



Department of Information Technology

Academic Year – 2019-2020	Class: Third Year
Semester – II	Date : 20/01/2020
CO : 1,2,3	PO: 1,2,3,4,9,10,12

Innovative Teaching Methods

Title of Innovation method/activity: Collaborative Problem Solving

1. **Name of Faculty:** Mrs. Bhawana A. Ahire

2. **Subject:** System Programming

3. Objective of Method:

- Collecting data.
- Breeding fresh ideas and taking inputs from a particular group.
- Perception of common people on a particular topic.
- Identify a solution to a specific problem or issue.

4. Topic Covered through Collaborative Problem Solving Activity:

1.	Pass-I & Pass-II of assembler
2.	Macro processor
3.	Parser

5. Description of method with Benefits (8 – 10 lines) :

In this method problem statements related to the subject are given to the group students. The group members discuss and understand given problem statement. Everyone tries to solve the problem and verifies solution among them. Finally teacher will make assessment of solutions provided by the students.

The method Impact:

This activity encourages self-learning, creativity, critical thinking and also emphasizes communication, team work, analysis skills among students.

Roles and Responsibilities

- **Teacher**
 - Develop a Clear Goal for problem solving.

- Allot a problem statement to every group
- Choose a Method to Assign Students to Groups
- Prepare assessment methodology.
- **Student**
 - Go through the provided problem statement.
 - Understand and analyze problem statement through collaboration.
 - Actively participate in group and contribute in order to provide solution.
 - Share the expertise at a time of problem solving.
- **Group**
 - Develop the guidelines to establish group.(i.e. Decide the roll of all participants)
 - Every group should gain the expertise on particular problem statement.
 - Develop the guidelines with which every group member can share the topic they learn.

6. Assessment Tools & Rubrics:

- **Level of Engagement**
 - Individual performance would be checked through the Group Discussion
- **Preparedness**
 - Good knowledge, Good presence of mind should be checked.
- **Attitude**
 - Positive Attitude & Patience Listening.

Rubrics for Assessment of Group Discussion

Sr. No	Name of Method	Evaluation Criteria	SC	Excellent (100%)	Satisfactory (60%)	Poor (20%)
01	Collaborative Problem Solving	Understanding	10	<ul style="list-style-type: none"> • Clear problem understanding 	<ul style="list-style-type: none"> • Adequate problem understanding • Problem solving ability • Correctness of solution 	<ul style="list-style-type: none"> • Inadequate understanding • Problem-solving ability • Correctness of solution
		Problem solving ability	10	<ul style="list-style-type: none"> • Complete solution • Use of appropriate methodology 	<ul style="list-style-type: none"> • Partial solution • Use of partially appropriate methodology 	<ul style="list-style-type: none"> • Wrong solution • Use of wrong methodology
		Team work	5	<ul style="list-style-type: none"> • Team work skill • Active Participation • On time completion 	<ul style="list-style-type: none"> • Team work skill • Active Participation • On time completion 	<ul style="list-style-type: none"> • Team work skill • Active Participation • On time completion

7. Evaluation Sheet

MARATHA VIDYA PRASARAK SAMAJ'S
KARMAVEER ADV. BABURAO GANPATRAO THAKARE
COLLEGE OF ENGINEERING

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Department of Information Technology

Class : TE

Semester : II

Academic Year: 2019- 20

Subject : Systems Programming

Assessment of Innovative Teaching Method : Collaborative Problem Solving

Sr. No.	Roll No.	Name	Understanding (10)	Problem solving ability (10)	Team work (5)	Total (25)
1	1	ASWANI RENU GANGARAM	9	9	4	22
2	2	BAHALKAR GANESH SHARAD		AB		
3	3	BAVISKAR RONAK HEMANT	9	8	3	20
4	4	BEJEKAR TUSHAR SAMPAT	8	7	3	18
5	5	BHAMARE VEDANT VIJAY	10	10	4	24
6	6	BHAMRE DIVYA JAYANT	8	8	4	20
7	7	BHAVSAR DISHA MANOJ	9	9	4	22
8	8	BORA MANSI AMIT	10	9	5	24
9	9	BORSE SHUBHAM PRASHANT	8	8	3	19
10	11	DAWALKAR RISHIKESH ARVIND	9	9	4	22
11	12	DEORE AKASH SANJAY	9	10	5	24
12	13	DHAVALE RUPALI RAJESH		AB		
13	14	DHAWALE BHAKTI RAJENDRA	9	9	4	22
14	15	DHOKANE PALLAVI RAJENDRA	9	9	3	21
15	16	DUMBARE SHIVAM KAILAS	8	9	4	21
16	17	GAIKWAD HARSHAL DILIP		AB		
17	19	GAWALE AKANKSHA DNYANESHWAR	9	8	3	20
18	20	GHODKE CHINMAY DEEPAK		AB		
19	21	GHULE PRANJAL PRATAP		AB		
20	22	GUJARATHI DEVESH SANTOSH	9	7	3	19
21	23	GULAVE PRATIK VIJAY	8	8	4	20
22	24	JADHAV DHANASHRI JAGANNATH	8	9	3	20
23	26	JAGTAP ABHINANDAN ASHOK		AB		
24	27	JHAVAR ANUSHREE SHARAD	9	9	5	23
25	28	KADAM SIDDHANT PRAKASH	9	7	3	19
26	29	KAKAD SAURABH CHANGDEO	8	8	4	20
27	30	KALE APURVA RAJENDRA	7	9	4	20

28	31	KANGANE SHUBHAM MACCHINDRA	7	8	4	19
29	32	KANKARIYA SANKET SANTOSHKUMAR	—	AB	—	—
30	33	KARPE ANUJA MUKUND	8	7	3	18
31	35	KHAIRNAR DHANALI VIJAY	9	9	4	22
32	36	KHAIRNAR ROHIT SHANKAR	10	10	4	24
33	37	KINGE SHRUTIKA RAJENDRAKUMAR	10	9	4	23
34	38	KUWAR TEJAL RAJENDRA	8	8	4	20
35	39	LANGHE ATHARVA RAJENDRA	10	10	4	24
36	40	MAHAJAN KOMAL RAVINDRA	6	8	4	18
37	41	MAKNOR KANCHAN NANDALAL	9	9	3	21
38	42	MORANKAR ABHISHEK RAJENDRA	8	9	4	21
39	43	MORE VISHAKHA SANJAY	—	AB	—	—
40	44	NAHAR RIDDHI SUNIL	10	9	4	23
41	46	PATIL JASWANTSING VIJAYSING	10	9	5	24
42	47	PATIL PRAGATI SANJAY	8	8	3	19
43	49	PATIL SUSHANT PARAG	7	8	4	19
44	50	PEKHALE REVATI PANDIT	9	9	3	21
45	51	PINGLE PRANJAL ANIL	8	9	4	21
46	52	PINGLE PRATIBHA BALASAHEB	8	8	4	20
47	53	RAHANE NIKHIL VITTHAL	9	10	5	24
48	54	SANAP MADHURI SHANKAR	8	8	4	20
49	55	SAPKALE PRANALI VIJAY	9	8	4	21
50	56	SARODE SNEHAL RAMRAO	—	AB	—	—
51	57	SHAH OWAIS SHARFRAZ	8	8	4	20
52	58	SHARDUL SHWETA VISHWAKARMA	10	10	5	25
53	59	SHINDORE SALIL DARSHAN	7	7	3	17
54	60	SHIVADE ANKITA KASHINATH	—	AB	—	—
55	61	SINGH SACHIN AJAB NARAYAN	—	AB	—	—
56	62	SURYAWANSHI SARANG PRAVIN	7	6	4	17
57	63	TARWANI RIDDHI KHEMCHAND	10	9	5	24
58	64	THOMBARE DHANASHRI RAMESH	10	10	4	24
59	65	UPASANI SIMRAN MANGESH	8	7	3	18
60	66	VIDHATE SANKET SOMNATH	9	9	3	21
61	67	VISHWAKARMA ROHIT TRIVENIPRASAD	7	7	4	18
62	68	VYAS BHUMIKA RAJNISH	9	10	4	23
63	69	WAGH CHANDAN PREM	—	AB	—	—
64	70	WAGH RENUKA SHIVAJI	9	9	4	22

65	71	WAVDHANE UTKARSHA DNYANESHWAR	10	9	4	23
66	72	ZAMBARE AMAN PRABHAKAR	8	8	4	20
67	75	ROHINI MORE	10	9	5	29
68	76	PRERANA GANGURDE	AB			

Subject In-charge

Mrs. Bhawana A. Ahire

HOD(IT)

Dr. V. R. Sonawane

8. Activity Picture



Department of Information Technology

Innovative teaching method: Collaborative Problem Solving Date: 20/01/2020

Group No. 4

Group Members Name: 1. Bhumnika R. Vyas (68) 2. Dhanashvi Jadhav (24)
3. Revati P. Khale (50) 4. Pragati Patil (47)

Problem Statement:

For the following piece of assembly language code, show the contents of symbol table, literal table and pool table. Also generate output of PASS-I and PASS-II. Assume size of instruction equal to one.

```

1) START                202
2) MOVER                AREG, -'5'
3) MOVEM               AREG, -A
4) LOOP                MOVER AREG, A
5) MOVER               CREG, B
6) ADD                 CREG, 31
7) MOVEM               CREG, B
8) BC                  ANY NEXT
9) LORG
10) ADD                CREG, B
11) BC                 LE LOOP
12) NEXT SUB           AREG, -'1'
13) BC LT, BACK
14) STOP
15) ORIGIN             219
16) MULTI              CREG, B
17) A                  DS 1
18) BACK EQU          LOOP
19) B                  DS 1
20) END

```

Pragati Potil (47)

NDMVP Samaj's, KBT COE, NASHIK

Mnemonic Code	class	Mnemonic length	length	Symbol	Address	Length
MOVER	IS	#2	1	A	216	1
MOVEM	IS	#3	1	B	217	1
MOVER	IS	#4	1	ANY		
MOVER	IS	#5	1	NEXT	221	1
ADD				BACK	225	1
MOVEM						
BC						
SUB						
STOP						
MULT						

OPTAB

SYMTAB

LITTAB

POOLTAB

Literal	Address		Literal no.
= '5'	209	} →	#1
= '1'	210		#3
= '1'	224		

Bhumiika Vyas (68)

NDMVP Samaj's, KBT COE, NASHIK

Mnemonic op code	CLASS	Mnemonic Info	Length	Sym	Addr	Length
MOVER	IS	#2	1	A	216	1
MOVEM	IS	#3	1	B	217	1
MOVER	IS	#4	1	ANY	220	
MOVER	IS	#5	1	NEXT	221	1
ADD	IS		1	BACK	225	1
MOVEM						
BC						
SUB						
STOP						
MULT						

SYMTAB

OPTAB

Literal	Address	Literal no
= '5'	209	#1
= '1'	210	#3
= '1'	224	

LITTAB

POOLTAB

Revati Pekarale .(50)

NDMVP Samaj's, KBT COE, NASHIK

Mnemonic opcode	Class	Mnemonic Info	length	Sym	Add ^r	Length
MOVER	IS	#2	1	A	216	1
MOVEM	IS	#3	1	B	217	1
MOVER	IS	#4	1	Amj	221	1
MOVER	IS	#5	1	NEXT	221	1
ADD	IS			BACK	225	1
MOVEM	IS					
Bc	IS					
SUB						
STOP						
MULT						

OPTAB

SYMTAB

literal	Address	literal no
= '5'	209	#1
= '1'	210	#3
= '1'	224	

LITAB

poolTAB

9. For review and critique contact: e-mail address of faculty and HOD

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