



# Indra Ganesan

## COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
Accredited by NAAC with 'B+' Grade, 2(F) & 12B Status Institution by UGC

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

# NAAC DOCUMENTS

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## QUALITY INDICATOR FRAME WORK

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### CRITERION – 2

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## TEACHING-LEARNING AND EVALUATION

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SUBMITTED BY

# IQAC

INTERNAL QUALITY ASSURANCE CELL

## INDRA GANESAN COLLEGE OF ENGINEERING





<b>Criteria2</b>	<b>Teaching-Learning and Evaluation</b>	<b>350</b>
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**Key Indicator-2.3. Teaching-Learning Process(40)**

**2021-2022**

**PARTICIPATIVE LEARNING**

**ELECTRONICS AND COMMUNICATION ENGINEERING and  
ME (VLSI DESIGN)**

<b>Activity</b>	<b>Number of Students Attended</b>	<b>Page No.</b>
<b>Value Added Course(VAC)</b>	<b>105</b>	<b>3</b>
<b>TOTAL STUDENTS ATTENDED</b>	<b>105</b>	<b>-</b>



**Criteria2**

**Teaching-Learning and Evaluation**

**350**

**KeyIndicator-2.3.Teaching-LearningProcess(40)**

**2021-2022**

**ELECTRONICS AND COMMUNICATION ENGINEERING and  
ME (VLSI DESIGN)**

**PARTICIPATIVE LEARNING**

**VALUE ADDED COURSE**



# Indra Ganesan

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Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli- 620 012  
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Department of Electronics and Communication Engineering

Academic Year 2021-2022-ODD Semester

23.02.2022

### DEPARTMENT CIRCULAR

Department of Electronics and Communication Engineering and IQAC of IGCE in association with Galwin Technology, Trichy, is going to organize Value Added Course for all Second, Third and Final year students on "Lab View" from 01.03.2022 to 05.03.2022. Certificates will be issued to the eligible participants at the end of the Course. This training is to be provided in our campus.

Resource Person Detail	Mr. Deepan, Trainer Galwin Technology, Trichy
Venue	DSP Lab

  
HOD/ECE

  
PRINCIPAL

Cc:

- Principal office
- IQAC Co-Ordinator
- Class In charges - II, III & IV-Year
- II, III & IV-Year ECE Students
- Office File
- Notice Board

  
Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012



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Value Added Course

“Lab View”

SYLLABUS

S.NO	TOPIC COVERED	DURATI ON (in hours)	DATE
1	Introduction Lab View -Evolution of LabVIEW Lab View add on tool kits	3	01.03.2023
2	Lab View Real Time, FPGA, PDA, and Embedded	3	01.03.2023
3	Lab View Environment Front panel, control and indicator- Block Diagram. Nodes , Wires, Data Flow Programming	3	02.03.2023
4	Lab View Projects, Project Explorer window, project Explorer Toolbars Building Application- Installers- Floating Palettes	3	02.03.2023
5	Lab View Foundation - Creating VI- Basic Controls	3	03.03.2023
6	Indicators- Boolean's- String- Paths	3	03.03.2023
7	Automatic wire routing-Automatic Wiring	3	04.03.2023
8	Wiring Tips- adding Constants- Controls and indicators	3	04.03.2023
9	Keyboard Shortcuts- Cloning and object	6	05.03.2023
10	Exam	1	05.03.2023
Total Hours (Excluding Exam)		30	-

*Balaji*  
VAC Coordinator

*M. Prasad*  
HOD/ECE

*G. Balakrishnan*  
Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal  
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## Value Added Course

“Lab View”

### STUDENTS PARTICIPATION LIST

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal

Indra Ganesan College of Engineering

10, Vallev Madurai Main Road

Manikondam

Tiruchirappalli - 620 012

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH
1	811218106001	ABINAYA R	IV / ECE
2	811218106002	AKILA K	IV / ECE
3	811218106004	ARTHI M	IV / ECE
4	811218106005	AZHAGU MEENA M	IV / ECE
5	811218106006	DEVI K	IV / ECE
6	811218106007	DHANALAKSHMI S	IV / ECE
7	811218106008	HARI KRISHNAN S	IV / ECE
8	811218106009	JANANI V	IV / ECE
9	811218106010	JENIFER C	IV / ECE
10	811218106011	JENIFER S	IV / ECE
11	811218106012	KESAVAMURTHI M	IV / ECE
12	811218106013	KIRUTHIKA S	IV / ECE
13	811218106015	MARIA FRANCIS D	IV / ECE
14	811218106016	RAGAVI A	IV / ECE
15	811218106017	RUTHRAMOORTHY M	IV / ECE
16	811218106018	SABARINATHAN K	IV / ECE
17	811218106019	SARMILA M	IV / ECE
18	811218106020	SUMATHI S	IV / ECE
19	811218106021	THIVYA PRIYA R	IV / ECE
20	811219106001	DAYANA P	III / ECE
21	811219106002	DEVIKA K	III / ECE
22	811219106003	DINESH J	III / ECE
23	811219106004	MOHANA SUNDARAM K	III / ECE
24	811219106005	RAVIKUMAR B	III / ECE
25	811219106006	SANTHANARAJ A	III / ECE
26	811219106007	SHYAM CR	III / ECE
27	811219106008	SRIKANTH M	III / ECE
28	811219106009	SURENDRAN S	III / ECE
29	811219106010	SURYA V	III / ECE
30	811219106011	SWETHA K	III / ECE
31	811219106301	YUVASHREE S	III / ECE
32	811219106701	VIJAYALAKSHMI V	III / ECE
33	811219106702	PONNARASU S	III / ECE
34	811220106006	BANU PRIYA G	II / ECE



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S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH
35	811220106008	BHARATHIDASAN C	II/ ECE
36	811220106018	JJANCY	II/ ECE
37	811220106019	JEEVASEN N	II/ ECE
38	811220106021	KAMARAJ.S	II/ ECE
39	811220106022	C.KARTHICK	II/ ECE
40	811220106023	S.KARTHIKA	II/ ECE
41	811220106025	KISHORE R	II/ ECE
42	811220106026	M. KISHORE KUMAR	II/ ECE
43	811220106028	MANCY.E	II/ ECE
44	811220106031	PRADHAP.J	II/ ECE
45	811220106032	PRASANNA.A.J	II/ ECE
46	811220106033	PREETHIKA.M	II/ ECE
47	811220106034	PREMALATHA.M	II/ ECE
48	811220106037	SHRI HARINI PRIYA B	II/ ECE
49	811220106038	SNEGA M	II/ ECE
50	811220106039	SOBI AMIRTHA N	II/ ECE
51	811220106041	SUNIL KUMAR B	II/ ECE
52	811220106042	SUSILA N	II/ ECE
53	811220106049	YOGA PRIYA.R	II/ ECE

*Bala Krish*  
VAC Coordinator

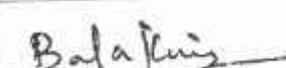


*M. Dhivya*  
HOD/ECE

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REPORT ON VALUE ADDED COURSE			
Title:	"Lab View"		
Resource Person:	Mr. Deepan, Trainer, Galwin Technology, Trichy	-----	
Date of conduct from :	01.03.2022	To: 05.03.2022	Duration: 30 Hours
Organized Department :	Electronics and Communication Engineering		
Participant Year:	2,3,4	No. of Students Registered :	59
Venue:	DSP Lab		
<b>Outcome of Value Added Course (VAC): At the end of the Course, Students can be able to</b>			
<ul style="list-style-type: none"><li>● create applications using the state machine design pattern</li><li>● to acquire, analyze, process, visualize, and store real-world data Recognize various tools used for the controller applications</li><li>● ability to quickly facilitate taking measurements.</li><li>● use of Lab view software is predominant in the areas where hardware products are built based on embedded programming</li></ul>			
<b>Assessment Process</b>			
<ul style="list-style-type: none"><li>● Students, who are securing <b>more than 70% on total score</b> and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted</li><li>● Total Score = <math>(0.5 * \text{Attendance in VAC out of 100 percentage} + 0.5 * \text{Test mark in VAC out of 100 marks})</math></li></ul>			
 VAC Coordinator	 HoD/ECE	 Principal	



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## SAMPLE PHOTOS OF VALUE ADDED COURSE

Title: "Lab View"

Resource Person: Mr. Deepan, Trainer, Galwin Technology, Trichy

Date of conduct from : 01.03.2022 To: 05.03.2022 Duration: 30 Hours

Organized Department : Electronics and Communication Engineering

Participant Year: 2,3,4 No. of Students Registered : 53

Venue: Sample Photos



*Bala Krishna*  
VAC Coordinator

*M. Balakrishnan*  
HoD/ECE

*[Signature]*  
Principal

Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal

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### Value Added Course "Lab View"

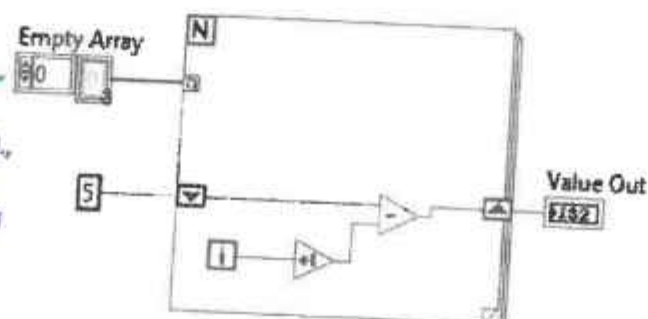
Name of the Student:

AU Register Number:

Year/Sem:

#### MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

- For implementing state diagrams that allow future application scalability, the best choice for a base structure is?
  - Sequence structure
  - Case structure
  - Formula node
  - Object-Oriented structure
- For implementing state diagrams that allow future application scalability, the best choice for a base structure is?
  - Sequence structure
  - Case structure
  - Formula node
  - Object-Oriented structure
- Clicking on the button allows you to bypass a node in the Block Diagram without single- stepping through the node.
  - Step Into
  - Step Over
  - Step Out
  - Step Through
- Which of the following apply to Property Nodes? (More than one answer may apply.)
  - Property Nodes allow attributes of front panel objects to be programmatically manipulated.
  - Property Nodes can be used to update the values contained in a front panel object.
  - More than one Property Node can be used for a single front panel object.
  - Property Nodes can be used to programmatically generate a Value Change event.
- You have a front panel control on a top-level VI that you must control from within a subVI. What must you pass to the subVI?
  - The control's properties
  - The control's methods
  - The control's reference
  - The control's data type
- You set a Breakpoint in the code contained within the False case of a Case structure. Will the VI execution pause if the code in True case of the Case structure is being executed?
  - Yes
  - No
- What value does the Value Out indicator display after the VI executes?



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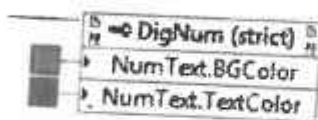
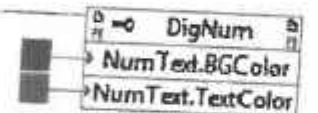
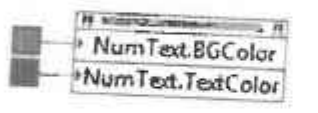
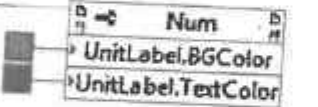
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- a. 0
- b. 4
- c. 5
- d. 6

8. Which Property Node changes the text color attributes of any digital numeric control from a subVI?

- a. 
- b. 
- c. 
- d. 

9. Which chart update mode should be used to show running data continuously scrolling from left to right across the chart?

- a. Strip Chart
- b. Scope Chart
- c. Sweep Chart
- d. Step Chart

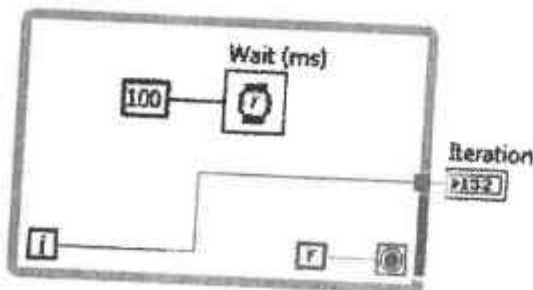
10. Which of the following does not conform to the Dataflow programming paradigm?

- a. Shift Registers
- b. Tunnels
- c. SubVIs
- d. Local variables

11. If possible, a Sequence structure should be replaced with a(n):

- a. Event structure
- b. For loop
- c. State machine
- d. While loop

12. Which of the following statements is TRUE about the following code segment?



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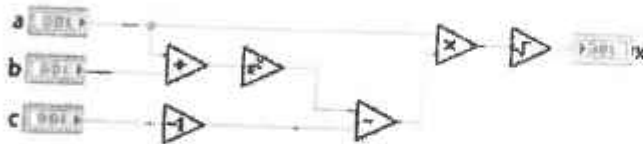


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- a. The loop will execute once and the indicator Iteration will have a value of one
- b. The loop will execute once and the indicator Iteration will have a value of zero
- c. The loop will execute infinitely and the program will have to be aborted
- d. The loop will not execute and the indicator Iteration will have a value of zero

13. Which equation is equivalent to the code?



- a.  $x = \sqrt{a \times ((a + b)^2 - (c - 1))}$
- b.  $x = \sqrt{a \times ((c - 1) - (a + b)^2)}$
- c.  $x = \sqrt{a \times ((a + b^2) - (c - 1))}$
- d.  $x = \sqrt{a^2 \times ((a + b)^2 - (c - 1))}$

14. A VI has Automatic Error Handling enabled. It calls a SubVI that has Automatic Error Handling disabled. The Error Out terminal of the SubVI is unwired in the calling VI. The SubVI returns an error to the calling VI. Will an error dialog be posted because of Automatic Error Handling?

- a. No, since the SubVI has Automatic Error Handling disabled
- b. Yes, since the SubVI has Automatic Error Handling disabled
- c. No, since the Error Out terminal from the subVI is not wired in the calling VI.
- d. Yes, since the Error Out terminal from the subVI is not wired in the calling VI.

15. Which of the following statements is FALSE?

- a. A SubVI connector pane defines where to wire inputs and outputs
- b. The color of a SubVI connector pane terminal matches the data type it is connected to
- c. You must have an icon/connector pane to use a SubVI
- d. A SubVI icon can be edited from the functions palette

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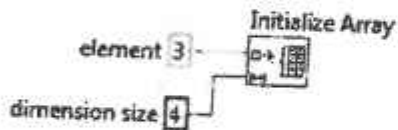
16. Which of the following cannot be used to transfer data?  
a. Semaphores b. Queues c. Notifiers d. Local variable

17. The Error list shows all of the following EXCEPT:

- a. Items with errors  
b. Errors and warnings  
c. Details about the warnings  
d. Error Codes

18. Auto-indexing at loop boundary is a feature that allows: (More than one answer may apply.)  
a. Arrays to be automatically traversed from one iteration to the next  
b. Array functions to automatically index array elements  
c. Functions that use arrays to automatically index them  
d. Arrays to be automatically accumulated at loop boundaries

19. What is the output of the Initialize Array function after the following code has executed?



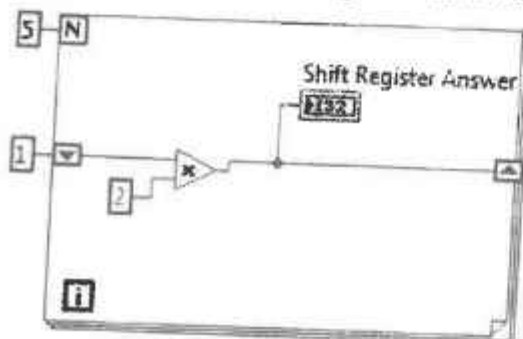
- a. 1-D Array of {3, 3, 3, 3}  
b. 1-D Array of {4, 4, 4}  
c. 1-D Array of {3, 4}  
d. 1-D Array of {4, 3}

20. Which of the following will cause an event to be captured by the Lab View Event Structure?  
a. Changing a Front Panel control's Value via a mouse click on the control  
b. Changing a Front Panel control's Value property via a property node  
c. Changing a Front Panel control's Value via a control reference  
d. Changing a Front Panel control's Value via a local variable

21. Which variable is commonly used to eliminate race conditions by preventing simultaneous access to code or data?

- a. Functional global variable  
b. Local variable  
c. Global variable  
d. Shared variable

22. What is the value in Shift Register Answer after the following code has executed?



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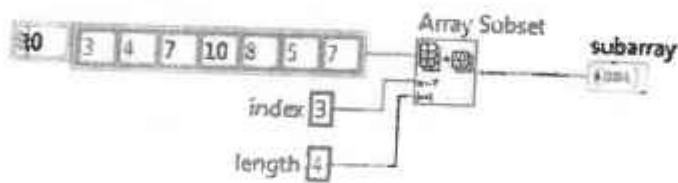


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a.16      b.24      c.32      d.10

23. What is the result in **subarray** after the following code has executed?




- a. 1-D Array of {8, 5, 7}
- b. 1-D Array of {10, 8, 5}
- c. 1-D Array of {10, 8, 5, 7}
- d. 1-D Array of {7, 10, 8, 5}

24. How do you document a VI so that the description appears in the Show Context Help popup window?

- a. Use the VI Properties Documentation window
- b. Type in the Show Context Help window
- c. Create a free label on the front panel
- d. Edit the Lab View help files

25. Which of the following terminals controls how many times a For loop executes?

- a.
- b.
- c.
- d.

  
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## Value Added Course

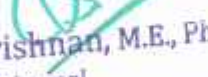
"Lab View"

### ANSWER KEY

c

1	b	6	b	11	c	16	d	21	c
2	b	7	b	12	a	17	a or d	22	c
3	d	8	a	13	d	18	a	23	a
4	c	9	d	14	d	19	a	24	d
5	c	10	c	15	a	20	a	25	c

Balaki  
VAC Coordinator

  
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18/25

### Value Added Course "Lab View"

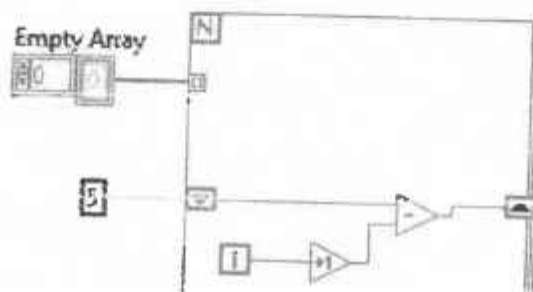
Name of the Student: Devi . K

Year/Sem: IV / VII

AU Register Number: 811218106006

#### MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

- For implementing state diagrams that allow future application scalability, the best choice for a base structure is?  
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c. Formula node  
d. Object-Oriented structure ✓
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- You have a front panel control on a top-level VI that you must control from within a subVI. What must you pass to the subVI?  
a. The control's properties  
b. The control's methods  
c. The control's reference  
d. The control's data type ✗
- You set a Breakpoint in the code contained within the False case of a Case structure. Will the VI execution pause if the code in True case of the Case structure is being executed?  
a. Yes  
b. No ✗
- What value does the Value Out indicator display after the VI executes?



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a. 0  
c. 5

b. 4  
d. 6

8. Which Property Node changes the text color attributes of any digital numeric control from a subVI?

- a.
- b.
- c.
- d.

9. Which chart update mode should be used to show running data continuously scrolling from left to right across the chart?

- a. Strip Chart      b. Scope Chart      c. Sweep Chart       d. Step Chart

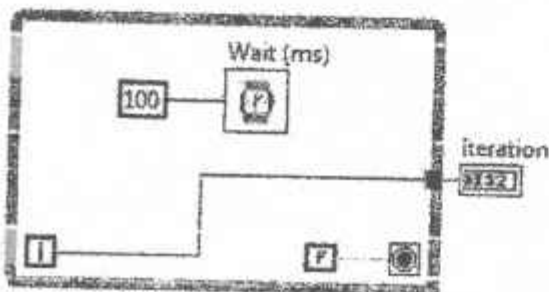
10. Which of the following does not conform to the Dataflow programming paradigm?

- a. Shift Registers      b. Tunnels       c. SubVIs      d. Local variables

11. If possible, a Sequence structure should be replaced with a(n):

- a. Event structure      b. For loop       c. State machine      d. While loop

12. Which of the following statements is TRUE about the following code segment?

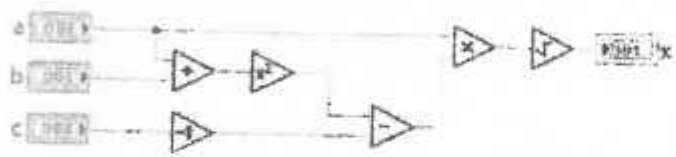


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 Principal  
 Indra Ganesan College of Engineering  
 IG Valley, Madurai Main Road  
 Manikandam, Trichy-620 012.



- a. The loop will execute once and the indicator Iteration will have a value of one
- b. The loop will execute once and the indicator Iteration will have a value of zero
- c. The loop will execute infinitely and the program will have to be aborted
- d. The loop will not execute and the indicator Iteration will have a value of zero

13.. Which equation is equivalent to the code?



- a.  $x = \sqrt{a \times ((a + b)^2 - (c - 1))}$
- b.  $x = \sqrt{a \times ((c - 1) - (a + b)^2)}$
- c.  $x = \sqrt{a \times ((a + b^2) - (c - 1))}$
- d.  $x = \sqrt{a^2 \times ((a + b)^2 - (c - 1))}$

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- 14.. A VI has Automatic Error Handling enabled. It calls a SubVI that has Automatic Error Handling disabled. The Error Out terminal of the SubVI is unwired in the calling VI. The SubVI returns an error to the calling VI. Will an error dialog be posted because of Automatic Error Handling?
- a. No, since the SubVI has Automatic Error Handling disabled
  - b. Yes, since the SubVI has Automatic Error Handling disabled
  - c. No, since the Error Out terminal from the subVI is not wired in the calling VI.
  - d. Yes, since the Error Out terminal from the subVI is not wired in the calling VI.

15. Which of the following statements is FALSE?
- a. A SubVI connector pane defines where to wire inputs and outputs
  - b. The color of a SubVI connector pane terminal matches the data type it is connected to
  - c. You must have an icon/connector pane to use a SubVI
  - d. A SubVI icon can be edited from the functions palette



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16. Which of the following cannot be used to transfer data?  
a. Semaphores b. Queues c. Notifiers  d. Local variable

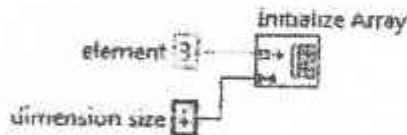
17. The Error list shows all of the following EXCEPT:

- a. Items with errors  
b. Errors and warnings  
c. Details about the warnings  
d. Error Codes

18. Auto-indexing at loop boundary is a feature that allows: (More than one answer may apply.)

- a. Arrays to be automatically traversed from one iteration to the next  
b. Array functions to automatically index array elements  
c. Functions that use arrays to automatically index them  
d. Arrays to be automatically accumulated at loop boundaries

19. What is the output of the Initialize Array function after the following code has executed?



- a. 1-D Array of {3, 3, 3, 3}  
b. 1-D Array of {4, 4, 4}  
c. 1-D Array of {3, 4}  
 d. 1-D Array of {4, 3}

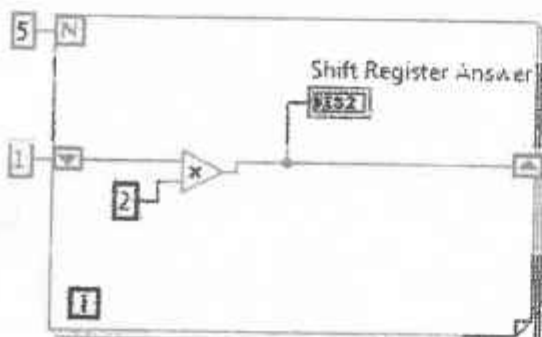
20. Which of the following will cause an event to be captured by the Lab View Event Structure?


- a. Changing a Front Panel control's Value via a mouse click on the control  
b. Changing a Front Panel control's Value property via a property node  
c. Changing a Front Panel control's Value via a control reference  
d. Changing a Front Panel control's Value via a local variable

21. Which variable is commonly used to eliminate race conditions by preventing simultaneous access to code or data?

- a. Functional global variable  
b. Local variable  
c. Global variable  
d. Shared variable

22. What is the value in Shift Register Answer after the following code has executed?



  
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6

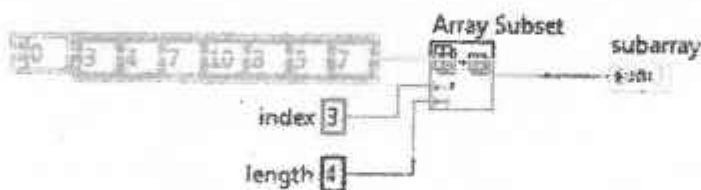
a,16

b,24

c,32

d,10

23. What is the result in **subarray** after the following code has executed?



- a) 1-D Array of {8, 5, 7}
- b. 1-D Array of {10, 8, 5}
- c. 1-D Array of {10, 8, 5, 7}
- d. 1-D Array of {7, 10, 8, 5}

24. How do you document a VI so that the description appears in the Show Context Help popup window?

- a. Use the VI Properties Documentation window
- b. Type in the Show Context Help window
- c. Create a free label on the front panel
- d. Edit the Lab View help files

25. Which of the following terminals controls how many times a For loop executes?

- a)
- b.
- c.
- d.

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24  
---  
25

## Value Added Course " Lab View "

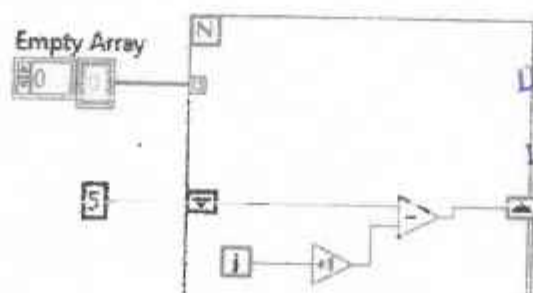
Name of the Student: Abinaya .R.

Year/Sem: IV / VU

AU Register Number: 811218106001

### MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

- For implementing state diagrams that allow future application scalability, the best choice for a base structure is?  
a. Sequence structure  
b. Formula node  
c. Case structure  
d. Object-Oriented structure
- For implementing state diagrams that allow future application scalability, the best choice for a base structure is?  
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- Clicking on the button allows you to bypass a node in the Block Diagram without single- stepping through the node.  
a. Step Into      b. Step Over      c. Step Out      d. Step Through
- Which of the following apply to Property Nodes? (More than one answer may apply.)  
a. Property Nodes allow attributes of front panel objects to be programmatically manipulated.  
b. Property Nodes can be used to update the values contained in a front panel object.  
c. More than one Property Node can be used for a single front panel object.  
d. Property Nodes can be used to programmatically generate a Value Change event.
- You have a front panel control on a top-level VI that you must control from within a subVI. What must you pass to the subVI?  
a. The control's properties  
b. The control's methods  
c. The control's reference  
d. The control's data type
- You set a Breakpoint in the code contained within the False case of a Case structure. Will the VI execution pause if the code in True case of the Case structure is being executed?  
a. Yes  
b. No
- What value does the Value Out indicator display after the VI executes?



*(Signature)*  
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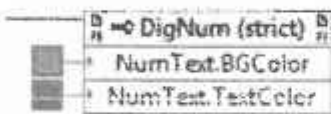
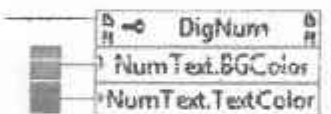
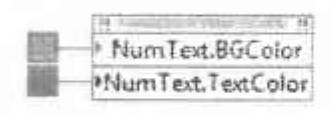
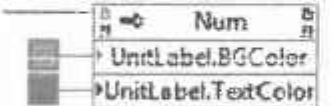


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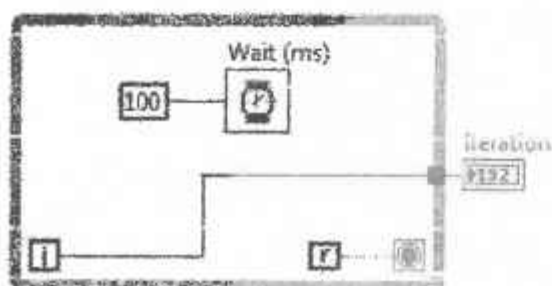
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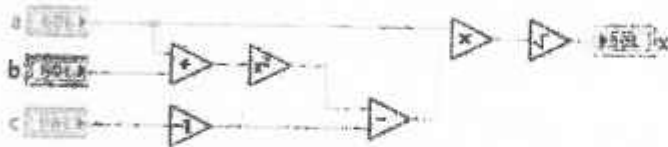


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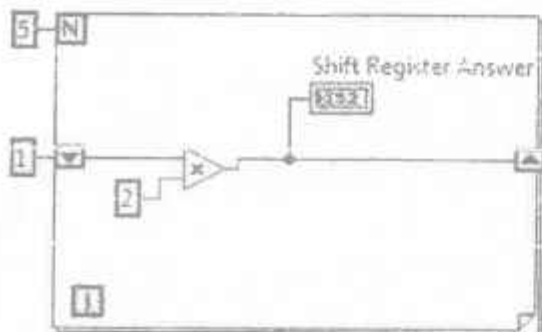
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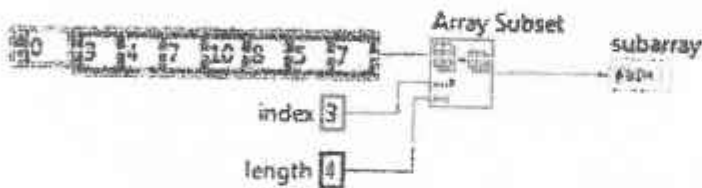


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- a.16      b.24      **c.32**      d.10

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- a.   
b.   
**c.**  ✓  
d. 

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Department of Electronics and Communication Engineering

Academic Year 2021-2022 – Odd Semester

## STUDENTS ATTENDANCE LIST

### Value Added Course

“Lab View”

  
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Sl. No	REG NO	STUDENTS NAME	YEAR/ BRANCH	01.03.2022		02.03.2022		03.03.2022		04.03.2022		05.03.2022		NO OF SESSIONS ATTENDE D	SIGN OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	S11218106001	ABINAYA R	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Abinayar
2	S11218106002	AKILA R	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	K. Akila
3	S11218106004	ARTHI M	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M. Arthi
4	S11218106005	AZHAGU MEENA M	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M. Meena
5	S11218106006	DEVI K	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Meena
6	S11218106007	DHANALAKSHMI S	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Dersi
7	S11218106008	HARI KRISHNAN S	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Dhanu
8	S11218106009	JANANI V S	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	S. Hani
9	S11218106010	JENIFER C	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	V. Janani
10	S11218106011	JENIFER S	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	C. Jenifer
11	S11218106012	KESAVAMURTHI M	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Jenifer S
12	S11218106013	KIRUTHIKAS	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kes
13	S11218106015	MARIA FRANCIS D	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Kiruthika
14	S11218106016	RAGAVI A	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Meena
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Ragavi



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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
15	811218106017	RUTHRAMOORTHY M	IV / ECE	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	9	Ruth
16	811218106018	SABARINATHAN K	IV / ECE	✓	✓	✓	A	✓	✓	A	✓	✓	✓	8	Sabath
17	811218106019	SARMILA M	IV / ECE	✓	✓	✓	✓	✓	A	✓	A	✓	✓	8	Sarmila
18	811218106020	SUMATHI S	IV / ECE	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	9	Sumathi
19	811218106021	THIVYA PRIYA R	IV / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Thivya Priya R
20	811219106001	DAYANA P	III / ECE	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Dayana P
21	811219106002	DEVIKA K	III / ECE	✓	✓	A	✓	A	✓	✓	✓	✓	✓	8	Devika K
22	811219106003	DINESH J	III / ECE	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	9	J. Dinesh
23	811219106004	MOHANA SUNDARAM K	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Mohan Sundaram K
24	811219106005	RAVIKUMAR B	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Ravikumar
25	811219106006	SANTHANARAJ A	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Santhanaraj A
26	811219106007	SHYAM CR	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Shyam CR
27	811219106008	SRIKANTH M	III / ECE	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	9	Srikanth M
28	811219106009	SURENDRAN S	III / ECE	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	9	Surentran S
29	811219106010	SURYA V	III / ECE	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	9	Surya V
30	811219106011	SWETHA K	III / ECE	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	9	Swetha K
31	811219106301	YUVASHREE S	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Yuvashree S
32	811219106701	VIJAYALAKSHMI V	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	YUVA.S
33	811219106702	PONNARASU S	III / ECE	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	9	Ponnarasu S
34	811220106006	BANU PRIYA G	III / ECE	✓	✓	A	✓	✓	✓	✓	A	✓	✓	8	Banu Priya G
35	811220106008	BHARATHIDASAN C	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Bharathidasan C
36	811220106018	J.JANCY	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Jency J

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S. NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	01.03.2022		02.03.2022		03.03.2022		04.03.2022		05.03.2022		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
37	811220106019	JEEVASEN N		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
38	811220106021	KAMARAJ.S	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Jeevasen
39	811220106022	C.KARTHICK	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kamaraj.S
40	811220106023	S.KARTHIKA	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Karthika
41	811220106025	KISHORE R	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kishore R
42	811220106026	M. KISHORE KUMAR	II/ ECE	✓	✓	✓	✓	A	✓	✓	A	✓	✓	9	Kishore R
43	811220106028	MANCY.E	II/ ECE	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	8	Kishore R
44	811220106031	PRADHAP.J	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Kishore R
45	811220106032	PRASANNA.A	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kishore R
46	811220106033	PREETHIKA.M	II/ ECE	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	9	Mancy.E
47	811220106034	PREMALATHA.M	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Preethika.M
48	811220106037	SHRI HARINI PRIYA B	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Prasanna.A
49	811220106038	SNEGA M	II/ ECE	A	✓	A	✓	✓	✓	✓	✓	✓	✓	10	Preethika.M
50	811220106039	SOBI AMIRTHA N	II/ ECE	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	9	Prasanna.A
51	811220106041	SUNIL KUMAR B	II/ ECE	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	8	Preethika.M
52	811220106042	SUSILA N	II/ ECE	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	8	Harini Priya B
53	811220106049	YOGA PRIYA.R	II/ ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Sneha M
			II/ ECE	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Harini Priya B
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Sneha M
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Sobi Amirtha N
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Sunil Kumar B
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Susila N
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	8	Yoga Priya.R

*Balakrishnan*  
 VAC Coordinator

*(Signature)*  
 Dr. G. Balakrishnan, M.E., Ph.D.,  
 Principal  
 Indra Ganesan College of Engineering  
 IG Valley, Madurai Main Road  
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*(Signature)*  
 HoD/ECE



# Indra Ganesan

## COLLEGE OF ENGINEERING

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Accredited by NAAC with B+ Grade

Department of Electronics and Communication Engineering

Academic Year 2021-2022 – Odd Semester

### VALUE ADDED COURSE ASSESMENT SHEET

#### Lab View

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	811218106001	ABINAYA R	IV/ECE	30	100	24	96	98
2	811218106002	AKILA K	IV/ECE	30	100	25	100	100
3	811218106004	ARTHI M	IV/ECE	30	100	23	92	96
4	811218106005	AZHAGU MEENA M	IV/ECE	30	100	23	92	96
5	811218106006	DEVI K	IV/ECE	27	90	18	72	81
6	811218106007	DHANALAKSHMI S	IV/ECE	30	100	21	84	92
7	811218106008	HARI KRISHNAN S	IV/ECE	30	100	20	80	90
8	811218106009	JANANI V	IV/ECE	30	100	23	92	96
9	811218106010	JENIFER C	IV/ECE	30	100	24	96	98
10	811218106011	JENIFER S	IV/ECE	30	100	20	80	90
11	811218106012	KESAVAMURTHI M	IV/ECE	30	100	22	88	94

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S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
12	811218106013	KIRUTHIKA S	IV / ECE	27	90	20	80	85
13	811218106015	MARIA FRANCIS D	IV / ECE	30	100	21	84	92
14	811218106016	RAGAVI A	IV / ECE	30	100	19	76	88
15	811218106017	RUTHRAMOORTHY M	IV / ECE	27	90	19	76	83
16	811218106018	SABARINATHAN K	IV / ECE	24	80	20	80	80
17	811218106019	SARMILA M	IV / ECE	24	80	21	84	82
18	811218106020	SUMATHI S	IV / ECE	27	90	22	88	89
19	811218106021	THIVYA PRIYA R	IV / ECE	30	100	20	80	90
20	811219106001	DAYANA P	III / ECE	27	90	21	84	87
21	811219106002	DEVIKA K	III / ECE	24	80	20	80	80
22	811219106003	DINESH J	III / ECE	27	90	21	84	87
23	811219106004	MOHANA SUNDARAM K	III / ECE	30	100	20	80	90
24	811219106005	RAVIKUMAR B	III / ECE	30	100	20	80	90
25	811219106006	SANTHANARAJ A	III / ECE	30	100	19	76	88
26	811219106007	SHYAM CR	III / ECE	30	100	21	84	92
27	811219106008	SRIKANTH M	III / ECE	27	90	19	76	83
28	811219106009	SURENDRAN S	III / ECE	27	90	19	76	83
29	811219106010	SURYA V	III / ECE	27	90	19	76	83
30	811219106011	SWETHA K	III / ECE	27	90	19	76	83

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S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
31	811219106301	YUVASHREE S	III / ECE	30	100	19	76	88
32	811219106701	VIJAYALAKSHMI V	III / ECE	27	90	19	76	83
33	811219106702	PONNARASU S	III / ECE	24	80	21	84	82
34	811220106006	BANU PRIYA G	III / ECE	27	90	20	80	85
35	811220106008	BHARATHIDASAN C	II/ ECE	30	100	21	84	92
36	811220106018	JJANCY	II/ ECE	27	90	19	76	83
37	811220106019	JEEVASEN N	II/ ECE	30	100	19	76	88
38	811220106021	KAMARAJ S	II/ ECE	30	100	19	76	88
39	811220106022	C.KARTHICK	II/ ECE	30	100	21	84	92
40	811220106023	S.KARTHIKA	II/ ECE	27	90	21	84	87
41	811220106025	KISHORE R	II/ ECE	24	80	20	80	80
42	811220106026	M. KISHORE KUMAR	II/ ECE	27	90	21	84	87
43	811220106028	MANCY E	II/ ECE	30	100	20	80	90
44	811220106031	PRADHAP J	II/ ECE	27	90	19	76	83
45	811220106032	PRASANNAAJ	II/ ECE	30	100	19	76	88
46	811220106033	PRFETHIKA M	II/ ECE	30	100	21	84	92
47	811220106034	PREMALATHA M	II/ ECE	27	90	19	76	83
48	811220106037	SHRI HARINI PRIYA B	II/ ECE	24	80	20	80	80
49	811220106038	SNEGA M	II/ ECE	24	80	20	80	80

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S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
50	811220106039	SOBI AMIRTHA N	II/ ECE	27	90	19	76	83
51	811220106041	SUNIL KUMAR B	II/ ECE	30	100	20	80	90
52	811220106042	SUSILAN	II/ ECE	27	90	19	76	83
53	811220106049	YOGA PRIYA.R	II/ ECE	24	80	21	84	82

  
VAC Coordinator

  
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NAAC Accredited (2F) Status Institution by UGC



## CERTIFICATE OF PARTICIPATION

This is to certify that Ms. Akila K , IV Year, ECE has successfully completed the Value Added Course on “Lab View” organized by Department of Electronics & Communication Engineering and IQAC of our Institution in Association with Pantech Solutions from 01<sup>st</sup> March 2022 to 05<sup>th</sup> March 2022 (5days) during the Academic year 2021-2022.

  
**Galwin Technology**  
**Mr. Tamil Vendhan K.C**  
**Human Resource Manager**

  
**Dr. G. Balakrishnan, M.E., Ph.D.**  
Principal  
Indra Ganesan College of Engineering  
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**Principal**  
**IGCE**



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Department of Electronics and Communication Engineering

Academic Year 2021-2022-EVEN Semester

27.07.2022

## DEPARTMENT CIRCULAR

Department of Electronics and Communication Engineering and IQAC of IGCE in association with Hitakey Infosys, Trichy, is going to organize Value Added Course for all Second, Third and Final year students on "**Introduction to Machine Learning**" from 01.08.2022 to 05.08.2022. Certificates will be issued to the eligible participants at the end of the Course. This training is to be provided in our campus

Resource Person Detail	Ms. Shalom Jerlin , Technical Head, Hitakey Infosys, Trichy
Venue	DSP Lab, IGCE

  
HOD/ECE

  
PRINCIPAL

Cc:

- Principal office
- IQAC Co-Ordinator
- Class In charges - II, III & IV-Year
- II, III & IV-Year ECE Students
- Office File
- Notice Board

  
Dr. G. Balakrishnan, M.E., Ph.D.,  
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## Value Added Course

"Introduction to Machine Learning"

### SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction: A brief introduction to machine learning	3	01.08.2022
2	Supervised Learning	3	01.08.2022
3	Reinforcement Learning	3	02.08.2022
4	Probability theory	3	02.08.2022
5	Probability Basics 1&2	3	03.08.2022
6	Linear Algebra 1&2	3	03.08.2022
7	Statistical theory	3	04.08.2022
8	Bias variance	3	04.08.2022
9	Linear Regression	3	05.08.2022
10	Exam	6	05.08.2022
<b>Total Hours (Excluding Exam)</b>		30	-

*Balakrishnan*  
VAC Coordinator

*M.P. Srinivasan*  
HOD/ECE

*Dr. G. Balakrishnan*  
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## Value Added Course

"Introduction to Machine Learning"

### STUDENTS PARTICIPATION LIST

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH
1	811218106001	ABINAYA R	IV/ECE
2	811218106002	AKILA K	IV/ECE
3	811218106004	ARTHI M	IV/ECE
4	811218106005	AZHAGU MEENA M	IV/ECE
5	811218106006	DEVI K	IV/ECE
6	811218106007	DHANALAKSHMI S	IV/ECE
7	811218106008	HARI KRISHNAN S	IV/ECE
8	811218106009	JANANI V	IV/ECE
9	811218106010	JENIFER C	IV/ECE
10	811218106011	JENIFER S	IV/ECE
11	811218106012	KESAVAMURTHI M	IV/ECE
12	811218106013	KIRUTHIKA S	IV/ECE
13	811218106015	MARIA FRANCIS D	IV/ECE
14	811218106016	RAGAVI A	IV/ECE
15	811218106017	RUTHRAMOORTHY M	IV/ECE
16	811218106018	SABARINATHAN K	IV/ECE
17	811218106019	SARMILA M	IV/ECE
18	811218106020	SUMATHI S	IV/ECE
19	811218106021	THIVYA PRIYA R	IV/ECE
20	811219106001	DAYANA P	III / ECE
21	811219106002	DEVIKA K	III / ECE
22	811219106003	DINESH J	III / ECE
23	811219106004	MOHANA SUNDARAM K	III / ECE
24	811219106005	RAVIKUMAR B	III / ECE
25	811219106006	SANTHANARAJ A	III / ECE
26	811219106008	SRIKANTH M	III / ECE
27	811219106009	SURENDRAN S	III / ECE
28	811219106010	SURYA V	III / ECE
29	811219106011	SWETHA K	III / ECE
30	811219106301	YUVASHREE S	III / ECE
31	811219106701	VJAYALAKSHMI V	III / ECE
32	811219106702	PONNARASU S	III / ECE
33	811220106006	BANU PRIYA G	II / ECE
34	811220106008	BHARATHIDASAN C	II / ECE

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S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH
35	811220106018	JANCY J	II / ECE
36	811220106019	JEEVASEN N	II / ECE
37	811220106021	KAMARAJ.S	II / ECE
38	811220106022	KARTHICK C	II / ECE
39	811220106023	KARTHIKA S	II / ECE
40	811220106025	KISHORE R	II / ECE
41	811220106026	KISHORE KUMAR M	II / ECE
42	811220106028	MANCY.E	II / ECE
43	811220106031	PRADHAP J	II / ECE
44	811220106032	PRASANNA.AJ	II / ECE
45	811220106033	PREETHIKA.M	II / ECE
46	811220106034	PREMALATHA.M	II / ECE
47	811220106037	SHRI HARINI PRIYA B	II / ECE
48	811220106038	SNEGA M	II / ECE
49	811220106039	SOBI AMIRTHA N	II / ECE
50	811220106041	SUNIL KUMAR B	II / ECE
51	811220106042	SUSILA N	II / ECE
52	811220106049	YOGA PRIYA.R	II / ECE

*Balakesh*  
VAC Coordinator

*M. B. Prasad*

HOD/ECE

*(Signature)*

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## REPORT ON VALUE ADDED COURSE

Title: "Introduction to Machine Learning"

Resource Person: Ms. Shalom Jerlin ,  
Technical Head,  
Hitakey Infosys  
Trichy

Date of conduct from : 01.08.2022 To: 05.08.2022 Duration: 30 Hours

Organized Department : Electronics and Communication Engineering

Participant Year: 2,3,4

No. of Students Registered : 52

Venue: Online Link: ECE Seminar hall

Outcome of Value Added Course (VAC): At the end of the Course, Students can be able to

- Understand different types of machine learning and map problems to different classes of machine learning algorithms
- Describe and apply machine-learning algorithms including decision trees, naïve Bayes, and logistic regression.
- Understand a wide variety of learning algorithms.
- Understand how to evaluate models generated from data.
- Apply the algorithms to a real problem, optimize the models learned and report on the expected accuracy that can be achieved by applying the models.

### Assessment Process

- Students, who are securing more than 70% on total score and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score =  $(0.5 * \text{Attendance in VAC out of 100 percentage} + 0.5 * \text{Test mark in VAC out of 100 marks})$

Balakrishnan  
VAC Coordinator

M. Shalom Jerlin  
HoD/ECE

[Signature]  
Principal

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## SAMPLE PHOTOS OF VALUE ADDED COURSE

Title:	"Introduction to Machine Learning"				
Resource Person:	Ms. Shalom Jerlin , Technical Head, Hitakey Infosys Trichy				
Date of conduct from :	01.08.2022	To:	05.08.2022	Duration:	30 Hours
Organized Department :	Electronics and Communication Engineering				
Participant Year:	2,3,4		No. of Students Registered :	52	
Venue:	DSP Lab				

### Sample photo



Balakrishnan  
VAC Coordinator

M. Balakrishnan  
HoD/ECE

Principal

Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal

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Value Added Course

"Introduction to Machine Learning"


Name of the Student:

Year/Sem:

AU Register Number:

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

- Type of matrix decomposition model is
  - predictive model
  - descriptive model
  - logical model
  - None
- PCA is
  - backward feature selection
  - forward feature selection
  - feature extraction
  - None of these
- Supervised learning and unsupervised clustering both require which is correct according to the statement
  - input attribute
  - hidden attribute
  - output attribute
  - categorical attribute
- Following are the types of supervised learning.
  - regression
  - classification
  - subgroup discovery
  - All of above
- A feature F1 can take certain value: A, B, C, D, E, & F and represents grade of students from a college. Here feature type is
  - ordinal
  - nominal
  - categorical
  - boolean
- Following is powerful distance metrics used by Geometric model.
  - manhattan distance
  - euclidean distance
  - All of above
  - None of above
- The output of training process in machine learning is
  - machine learning algorithm
  - Null
- Which of the following is a good test dataset characteristic?
  - is representative of the dataset as a whole
  - large enough to yield meaningful results
  - All of above
  - None of the above
- Which of the following techniques would perform better for reducing dimensions of a data set?
  - removing columns which have high variance in data
  - removing columns which have too many missing value
  - removing columns with dissimilar data trends
  - None of the above

  
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## Value Added Course

### "Introduction to Machine Learning"

10. What characterize is hyperplane in geometrical model of machine learning?
- a) a plane with 1 dimensional fewer than number of input attributes
  - b) a plane with 1 dimensional more than number of input attributes
  - c) a plane with 2 dimensional more than number of input attributes
  - d) a plane with 2 dimensional fewer than number of input attributes
11. You are given reviews of few Netflix series marked as positive, negative and neutral. Classifying reviews of a new netflix series is an example of
- a) unsupervised learning
  - b) semi supervised learning
  - c) supervised learning
  - d) reinforcement learning
12. Like the probabilistic view, the view allows us to associate a probability of membership with each classification
- a) deductive
  - b) exemplar
  - c) classical
  - d) inductive
13. The problem of finding hidden structure in unlabeled data is called
- a) unsupervised learning
  - b) reinforcement learning
  - c) supervised learning
  - d) None
14. If machine learning model output involves target variable then that model is called as
- a) predictive model
  - b) descriptive model
  - c) reinforcement learning
  - d) All of above
15. Database query is used to uncover this type of knowledge
- a) hidden
  - b) shallow
  - c) deep
  - d) multidimensional
16. Data used to build a data mining model.
- a) training data
  - b) hidden data
  - c) test data
  - d) validation data
17. Application of machine learning methods to large databases is called
- a) big data computing
  - b) artificial intelligence
  - c) data mining
  - d) internet of things
18. Which learning Requires Self-Assessment to identify patterns within data?
- a) supervised learning
  - b) unsupervised learning
  - c) semi supervised learning
  - d) reinforced learning

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Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.



Value Added Course

"Introduction to Machine Learning"

19. In simple term, machine learning is\_
- a) prediction to answer a query  
b) training based on historical data  
c) All of above  
d) None of above
20. Of the Following Examples, Which would you address using an supervised learning Algorithm?
- a) given a set of news articles found on the web, group them into set of articles about the same story  
b) given email labeled as spam or not spam, learn a spam filter  
c) given a database of customer data, automatically discover market segments and group customers into different market segments  
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21. If machine learning model output doesn't involves target variable then that model is called as\_
- a) predictive model  
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22. In what type of learning labelled training data is used\_
- a) supervised learning  
b) unsupervised learning  
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23. In the example of predicting number of babies based on stork's population ,Number of babies is\_
- a) feature  
b) observation  
c) outcome  
d) attribute
24. Following are the descriptive models\_
- a) classification  
b) clustering  
c) association rule  
d) Both 1 and 2
25. In following type of feature selection method we start with empty feature set
- a) backward feature selection  
b) forward feature selection  
c) All of above  
d) None of above

  
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### Value Added Course


"Introduction to Machine Learning"

#### ANSWER KEY

1	c	6	d	11	c	16	d	21	b
2	a	7	d	12	b	17	d	22	d
3	a	8	a	13	a	18	c	23	a
4	b	9	d	14	c	19	c	24	b
5	a	10	c	15	d	20	a	25	b

*Balakrishnan*

VAC Coordinator

  
Dr. G. Balakrishnan, M.E., Ph.D.,  
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## Value Added Course

"Introduction to Machine Learning"

19  
25

Name of the Student: Santhana Raj. A

Year/Sem: III / V

AU Register Number: 811219106006

### MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

- Type of matrix decomposition model is  
a) predictive model  
 c) logical model  
b) descriptive model  
d) None
- PCA is  
a) backward feature selection   
c) feature extraction  
b) forward feature selection  
d) None of these
- Supervised learning and unsupervised clustering both require which is correct according to the statement  
 a) input attribute  
c) output attribute  
b) hidden attribute  
d) categorical attribute
- Following are the types of supervised learning  
a) regression  
c) subgroup discovery  
 b) classification  
d) All of above
- A feature F1 can take certain value: A, B, C, D, E, & F and represents grade of students from a college. Here feature type is  
 a) ordinal  
c) categorical  
b) nominal  
d) boolean
- Following is powerful distance metrics used by Geometric model  
a) manhattan distance  
c) All of above  
b) euclidean distance  
 d) None of above
- The output of training process in machine learning is  
a) machine learning algorithm  
c) Null  
 b) machine learning model  
d) accuracy
- Which of the following is a good test dataset characteristic?  
 a) is representative of the dataset as a whole  
c) All of above  
b) large enough to yield meaningful results  
d) None of the above
- Which of the following techniques would perform better for reducing dimensions of a data set?  
a) removing columns which have high variance in data  
c) removing columns with dissimilar data trends  
b) removing columns which have too many missing value  
 d) None of the above

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10/11/20

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IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.

10. What characterize is hyperplane in geometrical model of machine learning?

- a) a plane with 1 dimensional fewer than number of input attributes
- b) a plane with 1 dimensional more than number of input attributes
- c) a plane with 2 dimensional more than number of input attributes
- d) a plane with 2 dimensional fewer than number of input attributes

11. You are given reviews of few Netflix series marked as positive, negative and neutral.

Classifying reviews of a new netflix series is an example of

- a) unsupervised learning
- b) supervised learning
- c) semi supervised learning
- d) reinforcement learning

12. Like the probabilistic view, the view allows us to associate a probability of membership with each classification

- a) deductive
- b) exemplar
- c) classical
- d) inductive

13. The problem of finding hidden structure in unlabeled data is called

- a) unsupervised learning
- b) reinforcement learning
- c) supervised learning
- d) None

14. If machine learning model output involves target variable then that model is called as

- a) predictive model
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19. In simple term, machine learning is.
- a) prediction to answer a query ✓
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20. Of the Following Examples, Which would you address using an supervised learning Algorithm?
- a) given a set of news articles found on the web. group them into set of articles about the same story ✓
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Principal

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## Value Added Course

"Introduction to Machine Learning"

Name of the Student: Sarmila . M

Year/Sem: IV / VII

AU Register Number: 811218106019

24  
25

### MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

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Department of Electronics and Communication Engineering

Academic Year 2021-2022 – Even Semester

### STUDENTS ATTENDANCE LIST

Value Added Course

“Introduction to Machine Learning”

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S.N O	REG NO	STUDENTS NAME	YEAR/ BRANC H	01.08.2022		02.08.2022		03.08.2022		04.08.2022		05.08.2022		NO OF SESSIONS ATTENDE D	SIGN OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811218106001	ABINAYA R	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Abinaya R
2	811218106002	AKILA K	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	K. Akhila
3	811218106004	ARTHI M	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M. Artha
4	811218106005	AZHAGU MEENA M	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Meena
5	811218106006	DEVI K	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Devi
6	811218106007	DHANALAKSHMI S	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Dhanalakshmi S
7	811218106008	HARI KRISHNAN S	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Hari Krishnan S
8	811218106009	JANANI V	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Janani V
9	811218106010	JENIFER C	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Jenifer C
10	811218106011	JENIFER S	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Jenifer S
11	811218106012	KESAVAMURTHI M	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kesavamurthi M
12	811218106013	KIRUTHIKA S	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kiruthika S
13	811218106015	MARIA FRANCIS D	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Maria Francis D
14	811218106016	RAGAVIA	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Ragavia



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S. NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	01.08.2022		02.08.2022		03.08.2022		04.08.2022		05.08.2022		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
15	811218106017	RUTHRAMOORTHY M	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Ruth
16	811218106018	SABARINATHAN K	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Sabar
17	811218106019	SARMILA M	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Sarmi
18	811218106020	SUMATHI S	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Sumathi
19	811218106021	THIVYA PRIYA R	IV/ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Thivya
20	811219106001	DAYANA P	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Dayana
21	811219106002	DEVIKA K	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Devika
22	811219106003	DINESH J	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Dinesh
23	811219106004	MOHANA SUNDARAM K	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Mohana
24	811219106005	RAVIKUMAR B	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Ravi
25	811219106006	SANTHANARAJ A	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Santhan
26	811219106008	SRIKANTH M	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Srikanth
27	811219106009	SURENDRAN S	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Suren
28	811219106010	SURYA V	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Surya
29	811219106011	SWETHA K	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Swetha
30	811219106301	YUVASHREE S	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Yuvashree
31	811219106701	VIJAYALAKSHMI V	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Vijaya
32	811219106702	PONNARASU S	III / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Ponnarasu
33	811220106006	BANU PRIYA G	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Banupriya
34	811220106008	BHARATHIDASAN C	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Bharathidasan
35	811220106018	JANCY J	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Jancy
36	811220106019	JEEVASEN N	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Jeevasen

Dr. G. Balakrishnan, M.E., Ph.D.,  
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S. NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	01.08.2022		02.08.2022		03.08.2022		04.08.2022		05.08.2022		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
37	811220106021	KAMARAJ.S	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kamaraj
38	811220106022	C.KARTHICK	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	C. Karthick
39	811220106023	S.KARTHIKA	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	S. Karthika
40	811220106025	KISHORE R	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Kishore R
41	811220106026	M. KISHORE KUMAR	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M. Kishore Kumar
42	811220106028	MANCY.E	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Mancy.E
43	811220106031	PRADHAP.J	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	J. Pradha
44	811220106032	PRASANNA.J	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Prasanna
45	811220106033	PREETHIKA.M	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Preethika.M
46	811220106034	PREMALATHA.M	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Preethika.M
47	811220106037	SHRI HARINI PRIYA B	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	B. Shri Harini Priya
48	811220106038	M.SNEGA	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Shreya
49	811220106039	N.SOBI AMIRTHA	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	N. Sobi Amirtha
50	811220106041	SUNIL KUMAR B	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Sunil Kumar B
51	811220106042	SUSILA N	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Susila.N
52	811220106049	YOGA PRIYA.R	II / ECE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Yoga priya

  
VAC Coordinator

  
Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.

  
HoD/ECE



# Indra Ganesan

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Accredited by NAAC with B+ Grade

Department of Electronics and Communication Engineering

Academic Year 2021-2022 – Even Semester

## VALUE ADDED COURSE ASSESMENT SHEET

Introduction to Machine Learning

Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai-Main Road  
Manikandam, Trichy-620 012.

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	811218106001	ABINAYA R	IV / ECE	30	100	24	96	98
2	811218106002	AKILA K	IV / ECE	30	100	25	100	100
3	811218106004	ARTHI M	IV / ECE	30	100	23	92	96
4	811218106005	AZHAGU MEENA M	IV / ECE	30	100	23	92	96
5	811218106006	DEVI K	IV / ECE	27	90	18	72	81
6	811218106007	DHANALAKSHMI S	IV / ECE	30	100	21	84	92
7	811218106008	HARI KRISHNAN S	IV / ECE	30	100	20	80	90
8	811218106009	JANANI V	IV / ECE	30	100	23	92	96
9	811218106010	JENIFER C	IV / ECE	30	100	24	96	98
10	811218106011	JENIFER S	IV / ECE	30	100	25	100	100
11	811218106012	KESAVAMURTHI M	IV / ECE	30	100	23	92	96



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S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
12	811218106013	KIRUTHIKA S	IV / ECE	30	100	22	88	94
13	811218106015	MARIA FRANCIS D	IV / ECE	30	100	24	96	98
14	811218106016	RAGAVI A	IV / ECE	30	100	24	96	98
15	811218106017	RUTHRAMOORTHY M	IV / ECE	30	100	22	88	94
16	811218106018	SABARINATHAN K	IV / ECE	30	100	20	80	90
17	811218106019	SARMILA M	IV / ECE	30	100	24	96	98
18	811218106020	SUMATHI S	IV / ECE	30	100	20	80	90
19	811218106021	THIVYA PRIYA R	IV / ECE	30	100	20	80	90
20	811219106001	DAYANA P	III / ECE	30	100	20	80	90
21	811219106002	DEVIKA K	III / ECE	30	100	20	80	90
22	811219106003	DINESH J	III / ECE	30	100	19	76	88
23	811219106004	MOHANA SUNDARAM K	III / ECE	30	100	21	84	92
24	811219106005	RAVIKUMAR B	III / ECE	30	100	18	72	86
25	811219106006	SANTHANARAJ A	III / ECE	27	90	19	76	83
26	811219106008	SRIKANTH M	III / ECE	30	100	17	68	84
27	811219106009	SURENDRAN S	III / ECE	30	100	20	80	90
28	811219106010	SURYA V	III / ECE	30	100	20	80	90
29	811219106011	SWETHA K	III / ECE	30	100	20	80	90

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 Manikandam, Trichy-620 012.


S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
30	811219106301	YUVASHREE S	III / ECE	30	100	19	76	88
31	811219106701	VIJAYALAKSHMI V	III / ECE	30	100	21	84	92
32	811219106702	PONNARASU S	III / ECE	30	100	18	72	86
33	811220106006	BANU PRIYA G	II / ECE	30	100	19	76	88
34	811220106008	BHARATHIDASAN C	II / ECE	30	100	23	92	96
35	811220106018	JANCY J	II / ECE	30	100	17	68	84
36	811220106019	JEEVASEN N	II / ECE	30	100	20	80	85
37	811220106021	KAMARAJ S	II / ECE	27	90	20	80	90
38	811220106022	C.KARTHICK	II / ECE	30	100	19	76	88
39	811220106023	S.KARTHIKA	II / ECE	30	100	21	84	92
40	811220106025	KISHORE R	II / ECE	30	100	18	72	86
41	811220106026	M. KISHORE KUMAR	II / ECE	30	100	19	76	88
42	811220106028	MANCY.E	II / ECE	30	100	23	92	96
43	811220106031	PRADHAP.J	II / ECE	30	100	17	68	84
44	811220106032	PRASANNAAJ	II / ECE	30	100	20	80	90
45	811220106033	PREETHIKA.M	II / ECE	30	100	20	80	90
46	811220106034	PREMALATHA.M	II / ECE	30	100	20	80	90
47	811220106037	SHRI HARJINI PRIYA B	II / ECE	30	100	23	92	96
48	811220106038	SNEGA M	II / ECE	30	100	17	68	84



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S.NO	REG NO.	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
49	811220106039	SOBI AMIRTHA	II / ECE	30	100	18	72	86
50	811220106041	SUNIL KUMAR B	II / ECE	30	100	19	76	88
51	811220106042	SUSILA N	II / ECE	27	90	23	92	91
52	811220106049	YOGA PRIYA.R	II / ECE	30	100	17	68	84

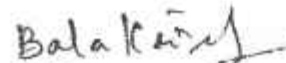
  
Dr. G. Balakrishnan, M.E., Ph.D.,

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Bala Krishna  
VAC Coordinator

  
M. P. Srinivas  
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## CERTIFICATE OF PARTICIPATION

This is to certify that Ms. KIRUTHIKA S , IV Year, ECE has successfully completed the Value Added Course on "Introduction to Machine Learning" organized by Department of Electronics & Communication Engineering and IQAC of our Institution in Association with Galwin Technology from 01<sup>st</sup> August 2022 to 05<sup>th</sup> August 2022 (5 days) during the Academic year 2021-2022.

  
**Ms. Shalom Jerlin,**  
**Hitakey Infosys ,**  
**Technical Head,**  
**Trichy**

  
**Dr. G. Balakrishnan, M.E., Ph.D.,**  
Principal  
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**Principal**  
**IGCE**