construct, conjecture, develop, formulate, author, investigate</i></td></tr><tr><td><b>evaluate</b></td><td>Justify a stand or decision <i>appraise, argue, defend, judge, select, support, value, critique, weigh</i></td></tr><tr><td><b>analyze</b></td><td>Draw connections among ideas <i>differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test</i></td></tr><tr><td><b>apply</b></td><td>Use information in new situations <i>execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch</i></td></tr><tr><td><b>understand</b></td><td>Explain ideas or concepts <i>classify, describe, discuss, explain, identify, locate, recognize, report, select, translate</i></td></tr><tr><td><b>remember</b></td><td>Recall facts and basic concepts <i>define, duplicate, list, memorize, repeat, state</i></td></tr></table></div>						<b>create</b>	Produce new or original work <i>Design, assemble, construct, conjecture, develop, formulate, author, investigate</i>	<b>evaluate</b>	Justify a stand or decision <i>appraise, argue, defend, judge, select, support, value, critique, weigh</i>	<b>analyze</b>	Draw connections among ideas <i>differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test</i>	<b>apply</b>	Use information in new situations <i>execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch</i>	<b>understand</b>	Explain ideas or concepts <i>classify, describe, discuss, explain, identify, locate, recognize, report, select, translate</i>	<b>remember</b>	Recall facts and basic concepts <i>define, duplicate, list, memorize, repeat, state</i>
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Subject In-charge

HOD