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,PO2		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 Al, = F '2' LTORG	CO1	PO1,PO2		3	7

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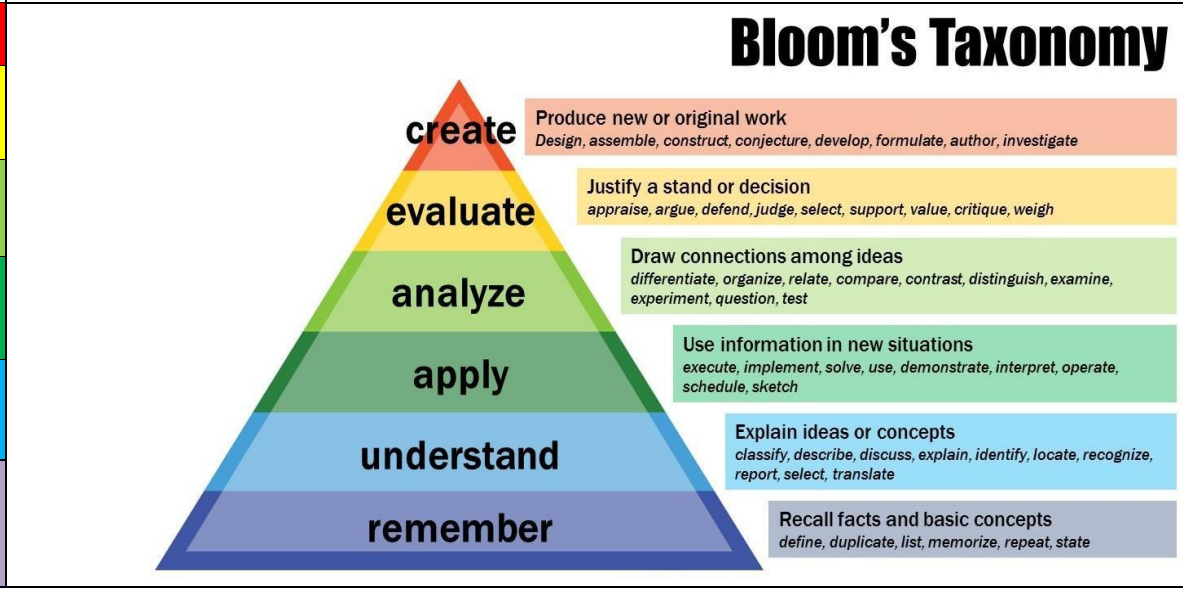
	ST 1, RES FIVE DC F '4' RES DS F '4' RES DS IF END					
Blooms level no						
6 **5** **4** **3** **2** **1**						

Subject In-charge **HOD**