



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

QUALITY INDICATOR FRAME WORK

CRITERION – 1

CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

INDRA GANESAN COLLEGE OF ENGINEERING





DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2021-22 EVEN / ODD SEMESTER

1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs,SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Title:	Solid State Joining Technologies				
Resource Person:	Mr.Faizal Ahamed &Mr.Sundaramoorthi Trainer UNIQ MEP Trichy				
Date of conduct from:	13.12.2021	To:	18.12.2021	Duration:	30 Hours
Organized Department:	MECHANICAL ENGINEERING				
Participant Year:	Mech IV,III Year	Semester:	ODD	No. of Students Registered:	43
Venue:	http://meet.google.com/hiz-vzeq-sre				

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Madurai Main Road (NH-45B), Manikandam, Trichy-12.
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Department of Mechanical Engineering

Academic Year 2021-2022 –Odd Semester

07.12.2021

DEPARTMENT CIRCULAR

Department of Mechanical Engineering and IQAC of IGCE in Association with CADD centre, Trichy is going to organize Value added course for all III, IV Year students on “Solid state Joining Technologies” From 13.12.2021 to 18.12.2021, certificates will be issued to be eligible participants at the end of the course. This training is to be provided in our campus.

Resource Person Details	1. Mr.Faizal Ahamed Trainer, UNIQ-MEP, Trichy 2.Mr.Sundaramoorthi, Trainer, UNIQ-MEP, Trichy
Venue	GOOGLE MEET Meet Link: meet.google.com/hiz-vzeg-sre


HoD/MECH


PRINCIPAL

Cc:

- Principal office
- IQAC Co-Ordinator
- Mechanical Faculties Room
- Class In charges - III & IV-Year
- III & IV-Year MECH Students Class Room
- Office Notice Board


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


"Solid state Joining Technologies"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction Manufacturing and Joining process	3	13.12.2021
2	Principle of fusion Welding process	3	13.12.2021
3	Brazing process	3	14.12.2021
4	Safe analysis of metallic joints	3	14.12.2021
5	Solidification of weld metals	3	15.12.2021
6	Explosive welding	3	15.12.2021
7	Weldability of aluminium alloys	3	16.12.2021
8	Residual stress and distortion	3	16.12.2021
9	FEM for manufacturing process	2	17.12.2021
10	Failure analysis and prevention	2	17.12.2021
11	Hybrid joining technologies	2	18.12.2021
11	Exam	1	18.12.2021
Total Hours		30	

VAC Coordinator

HoD/MECH


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

"Solid state Joining Technologies"

STUDENTS PARTICIPATION LIST

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	NAME	YEAR
1	811218114001	Abinash P	IV /MECHANICAL
2	811218114002	Ajith Kumar M	IV /MECHANICAL
3	811218114003	Arun Pandian M R	IV /MECHANICAL
4	811218114004	Alaguraja M	IV /MECHANICAL
5	811218114005	Balasubramani K	IV /MECHANICAL
6	811218114006	Dineshkumar K	IV /MECHANICAL
7	811218114007	Ganesapandy K	IV /MECHANICAL
8	811218114010	Murugappan P	IV /MECHANICAL
9	811218114011	Prasanth R	IV /MECHANICAL
10	811218114012	Praveen A	IV /MECHANICAL
11	8.11218E+11	Rabin Singh X	IV /MECHANICAL
12	811218114014	Ramesh.M	IV /MECHANICAL
13	811218114015	Renish Bharathi S	IV /MECHANICAL
14	811218114016	Santhosh K	IV /MECHANICAL
15	811218114017	Sathish Selva A	IV /MECHANICAL
16	811218114018	Tamilselvan T	IV /MECHANICAL
17	811218114019	Vasanth D	IV /MECHANICAL
18	811218114020	Vikram S	IV /MECHANICAL
19	811218114021	Vishnu B	IV /MECHANICAL
20	811218114022	Yogavishuvabarathi G	IV /MECHANICAL
21	811218114023	Vigneshwaran C	IV /MECHANICAL
22	811218114301	Dharmaseelan M	IV /MECHANICAL
23	811218114302	Mahamuni R	IV /MECHANICAL
24	811218114304	Ramakrishnan M	IV /MECHANICAL
25	811218114306	Subeekshiseeth Prasana D	IV /MECHANICAL
26	811219114001	Aathilingam V	III /MECHANICAL
27	811219114002	Abimanyu C	III /MECHANICAL
28	811219114003	Ajay S	III /MECHANICAL
29	811219114004	Christy Lourthu Samy A	III /MECHANICAL
30	811219114006	Periyasamy P	III /MECHANICAL
31	811219114008	Saravana Kumar V	III /MECHANICAL



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S.NO	REG NO	NAME	YEAR
32	811219114010	Siriyac Selva A	III /MECHANICAL
33	811219114011	Suriyaganesh M	III /MECHANICAL
34	811219114012	Vaithiyalingam M	III /MECHANICAL
35	811219114013	Vikash R	III /MECHANICAL
36	811219114301	Hariharan R	III /MECHANICAL
37	811219114302	Mohanraj G	III /MECHANICAL
38	811219114303	Sivash K	III /MECHANICAL
39	811219114700	Gokul R	III /MECHANICAL
40	811219114701	Praveen S	III/MECHANICAL
41	811219114702	Madhan Murugan S	III /MECHANICAL
42	811219114703	Muthukaruppan M	III /MECHANICAL
43	811219114704	Inigo Rithish P	III /MECHANICAL

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S.No.	Reg.No	Student's Name	Year/ Branch	DATE: 13.12.21		DATE: 14.12.21		DATE: 15.12.21		DATE: 16.12.21		DATE: 17.12.21		DATE: 18.12.21		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
23	811218114302	Mahamuni R	IV /MECHANICAL	/	/	/	/	a	/	/	/	/	/	/	/	9	Online Mode
24	811218114303	Naveen Kumar T	IV /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	10	
25	811218114304	Ramakrishnan M	IV /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	10	
26	811218114306	Subeekshiseeth Prasana D	IV /MECHANICAL	/	/	/	a	/	/	/	/	/	/	/	/	9	
27	811219114001	Aathilingam V	III /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	10	
28	811219114002	Abimanyu C	III /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	9	
29	811219114003	Ajay S	III /MECHANICAL	/	/	/	/	/	/	a	/	/	/	/	/	9	
30	811219114004	Christy Lourthu Samy A	III /MECHANICAL	/	/	/	/	/	/	/	a	/	/	/	/	9	
31	811219114006	Periyasamy P	III /MECHANICAL	/	/	/	/	/	/	/	/	/	a	/	/	9	
32	811219114008	Saravana Kumar V	III /MECHANICAL	/	/	/	/	a	a	/	/	/	/	/	/	8	
33	811219114010	Siriyac Selva A	III /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	10	
34	811219114011	Suriyaganesh M	III /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	10	
35	811219114012	Vaithiyalingam M	III /MECHANICAL	/	/	/	/	/	/	/	a	/	/	/	/	9	
36	811219114013	Vikash R	III /MECHANICAL	/	/	/	/	/	/	/	a	/	/	/	/	9	
				/	/	/	/	/	/	a	/	/	a	/	/	8	

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S.No.	Reg.No	Student's Name	Year/ Branch	DATE: 13.12.21		DATE: 14.12.21		DATE: 15.12.21		DATE: 16.12.21		DATE: 17.12.21		DATE: 18.12.21		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
37	811219114301	Hariharan R.	III /MECHANICAL	/	/	/	/	/	/	/	a	/	/	/	/	9	Online Mode
38	811219114302	Mohanraj G	III /MECHANICAL	/	/	/	/	/	/	/	a	/	/	/	/	9	
39	811219114303	Sivash K.	III /MECHANICAL	/	/	/	/	/	/	/	/	a	/	/	/	9	
40	811219114701	Gokul R.	III /MECHANICAL	/	/	/	/	/	/	/	a	/	/	/	/	9	
41	811219114702	Madhan Murugan S	III /MECHANICAL	/	/	a	/	/	/	/	/	/	/	/	/	9	
42	811219114703	Muthukaruppan M	III /MECHANICAL	/	/	/	/	/	a	/	/	/	/	/	/	9	
43	811219114704	Inigo Rithish P	III /MECHANICAL	/	/	/	/	/	/	/	/	/	/	/	/	10	
				/	/	/	/	/	/	/	/	/	/	/	/	10	


VAC Coordinator


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HoD/MECHANICAL



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Report on Value Added Course

Title: **Solid state Joining Technologies**

Resource Person: 1.Mr.Faizal Ahamed & 2.Mr.Sundaramoorthi,
Officer,
UNIQ-MEP
Trichy.

Date of conduct from : **13.12.2021** To: **18.12.2021** Duration: **30 Hours**

Organized Department : **MECHANICAL ENGINEERING**

Participant Year: **3, 4** No. of Students Registered : **43**

Venue: **GOOGLE MEET**
online mode Google Meet: meet.google.com/hiz-vzeg-sre

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

- Knowledge about Forge welding process
- Learning platform about cold welding process
- Know the practical skill development knowledge about diffusion welding process.
- friction welding and explosion welding process
- Industrial application oriented hot pressure welding process.

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 = $(0.5 * \text{Attendance in VAC out of 100 percentage} + 0.5 * \text{Test mark in VAC out of 100 marks})$


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HOD/MECH


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Sample Photos of Value Added Course

Title:	Solid state Joining Technologies				
Resource Person:	Mr.Faizal Ahamed,Mr.Sundaramoorthi, Officer, UNIQ-MEP Trichy.				
Date of conduct from :	13.12.2021	To:	18.12.2021	Duration:	30 Hours
Organized Department :	MECHANICAL ENGINEERING				
Participant Year:	3, 4	No. of Students Registered :	43		
Venue:	GOOGLE MEET online mode Google Meet: meet.google.com/hiz-vzeg-sre				

Sample Photo




VAC Coordinator


HOD/MECH


Principal

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Manikandam, Trichy-620 012.



Name of the Student :

Year/Sem:

AU Register Number:

Value Added Course

“Solid state joining Technologies”

MCQ QUESTIONS (25X4 = 100 Marks)

1) What we call the resistance of a material against any external force.

- a. Stiffness
- b. Hardness
- c. Strength
- d. Malleability

2) Which hardness test uses the steel ball as indenter?

- a. Brinell Hardness test
- b. Rockwell B hardness test
- c. Vickers hardness test
- d. Rockwell C hardness test

3) In which test, the specimen will be used in the form of the supported beam?

- a. Brinell Test
- b. Izod test
- c. Rockwell hardness test
- d. Charpy Test

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4) Which metal from the following has the non-crystalline structure?

- a. Quartz
 - b. Silica Glass
 - c. Tungsten
 - d. Iron
-

5) Which of the following has less crystallinity?


- a. Iron
 - b. Low-density polythene
 - c. High-density polythene
 - d. nickel
-

6) Which of the following axis system is being satisfied by tetragonal crystal system?

- a. $a = b \neq c, \alpha = \beta = \gamma = 90^\circ$
 - b. $a = b = c, \alpha \neq \beta = \gamma = 90^\circ$
 - c. $a = b = c, \alpha = \beta = \gamma = 90^\circ$
 - d. $a \neq b \neq c, \alpha = \beta = \gamma = 90^\circ$
-

7) Which one of the following is least symmetrical?

- a. Triclinic
 - b. Monoclinic
 - c. Tetragonal
 - d. Simple Qubic
-


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8) ASTM stands for?

- a. American Society for Tool Measurement
- b. American Society for Tensile Material
- c. American Society for Tensile Measurement
- d. American Society for Testing and Materials

9) What is the scale range of the Mohs hardness test?

- a. 1 - 1000
- b. 100 - 200
- c. 1 - 3000
- d. 1-10

10) Cast iron is a product of _____

- a. Cupola
- b. Blast Furnace
- c. Open hearth furnace
- d. Bessemer converter

11) Wrought iron is a product of _____

- a. Cupola
- b. Paddling furnace
- c. Blast furnace
- d. Bessemer converter


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12) Which of the following induces fine-grain distribution in alloy steel?

- a. Nickel
 - b. Titanium
 - c. Manganese
 - d. Vanadium
-

13) Tensile strength of alloy steel can be improved by adding _____

- a. Nickel
 - b. Titanium
 - c. Manganese
 - d. vanadium
-

14) Which of the following is the hardest constituent of steel?

- a. Ledeburite
 - b. Marten site
 - c. Bainite
 - d. austenite
-

15) Iron possesses BCC crystal structure up to (in degree centigrade)?

- a. 910
- b. 1410
- c. 1539
- d. 768

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16) Which of the following form of iron is magnetic?

- a. δ
- b. γ
- c. λ
- d. α

17) Which of the following are ceramics solids?

- a. Non-metallic, inorganic, and crystalline solids
- b. Metallic, inorganic, and amorphous solids
- c. Non-metallic, inorganic, and amorphous solids
- d. Non-metallic, organic, and amorphous solids

18) For an M10 grade RCC (Reinforced Cement Concrete), the cement ratio to aggregate to the sand is?

- a. 1:2:3
- b. 1:2:6
- c. 1:3:6
- d. 1:3:4

19) Which one of the following can act as a modifier in the glass-forming process

- a. Silicon dioxide
- b. Phosphorous oxide
- c. Magnesium oxide
- d. Sodium oxide


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20) Which of the following is not a laminar composite

- a. Bimetallic
 - b. Wood
 - c. Paints
 - d. cladding
-

21) In sandwich composites, which of the following material can be used for filling purposes?


- a. Wood
 - b. Cement
 - c. All of them
 - d. polymer
-

22) Which of the following has a greater impact on the longitudinal strength of reinforced composites?

- a. Fiber orientation
 - b. Fiber diameter
 - c. Fiber length
 - d. Fiber strength
-

23) Angle between side cutting edge and end cutting edge in the top surface plane of the tool.

- a. Side rake angle
- b. Nose angle
- c. Side cutting edge angle
- d. Side relief angle


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24) What is the maximum allowed value of VB in mm for the HSS tool used with the cast iron work piece for rough machining?

- a. 0.5
- b. 2
- c. 1.5
- d. 1

25) Which of the following tools is most suitable for very hard and brittle material?

- a. HSS
- b. Carbides
- c. None of them
- d. Cast cobalt alloy


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Value Added Course

“solid state Joining Technologies”

ANSWER KEY

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

VAC COORDINATOR

S. S. Srinivasan, M.E., Ph.D.,
Principal

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Name of the Student : 811218114004

Year/Sem: IV / Mech

AU Register Number: Atagunaja

Value Added Course

“Solid state joining Technologies”

MCQ QUESTIONS (25X4 = 100 Marks)

1) What we call the resistance of a material against any external force.

- a. Stiffness
 b. Hardness
 c. Strength
 d. Malleability

2) Which hardness test uses the steel ball as indenter?

- a. Brinell Hardness test
 b. Rockwell B hardness test
 c. Vickers hardness test
 d. Rockwell C hardness test

3) In which test, the specimen will be used in the form of the supported beam?

- a. Brinell Test
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 c. Rockwell hardness test
 d. Charpy Test

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4) Which metal from the following has the non-crystalline structure?

- a. Quartz
- b. Silica Glass
- c. Tungsten
- d. Iron

5) Which of the following has less crystallinity?

- a. Iron
- b. Low-density polythene
- c. High-density polythene
- d. nickel

6) Which of the following axis system is being satisfied by tetragonal crystal system?

- a. $a = b \neq c, \alpha = \beta = \gamma = 90^\circ$
- b. $a = b = c, \alpha \neq \beta = \gamma = 90^\circ$
- c. $a = b = c, \alpha = \beta = \gamma = 90^\circ$
- d. $a \neq b \neq c, \alpha = \beta = \gamma = 90^\circ$

7) Which one of the following is least symmetrical?

- a. Triclinic
- b. Monoclinic
- c. Tetragonal
- d. Simple Cubic



8) ASTM stands for?

- a. American Society for Tool Measurement
- b. American Society for Tensile Material
- c. American Society for Tensile Measurement
- d. American Society for Testing and Materials

9) What is the scale range of the Mohs hardness test?


- a. 1 - 1000
- b. 100 - 200
- c. 1 - 3000
- d. 1-10

10) Cast iron is a product of _____

- a. Cupola
- b. Blast Furnace
- c. Open hearth furnace
- d. Bessemer converter

11) Wrought iron is a product of _____

- a. Cupola
- b. Paddling furnace
- c. Blast furnace
- d. Bessemer converter


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12) Which of the following induces fine-grain distribution in alloy steel?

- a. Nickel
- b. Titanium
- c. Manganese
- d. Vanadium

13) Tensile strength of alloy steel can be improved by adding _____

- a. Nickel
- b. Titanium
- c. Manganese
- d. vanadium

14) Which of the following is the hardest constituent of steel?

- a. Ledeburite
- b. Marten site
- c. Bainite
- d. austenite

15) Iron possesses BCC crystal structure up to (in degree centigrade)?

- a. 910
- b. 1410
- c. 1539
- d. 768

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16) Which of the following form of iron is magnetic?

- a. δ
- b. γ
- c. λ
- d. α

17) Which of the following are ceramics solids?

- a. Non-metallic, inorganic, and crystalline solids
- b. Metallic, inorganic, and amorphous solids
- c. Non-metallic, inorganic, and amorphous solids
- d. Non-metallic, organic, and amorphous solids

18) For an M10 grade RCC (Reinforced Cement Concrete), the cement ratio to aggregate to the sand is?

- a. 1:2:3
- b. 1:2:6
- c. 1:3:6
- d. 1:3:4

19) Which one of the following can act as a modifier in the glass-forming process

- a. Silicon dioxide
- b. Phosphorous oxide
- c. Magnesium oxide
- d. Sodium oxide

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20) Which of the following is not a laminar composite

- a. Bimetallic
- b. Wood
- c. Paints
- d. cladding

21) In sandwich composites, which of the following material can be used for filling purposes?


- a. Wood
- b. Cement
- c. All of them
- d. polymer

22) Which of the following has a greater impact on the longitudinal strength of reinforced composites?

- a. Fiber orientation
- b. Fiber diameter
- c. Fiber length
- d. Fiber strength

23) Angle between side cutting edge and end cutting edge in the top surface plane of the tool.

- a. Side rake angle
- b. Nose angle
- c. Side cutting edge angle
- d. Side relief angle


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24) What is the maximum allowed value of VB in mm for the HSS tool used with the cast iron work piece for rough machining?

- a. 0.5
- b. 2
- c. 1.5
- d. 1

25) Which of the following tools is most suitable for very hard and brittle material?

- a. HSS
- b. Carbides
- c. None of them
- d. Cast cobalt alloy

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Department of Mechanical Engineering

Academic Year 2021-2022 – Odd Semester

VALUE ADDED COURSE ASSESEMENT SHEET

“Solid state Joining technologies”


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S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	811218114001	Abinash P	IV/MECHANICAL	30	100	20	80	84
2	811218114002	Ajith Kumar M	IV/MECHANICAL	30	100	18	72	74
3	811218114003	Arun Pandian M R	IV/MECHANICAL	29	97	18	72	85
4	811218114004	Alaguraja M	IV/MECHANICAL	29	97	21	84	85
5	811218114005	Balasubramani K	IV/MECHANICAL	30	100	18	72	80
6	811218114006	Dineshkumar K	IV/MECHANICAL	30	100	19	76	81
7	811218114007	Ganesapandy K	IV/MECHANICAL	29	97	18	72	86



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				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
8	811218114009	Karthikeyan R	IV/MECHANICAL	28	94	17	68	73
9	811218114010	Murugappan P	IV/MECHANICAL	30	100	18	72	78
10	811218114011	Prasanth R	IV/MECHANICAL	29	97	19	76	78
11	811218114012	Praveen A	IV/MECHANICAL	29	97	21	84	89
12	811218114013	Rabin Singh X	IV/MECHANICAL	30	100	20	80	90
13	811218114014	Ramesh.M	IV/MECHANICAL	30	100	21	84	91
14	811218114015	Renish Bharathi S	IV/MECHANICAL	28	94	18	72	83
15	811218114016	Santhosh K	IV/MECHANICAL	30	100	19	76	82
16	811218114017	Sathish Selva A	IV/MECHANICAL	30	100	18	72	78
17	811218114018	Tamilselvan T	IV/MECHANICAL	29	97	21	84	91
18	811218114019	Vasanth D	IV/MECHANICAL	29	97	22	88	84



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				No. of Hrs Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
19	811218114020	Vikram S	IV/MECHANICAL	30	100	20	80	84
20	811218114021	Vishnu B	IV/MECHANICAL	30	100	21	84	89
21	811218114022	Yogavishuvabarathi G	IV/MECHANICAL	29	94	20	80	86
22	811218114023	Vigneshwaran C	IV/MECHANICAL	29	94	22	88	94
23	811218114301	Dharmaseelan M	IV /MECHANICAL	30	100	20	80	84
24	811218114302	Mahamuni R	IV /MECHANICAL	29	94	16	64	74
25	811218114304	Ramakrishnan M	IV /MECHANICAL	30	100	21	84	85
26	811218114306	Subeekshiseeth Prasana D	IV /MECHANICAL	29	94	18	72	80
27	811219114001	Aathilingam V	III /MECHANICAL	30	100	19	76	81
28	811219114002	Abimanyu C	III /MECHANICAL	29	94	18	72	86



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				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
29	811219114003	Ajay S	III /MECHANICAL	27	89	17	68	73
30	811219114004	Christy Lourthu Samy A	III /MECHANICAL	27	89	18	72	78
31	811219114006	Periyasamy P	III /MECHANICAL	26	81	19	76	78
32	811219114008	Saravana Kumar V	III /MECHANICAL	29	94	21	84	89
33	811219114010	Siriyac Selva A	III /MECHANICAL	30	100	20	80	90
34	811219114011	Suriyaganesh M	III /MECHANICAL	29	97	21	84	91
35	811219114012	Vaithiyalingam M	III /MECHANICAL	28	94	18	72	83
36	811219114013	Vikash R	III /MECHANICAL	25	89	19	76	82
37	811219114301	Hariharan R	III /MECHANICAL	28	94	18	72	78
38	811219114302	Mohanraj G	III /MECHANICAL	29	94	21	84	91
39	811219114303	Sivash K	III /MECHANICAL	29	94	22	88	84



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				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
40	811219114701	Gokul R	III /MECHANICAL	28	89	20	80	84
41	811219114702	Madhan Murugan S	III /MECHANICAL	28	89	21	84	89
42	811219114703	Muthukaruppan M	III /MECHANICAL	30	92	20	80	86
43	811219114704	Inigo Rithish P	III /MECHANICAL	30	100	22	88	94


VAC Coordinator


S. S. Sankar Krishnan, M.E., Ph.D.,
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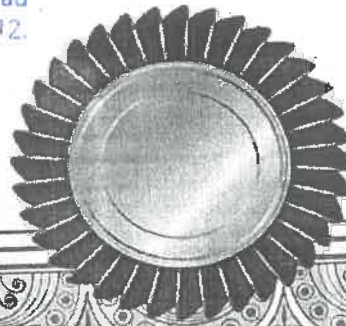
This is to certify that Mr.Sivash K,IV Year,MECH has successfully completed the value added course on "Solid State Joining Technologies" organized by department of Mechanical Engineering and IQAC of our institution in association with UNIQUE-MEP from 13.12.2021 to 18.12.2021(5days) during the Academic Year 2021-2022.

Mr.Faizal Ahamed

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ESTD: Madurai 27, Tamil Nadu, India

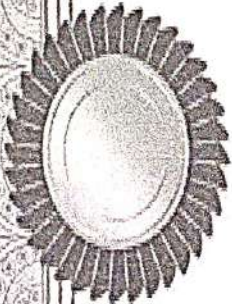
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Year *B.E-MECH*, Indra Ganesan College of Engineering has successfully completed the
Value Added course Solid state Joining Technologies conducted from 13 December 2021
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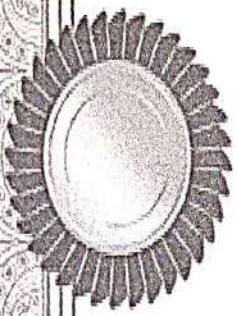
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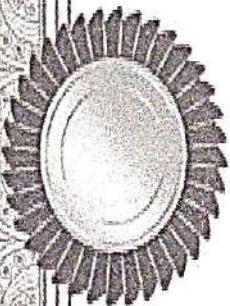
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This is to certify that Mr. Arun Pandian M R of IV /MECHANICAL Year B.E-MECH, Indra Ganesan College of Engineering has successfully completed the Value Added course Solid state Joining Technologies conducted from 13 December 2021 to 17 December 2021 (5days) during the Academic year 2021-2022.

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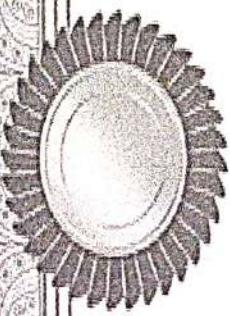
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