



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 – 2

TEACHING-LEARNING AND EVALUATION

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

INDRA GANESAN COLLEGE OF ENGINEERING





Criteria2	Teaching-Learning and Evaluation	350
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KeyIndicator-2.3.Teaching-Learning Process (40)

2022-2023

PARTICIPATIVE LEARNING
MECHANICAL ENGINEERING

Activity	Number of Students Attended	Page No.
Value Added Course(VAC)	93	3
TOTAL STUDENTS ATTENDED	93	-



Criteria2

Teaching-Learning and Evaluation

350

KeyIndicator-2.3.Teaching-Learning Process (40)

2022-2023

MECHANICAL ENGINEERING

PARTICIPATIVE LEARNING

VALUE ADDED COURSE



Indra Ganesan

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Department of Mechanical Engineering


Academic Year 2022-2023 –Odd Semester

Date: 03.12.2022

DEPARTMENT CIRCULAR

Department of Mechanical Engineering and IQAC of IGCE in Association with UNIQ-MEP, Trichy is going to organize Value added course for all III, IV Year students on “**Mechanical electrical and plumbing methods**” From 05.12.2022 to 09.12.2022., certificates will be issued to be eligible participants at the end of the course. This training is to be provided in our college campus

Resource Person Details	1. Mr.Abhu Manager, UNIQ-MEP, Trichy 2.Mr.David Ubaharasamy Executive, UNIQ-MEP, Trichy
Venue	Mechanical Seminar Hall


HOD/MECH


PRINCIPAL

Cc:

- Principal Table
- IQAC Co-Ordinator
- Class In charges – II,III & IV-Year
- II,III & IV-Year MECH Students
- Office File
- Notice Board


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



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Value Added Course

“Mechanical Electrical and Plumbing Methods”

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction of Mechanical tools	3	05.12.2022
2	Mechanical equipments and categories of tools	3	05.12.2022
3	Mechanical Machineries.	3	06.12.2022
4	Heat load calculation	3	06.12.2022
5	Sheet metals & foundry tools	3	07.12.2022
6	MEP software skills	3	07.12.2022
7	Electrical basis and electrical accessories	3	08.12.2022
8	Lighting circuit system design	3	08.12.2022
9	Load calculation and distribution ,cables section & Installation	3	09.12.2022
10	Introduction of plumbing system	3	09.12.2022
11	Exam	1	09.12.2022
Total Hours(Excluding Exam)		30	

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VAC Coordinator

HOD MECH



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Value Added Course

“Mechanical Electrical and Plumbing Methods”

STUDENTS PARTICIPATION LIST

S.No	Reg.No	Students Name	Year/Branch
1	811219114001	Aathilingam V	IV/MECH
2	811219114002	Abimanyu C	IV/MECH
3	811219114003	Ajay S	IV/MECH
4	811219114004	Christy Lourthu Samy A	IV/MECH
5	811219114006	Periyasamy P	IV/MECH
6	811219114008	Saravana Kumar V	IV/MECH
7	811219114010	Siriyac Selva A	IV/MECH
8	811219114011	Suriyaganesh M	IV/MECH
9	811219114012	Vaithiyalingam M	IV/MECH
10	811219114013	Vikash R	IV/MECH
11	811219114301	Hariharan R	IV/MECH
12	811219114302	Mohanraj G	IV/MECH
13	811219114303	Sivash K	IV/MECH
14	811219114701	Gokul R	IV/MECH
15	811219114702	Madhan Murugan S	IV/MECH
16	811219114703	Muthukaruppan M	IV/MECH
17	811219114704	Inigo Rithish P	IV/MECH
18	811220114001	Abinesh As	III/MECH

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S.No	Reg.No	Students Name	Year/Branch
19	811220114003	Anbarasan M	III/MECH
20	811220114005	Arunkumar M	III/MECH
21	811220114008	Balamurugan R	III/MECH
22	811220114013	Dhanushraja P	III/MECH
23	811220114015	Durai Pandi A	III/MECH
24	811220114017	Hariharan M	III/MECH
25	811220114020	Kanishkavardhini S	III/MECH
26	811220114026	Loganathan C	III/MECH
27	811220114032	Mohamed Ashif A	III/MECH
28	811220114039	Sanjay Kumar M	III/MECH
29	811220114040	Santhosh Kumar R	III/MECH
30	811220114042	Saranya Sree Tr	III/MECH
31	811220114043	Saravanan M	III/MECH
32	811220114044	Sathishkumar V	III/MECH
33	811220114047	Sheik Ameer M	III/MECH
34	811220114052	Thamaraiselvan K	III/MECH
35	811220114056	Vigneswaran K	III/MECH
36	811220114057	Vijayakumar G	III/MECH
37	811220114060	Yuvaraja A	III/MECH
38	811220114302	Chellapandian R	III/MECH
39	811220114305	Mohamed Nafil A	III/MECH

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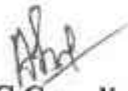
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S.No	Reg.No	Students Name	Year/Branch
40	811220114306	Ruban A	III/MECH
41	811221114006	Dhanasejaram D	II/MECH
42	811221114008	Dhiwakar R	II/MECH
43	811221114014	Kannan P	II/MECH
44	811221114022	Naveen M	II/MECH
45	811221114030	Santhosh R	II/MECH


VAC Coordinator


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VALUE ADDED COURSE

"Mechanical Electrical and Plumbing Method"

STUDENTS ATTENDANCE SHEET

S.No	Reg.No	Students Name	Year/Branch	DATE: 05.12.22		DATE: 06.12.22		DATE: 07.12.22		DATE: 08.12.22		DATE: 09.12.22		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811219114001	Aathilingam V	IV/MECH											10	Aathilingam V
	811219114002	Abimanyu C	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3	811219114003	Ajay S	IV/MECH	✓	✓	✓	α	✓	✓	✓	✓	✓	✓	09	Abimanyu C
4	811219114004	Christy Lourthu Samy A	IV/MECH	✓	✓	✓	α	✓	✓	✓	✓	✓	✓	09	Ajay - S
5	811219114006	Periyasamy P	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Periyasamy P
6	811219114008	Saravana Kumar V	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Periyasamy P
7	811219114010	Siriyac Selva A	IV/MECH	✓	✓	✓	✓	✓	✓	α	✓	✓	✓	09	Saravana Kumar V
8	811219114011	Suriyaganesh M	IV/MECH	✓	✓	✓	✓	α	✓	✓	✓	✓	✓	09	Suriyaganesh M
9	811219114012	Vaithiyalingam M	IV/MECH	✓	✓	✓	✓	✓	α	✓	✓	✓	✓	09	Vaithiyalingam M



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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
10	811219114013	Vikash R	IV/MECH	✓	✓	a	a	✓	✓	✓	✓	✓	✓	08	P. Vikash
11	811219114301	Hariharan R	IV/MECH	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	09	R. Hariharan
12	811219114302	Mohanraj G	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	G. Mohanraj
13	811219114303	Sivash K	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	09	K. Sivash
14	811219114701	Gokul R	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	a	09	R. Gokul
15	811219114702	Madhan Murugan S	IV/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	S. Madhan
16	811219114703	Muthukaruppan M	IV/MECH	✓	✓	✓	✓	✓	✓	a	a	✓	✓	10	M. Muthukaruppan
17	811219114704	Inigo Rithish P	IV/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	P. Rithish
18	811220114001	Abinesh As	III/MECH	✓	✓	✓	✓	✓	✓	a	a	✓	✓	08	A. Abinesh
19	811220114003	Anbarasan M	III/MECH	a	a	✓	✓	✓	✓	✓	✓	✓	✓	08	M. Anbarasan
20	811220114005	Arunkumar M	III/MECH	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	09	M. Arunkumar
21	811220114008	Balamurugan R	III/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	R. Balamurugan
				✓	✓	a	a	✓	✓	✓	✓	✓	✓	08	R. Balamurugan



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22	811220114013	Dhanushraja P	III/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	Dhanushraja P
23	811220114015	Durai Pandi A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Durai Pandi A
24	811220114017	Hariharan M	III/MECH	✓	✓	✓	✓	a	a	✓	✓	✓	✓	08	M. Hariharan
25	811220114020	Kanishkavardhini S	III/MECH	✓	✓	✓	✓	✓	✓	✓	a	✓	✓	09	Kanishkavardhini S
26	811220114026	Loganathan C	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	C. Loganathan
27	811220114032	Mohamed Ashif A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Mohamed Ashif A
28	811220114039	Sanjay Kumar M	III/MECH	✓	✓	✓	✓	a	✓	✓	✓	✓	✓	09	M. Sanjay Kumar
29	811220114040	Santhosh Kumar R	III/MECH	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	09	R. Santhosh Kumar
30	811220114042	Saranya Sree Tr	III/MECH	✓	✓	✓	✓	✓	✓	a	✓	✓	✓	09	Saranya Sree Tr
31	811220114043	Saravanan M	III/MECH	a	a	✓	✓	✓	✓	✓	✓	✓	✓	08	M. Saravanan
32	811220114044	Sathishkumar V	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	V. Sathishkumar
33	811220114047	Sheik Ameer M	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M. Sheik Ameer



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34	811220114052	Thamaraiselvan K	III/MECH												
35	811220114056	Vigneswaran K	III/MECH	1	a	1	1	1	1	1	1	1	1	09	<i>Thamaraiselvan K</i>
36	811220114057	Vijayakumar G	III/MECH	1	1	1	1	a	a	1	1	1	1	08	<i>Vijayakumar G</i>
37	811220114060	Yuvaraja A	III/MECH	1	a	1	1	1	1	1	1	1	1	09	<i>Yuvaraja A</i>
38	811220114302	Chellapandian R	III/MECH	1	9	1	1	1	1	1	1	1	1	10	<i>Chellapandian R</i>
39	811220114305	Mohamed Nafil A	III/MECH	1	1	1	1	1	1	1	1	1	1	10	<i>Mohamed Nafil A</i>
40	811220114306	Ruban A	III/MECH	1	a	1	1	1	1	1	1	1	1	09	<i>Ruban A</i>
41	811221114006	Dhanasejaram D	II/MECH	1	a	1	1	1	1	1	1	1	1	09	<i>Dhanasejaram D</i>
42	811221114008	Dhiwakar R	II/MECH	1	1	1	1	1	1	1	1	1	1	10	-
43	811221114014	Kannan P	II/MECH	1	1	1	1	1	1	1	1	1	1	10	<i>Kannan P</i>
44	811221114022	Naveen M	II/MECH	1	1	1	1	1	a	1	1	1	1	09	<i>Naveen M</i>
			II/MECH	1	1	1	1	1	1	1	1	1	1	10	<i>Naveen M</i>

A. G. S.
VAC Coordinator

P. J. S.
HoD/MECHANICAL



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Name of the Student :

Year/Sem:

AU Register Number:

Value Added Course

“Mechanical electrical and plumbing methods”

MCQ QUESTIONS (25X4 = 100 Marks)

1. Pump Start but Motor get overloaded or Trip on overload. _____
 - a) Alignment is wrong
 - b) Gland packing too tight
 - c) Worn out / Damaged ball bearing
 - d) Cavitations exists
2. During flooding of a dry dock the following items must be verified.
 - a). All sea valves are operational
 - b) Stern tube seal are operational
 - c). All overboard discharge valves are operational.
 - d). All of the above
3. Which type of valve is Bidirectional.,
 - a) Globe valve
 - b) Gate valve
 - c) Ball valve
 - d) Butterfly valve
4. Which of the following V/V cannot be overhauled in place without removing piping?.
 - a) Ball Valve
 - b) Diaphragm valve
 - c) Globe valve
 - d) Butterfly valve
5. The purpose of an evaporator in the domestic refrigeration system is to
 - a) Transmit latent heat of evaporation....
 - b) Absorb latent heat of fusion
 - c) Absorb latent heat of evaporation
 - d) Transmit latent heat of fusion
6. The attached vacuum pump of a ballast pump operates on the principle of a:
 - a). Centrifugal pump
 - b). Reciprocating pump
 - c). Gear Pump
 - d). Vane Pump

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7. Increasing the rotational speed of a cargo pump the pump flow rate will:
- Increase in direct proportion to the increase in speed
 - Decrease in direct proportion to the increase in speed
 - Flow rate doesn't depend upon speed
 - Flow Increased
8. Shaft sealing of a main sea water pump for ship plying in coastal muddy waters, which is the best option
- Gland packing
 - Lip seal with garter spring
 - Mechanical seal
 - Cup seal
9. The lower half of main bearing of a very large diesel engine can be removed by:
- Pulling out with a chain block
 - By hammering out with the help of a soft mallet
 - By slightly jacking the crankshaft and turning out the bearing half with a rope or similar tackle provided.
 - By using a special tool in the oil hole and turning the shaft to turn out the lower half.
10. Direction of rotation of centrifugal pump is reversed by changing the motor connections
- pump will deliver the liquid in reverse direction
 - pump discharge and capacity will be affected
 - efficiency will decrease
 - casing get overheated
11. Most steam traps respond well to cleaning. But when a thermodynamic trap fails to operate after cleaning, the next course of action should be:
- Throttle the steam outlet valve
 - Renew the trap
 - Lap the disc and the seat of the trap
 - Throttle the steam inlet valve
12. When M/E stand by F.O.heater in use of main engine
- Sudden opening F.O. inlet valve pressurized and damage the heater
 - F.O. in vapour lock inside heater allow steam
 - F.O. inlet valve causes pressure drop M/E F.O. pressure standby water is not pressurized may cause sudden change in engine /per load/rpm
 - heater leaking.


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13. Net Positive Suction Head is the

- a). Difference of Total suction head and Total discharge head
- b). Difference of static head and the frictional head
- c). Difference of dynamic suction head and the vapour pressure of liquid
- d). Difference of Static suction head and the vapour pressure of liquid

14. Which of the following will be required to be done in order to reduce sculpture corrosion of Main Engine components

- a). Increasing the atomization pressure of fuel injectors
- b). Fitting exhaust valves with valve rotators
- c). Running engine at or near normal sea load
- d). Decreasing the F.O. purifier feed rate , running two purifier in series one acting as purifier and other as clarifier

15. If the direction of rotation of a gear pump is reversed due to change in-phase sequence, what happens when the pump is started?

- a). Direction of flow remains the same
- b). The pump will get damaged due to overpressure on suction side
- c). Pump relief valve will be lifted
- d). The direction of flow will be reversed

16. you must have used rubber reinforced joints. The reinforcement is normally provided using non asbestos fibers. The reinforcement is provided because


- a) Ordinary rubber gasket has porous matrix. Having capillaries which can allow liquid leakage when subjected to high pressure.
- b) To increase load carrying capacity of the joint so it can withstand high pr.
- c) To increase temp resistance of joint
- d) To protect the joints from fire or other accidental damage.

17. Which of the following can lead to premature failure of roller bearings?

- a). Misalignment
- b). Contamination
- c). Shrinkage
- d). Over greasing

18. Metal cladding provides protection to the metal essentially for the life of ship because

- a). During cladding the protective coating reacts chemically with the base metal and inhibits corrosion
- b). This is the only method in which the completeness of the metal coating can assured, while other methods are liable to defects
- c). The thickness of protective coating is greater compared to any other metal coating method used
- d). The adherence of coating is best in case of metal cladding


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19. Butterfly valve stuck in half open position. How to repair.....not same but related Q.
- a. Can't be taken out in open position from line so try to close valve
 - b) Apply hammer to shut it.
 - c. Remove pipeline and do overhaul
 - d) Cannot be repaired onboard.
20. When steel components electroplated with chromium are used in corrosive environment
- a. Chrome plating prevents corrosion
 - b). Protection to the steel will be preferentially corroded
 - c. zinc plating is used on top of chrome plating for corrosion protection
 - d). Thickness of chrome plating to increase
21. Fire pump 1 water to deck discharge pressure 5 bar deck hydrant not getting water. Fire pump 2 discharge pressure 2.5 gives water. Fire pump 1 unable to send water to hydrant. What is the reason?
- a. Pump pressure gauge defective
 - b). Overboard discharge valve fully opened so water is not going to deck
 - c. Pump suction filter choke
 - d). Pump discharge valve may be stuck
22. Double entry impeller of centrifugal pump
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 - c. Red. Load on pump bearings
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 - b). Carryover and deposit of oil
 - c). Decompression
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- a). To replace with a fuse of correct rating
 - b). To replace fuses on all three phases
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 - d) To investigate the fault that led to the blowing of the fuse
25. Which of the following instruments measures propeller drop?
- a). Poker Gauge
 - b). Telescopic feeler gauge
 - c). Trammel
 - d). Propeller drop gauge

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

“Mechanical electrical and plumbing methods”

ANSWER KEY

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


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Principal

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VAC Coordinator



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Name of the Student : Cokul R

Year/Sem: IV / mech

AU Register Number: 811219114701

Value Added Course

“Mechanical electrical and plumbing methods”

MCQ QUESTIONS (25X4 = 100 Marks)

- Pump Start but Motor get overloaded or Trip on overload. _____
 - Alignment is wrong
 - Gland packing too tight
 - Worn out / Damaged ball bearing
 - Cavitations exists
- During flooding of a dry dock the following items must be verified.
 - All sea valves are operational
 - Stern tube seal are operational
 - All overboard discharge valves are operational
 - All of the above
- Which type of valve is Bidirectional..
 - Globe valve
 - Gate valve
 - Ball valve
 - Butterfly valve
- Which of the following V/V cannot be overhauled in place without removing piping?
 - Ball Valve
 - Diaphragm valve
 - Globe valve
 - Butterfly valve
- The purpose of an evaporator in the domestic refrigeration system is to
 - Transmit latent heat of evaporation....
 - Absorb latent heat of fusion
 - Absorb latent heat of evaporation
 - Transmit latent heat of fusion
- The attached vacuum pump of a ballast pump operates on the principle of a:
 - Centrifugal pump
 - Reciprocating pump
 - Gear Pump
 - Vane Pump

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7. Increasing the rotational speed of a cargo pump the pump flow rate will:
- a). Increase in direct proportion to the increase in speed
 - b). Decrease in direct proportion to the increase in speed
 - c). Flow rate doesn't depend upon speed
 - d). Flow Increased
8. Shaft sealing of a main sea water pump for ship plying in coastal muddy waters, which is the best option
- a). Gland packing
 - b). Lip seal with garter spring
 - c). Mechanical seal
 - d). Cup seal
9. The lower half of main bearing of a very large diesel engine can be removed by:
- a). Pulling out with a chain block
 - b). By hammering out with the help of a soft mallet
 - c). By slightly jacking the crankshaft and turning out the bearing half with a rope or similar tackle provided.
 - d). By using a special tool in the oil hole and turning the shaft to turn out the lower half.
10. Direction of rotation of centrifugal pump is reversed by changing the motor connections
- a. pump will deliver the liquid in reverse direction
 - b. pump discharge and capacity will be affected
 - c. efficiency will decrease
 - d. casing get overheated
11. Most steam traps respond well to cleaning. But when a thermodynamic trap fails to operate after cleaning, the next course of action should be;
- a) Throttle the steam outlet valve
 - b) Renew the trap
 - c) Lap the disc and the seat of the trap
 - d). Throttle the steam inlet valve
12. When M/E stand by F.O. heater in use of main engine
- a) Sudden opening F.O. inlet valve pressurized and damage the heater
 - b) F.O. in vapour lock inside heater allow steam
 - c) F.O. inlet valve causes pressure drop M/E F.O. pressure standby water is not pressurized may cause sudden change in engine /per load/rpm
 - d) heater leaking.


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13. Net Positive Suction Head is the

- a) Difference of Total suction head and Total discharge head
frictional head
- b). Difference of static head and the
- c). Difference of dynamic suction head and the
vapour pressure of liquid
- d). Difference of Static suction head and the
vapour pressure of liquid

14. Which of the following will be required to be done in order to reduce sculpture corrosion of Main Engine components

- a). Increasing the atomization pressure of fuel injectors
- b) Fitting exhaust valves with valve rotators
- c). Running engine at or near normal sea load
- d). Decreasing the F.O. purifier feed rate ,
running two purifier in series one acting as purifier and other as clarifier

15. If the direction of rotation of a gear pump is reversed due to change in-phase sequence, what happens when the pump is started?

- a). Direction of flow remains the same
- b). The pump will get damaged due to
overpressure on suction side
- C. Pump relief valve will be lifted
- d) The direction of flow will be reversed

16. you must have used rubber reinforced joints. The reinforcement is normally provided using non asbestos fibers. The reinforcement is provided because

- a) Ordinary rubber gasket has porous matrix. Having capillaries which can allow liquid leakage when subjected to high pressure.
- b) To increase load carrying capacity of the joint so it can withstand high pr.
- c) To increase temp resistance of joint
- d) To protect the joints from fire or other accidental damage.


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17. Which of the following can lead to premature failure of roller bearings?

- a). Misalignment
- b) Contamination
- C. Shrinkage
- d). Over greasing

18. Metal cladding provides protection to the metal essentially for the life of ship because

- a). During cladding the protective coating reacts chemically with the base metal and inhibits corrosion
- b). This is the only method in which the completeness of the metal coating can assured, while other methods are liable to defects
- c). The thickness of protective coating is greater compared to any other metal coating method used
- d). The adherence of coating is best in case of metal cladding



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19. Butterfly valve stuck in half open position. How to repair.....not same but related Q.

- a) Can't be taken out in open position fr line so try to close valve
- b) Apply hammer to shut it.
- c. Remove pipeline n do overhaul
- d) Cannot be repaired onboard.

20. When steel components electroplated with chromium r used in corrosive environment

- a. Chrome plating prevents corrosion
- b). Protection to the steel will be preferentially corroded
- c. zinc plating is used on top of chrome plating for corrosion protection
- d). Thickness of chrome plating to increase

21. Fire p/p1 water to deck discharge pr 5 bar deck hydrant not getting water. Fire p/p2 discharge pr 2.5 gives water. Fire pump 1 unable to send water to hydrant. What is the reason?

- a) Pump pressure gauge defective
- b). Overboard discharge v/v fully opened so water is not going to deck
- c. Pump suction filter choke
- d). Pump discharge v/v may be stuck

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- a. Inc. axial thrust
- b). Inc. motor load
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Department of Mechanical Engineering
Academic Year 2022-2023 – Odd Semester
VALUE ADDED COURSE ASSESEMENT SHEET
“Mechanical Electrical and Plumbing method”


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

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 Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	811219114001	Aathilingam V	IV/MECH	30	100	20	80	90
2	811219114002	Abimanyu C	IV/MECH	29	97	16	64	80
3	811219114003	Ajay S	IV/MECH	28	93	18	72	83
4	811219114004	Christy Lourthu Samy A	IV/MECH	30	100	21	84	92
5	811219114006	Periyasamy P	IV/MECH	29	97	17	68	82
6	811219114008	Saravana Kumar V	IV/MECH	28	93	18	72	83



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Principal
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IG Valley, Madurai Main Road
Manikandam, Tiruchirappalli - 620 012

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 Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
7	811219114010	Siriyac Selva A	IV/MECH	29	97	19	76	86
8	811219114011	Suriyaganesh M	IV/MECH	30	100	21	84	92
9	811219114012	Vaithiyalingam M	IV/MECH	28	93	20	80	87
10	811219114013	Vikash R	IV/MECH	27	90	18	72	81
11	811219114301	Hariharan R	IV/MECH	28	93	17	68	81
12	811219114302	Mohanraj G	IV/MECH	30	100	18	72	86
13	811219114303	Sivash K	IV/MECH	29	97	19	76	86
14	811219114701	Gokul R	IV/MECH	28	93	21	84	89
15	811219114702	Madhan Murugan S	IV/MECH	26	87	20	80	83
16	811219114703	Muthukaruppan M	IV/MECH	28	93	22	88	91
17	811219114704	Inigo Rithish P	IV/MECH	24	80	20	80	80



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

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 Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
18	811220114001	Abinesh As	III/MECH	26	87	21	84	85
19	811220114003	Anbarasan M	III/MECH	28	93	20	80	87
20	811220114005	Arunkumar M	III/MECH	28	93	22	88	91
21	811220114008	Balamurugan R	III/MECH	26	87	18	72	79
22	811220114013	Dhanushraja P	III/MECH	28	93	19	76	85
23	811220114015	Durai Pandi A	III/MECH	30	100	18	72	86
24	811220114017	Hariharan M	III/MECH	24	80	21	84	82
25	811220114020	Kanishkavardhini S	III/MECH	28	93	22	88	91
26	811220114026	Loganathan C	III/MECH	30	100	20	80	90
27	811220114032	Mohamed Ashif A	III/MECH	30	100	21	84	92
28	811220114039	Sanjay Kumar M	III/MECH	28	93	20	80	87



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Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli - 620 012
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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	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)	
29	811220114040	Santhosh Kumar R	III/MECH	28	93	22	88	91
30	811220114042	Saranya Sree Tr	III/MECH	28	93	20	80	87
31	811220114043	Saravanan M	III/MECH	26	87	22	88	87
32	811220114044	Sathishkumar V	III/MECH	30	100	20	80	90
33	811220114047	Sheik Ameer M	III/MECH	30	100	21	84	92
34	811220114052	Thamaraiselvan K	III/MECH	28	93	20	80	87
35	811220114056	Vigneswaran K	III/MECH	26	87	22	88	87
36	811220114057	Vijayakumar G	III/MECH	28	93	21	84	89
37	811220114060	Yuvaraja A	III/MECH	30	100	22	88	94
38	811220114302	Chellapandian R	III/MECH	30	100	20	80	90
39	811220114305	Mohamed Nafil A	III/MECH	28	93	21	84	89



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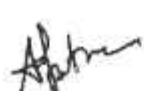


S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
40	811220114306	Ruban A	III/MECH	28	93	16	64	79
41	811221114006	Dhanasejaram D	II/MECH	30	100	18	72	86
42	811221114008	Dhiwakar R	II/MECH	30	100	21	84	92
43	811221114014	Kannan P	II/MECH	28	93	17	68	81
44	811221114022	Naveen M	II/MECH	30	100	18	72	86


VAC Coordinator


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Manikandam, Trichy-620 012.


HoD/MECHANICAL

Report on Value Added Course

Title:	Mechanical Electrical and Plumbing Methods				
Resource Person:	Mr. Abhu Co-ordinator UNIQ-MEP Trichy		Mr. David Ubaharasamy Executive, UNIQ-MEP, Trichy		
Date of conduct from :	05.12.2022	To:	09.12.2022	Duration:	30 Hours
Organized Department :	MECHANICAL ENGINEERING				
Participant Year:	2,3, 4		No. of Students Registered :	45	
Venue:	Mechanical Seminar Hall				
Outcome of Value Added Course (VAC): At the end of the Course, Students can able to					
<ul style="list-style-type: none">• Know real-world examples of on-the-job safety and health issues• Know how to protect themselves and others from accidental deaths and injuries.• Broad understanding of how hazards in the workplace can be controlled.• Students are expected to learn and practice the skills they will need in the workplace.• They receive required training on equipment they will use, and work processes they will perform• Develop a foundational understanding of safety systems.					
Assessment Process					
<ul style="list-style-type: none">• 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 * Attendance in VAC out of 100 percentage + 0.5 * Test mark in VAC out of 100 marks)					
<p>Dr. G. Balakrishnan, M.E., Ph.D., Principal</p> <p>Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.</p>					
 VAC Coordinator		 HOD MECH		 Principal	



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Sample Photo of Value Added Course

Title: **Mechanical Electrical and Plumbing Methods**

Resource Person: Mr. Abhu
Co-ordinator
UNI-Q-MEP
Trichy

Mr. David Ubaharasamy
Executive,
UNI-Q-MEP,
Trichy

Date of conduct from : **05.12.2022** To: **09.12.2022** Duration: **30 Hours**

Organized Department : **MECHANICAL ENGINEERING**

Participant Year: **2,3,4** No. of Students Registered : **45**


Venue: **Mechanical Seminar Hall**

Sample Photo




Google

Manikandam, Tamil Nadu, India
PJRQ+H4F, Trichy - Melur Rd, Manikandam, Panjappur, Tamil Nadu 620012, India
Lat 10.741424°
Long 78.637853°
05/12/22 03:44 PM GMT +05:30


VAC Coordinator


HoD MECH


Principal


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



CERTIFICATE OF PARTICIPATION

UNI UNIQUE
MEP

This is to certify that Mr. Yuvaraja A, III Year, MECH has successfully completed the value added course on "Mechanical, Electrical and plumbing Method" organized by department of Mechanical Engineering and IQAC of our institution in association with UNIQUE MEP from 05.12.2022 to 09.12.2022 (5days) during the Academic Year 2022-2023

K. Deepak

Mr. K. Deepak
UNIQUE MEP

108
Dr. G. Balakrishnan, M.E., Ph.D.:
Principal
Indra Ganesan College of Engineering
IG Valley, Madhavai Main Road
Manikandam, Tiruchirappalli-620-012.

[Signature]

PRINCIPAL
IGCE





CERTIFICATE OF PARTICIPATION

UNI UNIQUE
MEP

This is to certify that Mr.Santhosh Kumar R,III Year,MECH has successfully completed the value added course on "Mechanical,Electrical and plumbing Method" organized by department of Mechanical Engineering and IQAC of our institution in association with UNIQUE MEP from 05.12.2022 to 09.12.2022 (5days) during the Academic Year 2022-2023


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

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Manikandam, Trichy-620 012.



Mr. K. Deepak
UNIQUE MEP



PRINCIPAL
IGCE






CERTIFICATE OF PARTICIPATION

UNI UNIQUE
MEP

This is to certify that Mr.Mohamed Nafil A,III Year,MECH has successfully completed the value added course on "Mechanical,Electrical and plumbing Method" organized by department of Mechanical Engineering and IQAC of our institution in association with UNIQUE MEP from 05.12.2022 to 09.12.2022 (5days) during the Academic Year 2022-2023


Dr. G. Balakrishnan, M.E., Ph.D.,
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Mr. K. Deepak
UNIQUE MEP


PRINCIPAL
IGCE






CERTIFICATE OF PARTICIPATION

UNI UNIQUE
MEP

This is to certify that Mr. Hariharan, III Year, MECH has successfully completed the value added course on "Mechanical, Electrical and plumbing Method" organized by department of Mechanical Engineering and IQAC of our institution in association with UNIQUE MEP from 05.12.2022 to 09.12.2022 (5days) during the Academic Year 2022-2023


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

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
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Mr. K. Deepak
UNIQUE MEP



PRINCIPAL
IGCE





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Department of Mechanical Engineering

Academic Year 2022-2023 –Even Semester

Date: 18.05.2023

DEPARTMENT CIRCULAR

Department of Mechanical Engineering and IQAC of IGCE in Association with UNIQ-MEP, Trichy is going to organize Value added course for all III, IV Year students on “**Heat ventilation Air conditioning Technology**” from 22.05.2023 to 27.05.2023, 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.K.Deepak Executive UNIQ-MEP Trichy 2. Mr.Dhineshwaran G Executive UNIQ-MEP Trichy
Venue	Mechanical Seminar Hall-IGCE


HOD/MECH


PRINCIPAL

Cc:

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


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Value Added Course

“Heat Ventilation Air conditioning Technology”

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction of HVAC	3	22.05.2023
2	Air conditioning equipments and categories of air conditioning.	3	22.05.2023
3	psychometric	3	23.05.2023
4	Heat load calculation	3	23.05.2023
5	Fresh Air system	3	24.05.2023
6	HVAC software skills	3	24.05.2023
7	Electrical basis and electrical accessories	3	25.05.2023
8	Lighting circuit system design	3	25.05.2023
9	Load calculation and distribution ,cables section & Installation	3	26.05.2023
10	Application of HVAC	3	26.05.2023
11	Exam	1	27.05.2023
Total Hours(Excluding Exam)		30	


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VAC Coordinator


HOD MECH



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VALUE ADDED COURSE

“Heat ventilation Air conditioning Technology”

STUDENTS PARTICIPATION LIST

S.No	Reg.No	Students Name	Year/Branch
1	811219114001	Aathilingam V	IV/MECH
2	811219114002	Abimanyu C	IV/MECH
3	811219114003	Ajay S	IV/MECH
4	811219114004	Christy Lourthu Samy A	IV/MECH
5	811219114006	Periyasamy P	IV/MECH
6	811219114008	Saravana Kumar V	IV/MECH
7	811219114010	Siriyac Selva A	IV/MECH
8	811219114011	Suriyaganesh M	IV/MECH
9	811219114012	Vaithiyalingam M	IV/MECH
10	811219114013	Vikash R	IV/MECH
11	811219114301	Hariharan R	IV/MECH
12	811219114302	Mohanraj G	IV/MECH
13	811219114303	Sivash K	IV/MECH
14	811219114701	Gokul R	IV/MECH
15	811219114702	Madhan Murugan S	IV/MECH
16	811219114703	Muthukaruppan M	IV/MECH
17	811219114704	Inigo Rithish P	IV/MECH
18	811220114001	Abinesh As	III/MECH
19	811220114003	Anbarasan M	III/MECH
20	811220114005	Arunkumar M	III/MECH
21	811220114008	Balamurugan R	III/MECH
22	811220114013	Dhanushraja P	III/MECH
23	811220114015	Durai Pandi A	III/MECH
24	811220114017	Hariharan M	III/MECH
25	811220114020	Kanishkavardhini S	III/MECH
26	811220114026	Loganathan C	III/MECH
27	811220114032	Mohamed Ashif A	III/MECH
28	811220114039	Sanjay Kumar M	III/MECH
29	811220114040	Santhosh Kumar R	III/MECH
30	811220114042	Saranya Sree Tr	III/MECH
31	811220114043	Saravanan M	III/MECH
32	811220114044	Sathishkumar V	III/MECH
33	811220114047	Sheik Ameer M	III/MECH
34	811220114052	Thamaraiselvan K	III/MECH

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S.No	Reg.No	Students Name	Year/Branch
35	811220114056	Vigneswaran K	III/MECH
36	811220114057	Vijayakumar G	III/MECH
37	811220114060	Yuvaraja A	III/MECH
38	811220114302	Chellapandian R	III/MECH
39	811220114305	Mohamed Nafil A	III/MECH
40	811220114306	Ruban A	III/MECH
41	811221114006	Dhanasejaram D	II/MECH
42	811221114008	Dhiwakar R	II/MECH
43	811221114014	Kannan P	II/MECH
44	811221114022	Naveen M	II/MECH
45	811221114030	Santhosh R	II/MECH
46	811220114302	Chellapandian R	III/MECH
47	811220114305	Mohamed Nafil A	III/MECH
48	811220114306	Ruban A	III/MECH

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VAC Coordinator

HOD/MECH



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Department of Mechanical Engineering

Academic Year 2022-2023 – Even Semester

STUDENTS ATTENDANCE LIST

VALUE ADDED COURSE

“Heat ventilation Air conditioning Technology”

Dr. G. Balakrishnan, M.E., Ph.D.,
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 IG Valley, Madurai Main Road
 Manikandam, Trichy-620 012.

S.N o	Reg No	Students Name	Year/Branch	Date 22.05.23		Date 23.05.23		Date 24.05.23		Date 25.05.23		Date 26.05.23		SIGNATURE OF THE STUDENT	NO OF SESSIONS ATTENDED
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811219114001	Aathilingam V													
2	811219114002	Abimanyu C	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	V. Aathilingam	10
3	811219114003	Ajay S	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	V. Aathilingam	10
4	811219114004	Christy Lourthu Samy A	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	S. High	10
5	811219114006	Periyasamy P	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A. S. High	10
6	811219114008	Saravana Kumar V	IV/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Periyasamy P	8
7	811219114010	Siriyac Selva A	IV/MECH	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	V. Aathilingam	10
				ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	A. Siriyac	1



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S.No	Reg No	Students Name	Year/Branch	Date 22.05.23		Date 23.05.23		Date 24.05.23		Date 25.05.23		Date 26.05.23		SIGNATURE OF THE STUDENT	NO OF SESSIONS ATTENDED
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
25	811220114020	Kanishkavardhini S	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	S.K.	10
26	811220114026	Loganathan C	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C.P.	10
27	811220114032	Mohamed Ashif A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	A.A.	10
28	811220114039	Sanjay Kumar M	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	M.K.	10
29	811220114040	Santhosh Kumar R	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	R.K.	10
30	811220114042	Saranya Sree Tr	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	S.S.	10
31	811220114043	Saravanan M	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	M.S.	10
32	811220114044	Sathishkumar V	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	V.S.	10
33	811220114047	Sheik Ameer M	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	M.A.	10
34	811220114052	Thamaraiselvan K	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	T.K.	10
35	811220114056	Vigneswaran K	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	V.K.	10
36	811220114057	Vijayakumar G	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	V.G.	10
37	811220114060	Yuvaraja A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y.A.	10
38	811220114302	Chellapandian R	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C.P.	10
39	811220114305	Mohamed Nafil A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	M.N.	10

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S.No	Reg No	Students Name	Year/Branch	Date 22.05.23		Date 23.05.23		Date 24.05.23		Date 25.05.23		Date 26.05.23		SIGNATURE OF THE STUDENT	NO OF SESSIONS ATTENDED
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
40	811220114057	Vijayakumar G	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
41	811220114060	Yuvaraja A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
42	811220114302	Chellapandian R	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
43	811220114305	Mohamed Nafil A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
44	811220114306	Ruban A	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
45	811221114006	Dhanasejaram D	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
46	811221114008	Dhiwakar R	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
47	811221114014	Kannan P	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
48	811221114022	Naveen M	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10

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HoD MECHANICAL



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Name of the Student :

Year/Sem:

AU Register Number:

Value Added Course

“Heat ventilation Air conditioning Technology”

MCQ QUESTIONS (25X4 = 100 Marks)

- Types of air conditioning are
 - Comfort air conditioning
 - Industrial air conditioning
 - Both (a) & (b)
 - None
- Summer air conditioning means
 - Cooling & humidification
 - Cooling & dehumidification
 - Both (a) & (b)
 - None
- Winter air conditioning means
 - Cooling and humidification
 - Heating & dehumidification
 - Heating and humidification
 - None
- In comfort air conditioning
 - Total room air recirculates
 - Total fresh air circulates
 - 50-50 room and fresh air circulates
 - None
- In comfort air conditioning, room air and ventilation air are in the ratio
 - 80 : 20
 - 60 : 40
 - 40:60
 - None
- In comfort air conditioning, room air
 - Alone is cooled & then mixed with ventilation air & then cooled
 - Is mixed with ventilation air & then cooled
 - Both (a) & (b)
 - None
- In operation theatres of comfort air conditioning, the ratio of room air and ventilation air is
 - 100 : 0
 - 0:100
 - 50 : 50
 - NONE


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8. Inside design conditions for comfort air conditioning are

- a. 20°C & 80 % RH
- b. 24°C & 100 % RH
- c. $20-24^{\circ}\text{C}$ & 90 % RH
- d. None

9. Inside design conditions for comfort air conditioning are

- a. $20-24^{\circ}\text{C}$ & 80 % RH
- b. $24-28^{\circ}\text{C}$ & 100 % RH
- c. $22-27^{\circ}\text{C}$ & 40-60 % RH
- d. None

10. In air conditioning, types of loads added are

- a. Sensible heat loads
- b. Latent heat loads
- c. Both (a) & (b)
- d. None

11. In comfort air conditioning, which load is more comes from the occupants

- a. Sensible heat load
- b. Latent heat load
- c. Both (a) & (b)
- d. None

12. Outside design conditions in comfort air conditioning are

- a. Constant
- b. Variable
- c. Can't say
- d. None

13. In order to achieve dehumidification, it is essential to decrease the temperature of air

- a. Below wet bulb temperature
- b. Dew point temperature
- c. Below dry bulb temperature
- d. None

14. For heating & humidification of air, it is passed through

- a. Water spray & then heated
- b. Hot water spray
- c. Over the heated surface
- d. None

15. The air conditioning used for winter air conditioning is

- a. Refrigerator
- b. Heat engine
- c. Heat pump
- d. None

16. The refrigerant used in car air conditioning is

- a. Ammonia
- b. R-134a
- c. R-22
- d. None

17. Fan coil unit is used in air conditioning of a

- a. Room
- b. Auditorium
- c. Both (a) & (b)
- d. None


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18. Air handling unit is used in the air conditioning of a
- a. Room
 - b. Auditorium
 - c. Both (a) and (b)
 - d. None
19. Fan coil unit is used in a
- a. Window air conditioner
 - b. Split air conditioner
 - c. Both (a) & (b)
 - d. None
20. Ducts are used with
- a. Window air conditioner
 - b. Split air conditioner
 - c. Both (a) & (b)
 - d. None
21. Ducts used in air conditioning are made of
- a. Copper
 - b. GI steel
 - c. Wood
 - d. None
22. The best shape of ducts in air conditioning is
- a. Round
 - b. Rectangular
 - c. Square
 - d. None
23. Condensers in central air conditioning plants are
- a. Air cooled
 - b. Water cooled
 - c. Evaporative cooled
 - d. None
24. Condensers in window air conditioner are
- a. Air cooled
 - b. Water cooled
 - c. Evaporative cooled
 - d. None
25. Condensers in air conditioning of auditoriums are
- a. Air cooled
 - b. Water cooled
 - c. Evaporative cooled
 - d. None


VAC Coordinator


HoP Mech

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Value Added Course

“Heat ventilation Air conditioning Technology”

ANSWER KEY

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

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Name of the Student: Arun Kumar M

Year/Sem: III / mech

AU Register Number: 81220114005

Value Added Course

“Heat ventilation Air conditioning Technology”

MCQ QUESTIONS (25X4 = 100 Marks)

1. Types of air conditioning are

- a. Comfort air conditioning
 c. Both (a) & (b)

- b. Industrial air conditioning
d. None

2. Summer air conditioning means

- a. Cooling & humidification
c. Both (a) & (b)

- b. Cooling & dehumidification
 d. None

3. Winter air conditioning means

- a. Cooling and humidification
c. Heating and humidification

- b. Heating & dehumidification
d. None

4. In comfort air conditioning

- a. Total room air recirculates
c. 50-50 room and fresh air circulates

- b. Total fresh air circulates
d. None

5. In comfort air conditioning, room air and ventilation air are in the ratio

- a. 80 : 20
c. 40:60

- b. 60 : 40
d. None

5. In comfort air conditioning, room air

- a. Alone is cooled & then mixed with ventilation air
b. Is mixed with ventilation air & then cooled
c. Both (a) & (b)

- d. None

7. In operation theatres of comfort air conditioning, the ratio of room air and ventilation air is

- a. 100 : 0
c. 50 : 50

- b. 0:100
d. NONE

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20/25



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- a. Below wet bulb temperature
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b. Hot water spray
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- a. Ammonia
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d. None

17. Fan coil unit is used in air conditioning of a

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b. Auditorium
c. Both (a) & (b)
d. None


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18. Air handling unit is used in the air conditioning of a
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c. Both (a) and (b)
d. None
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- a. Window air conditioner
b. Split air conditioner
c. Both (a) & (b)
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b. Water cooled
c. Evaporative cooled
d. None
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- a. Air cooled
b. Water cooled
c. Evaporative cooled
d. None


VAC Coordinator


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Department of Mechanical Engineering
Academic Year 2022-2023 – Even Semester
VALUE ADDED COURSE ASSESEMENT SHEET
“Heat ventilation Air conditioning Technology”

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S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100)(B)	(50% of A + 50% of B)
1	811219114001	Aathilingam V	IV/MECH	30	100	18	72	86
2	811219114002	Abimanyu C	IV/MECH	28	93	16	64	79
3	811219114003	Ajay S	IV/MECH	30	100	18	72	86
4	811219114004	Christy Lourthu Samy A	IV/MECH	30	100	21	84	92
5	811219114006	Periyasamy P	IV/MECH	26	87	17	68	77
6	811219114008	Saravana Kumar V	IV/MECH	30	100	18	72	86
7	811219114010	Siriyac Selva A	IV/MECH	AB	AB	AB	AB	AB
8	811219114011	Suriyaganesh M	IV/MECH	30	100	21	84	92
9	811219114012	Vaithiyalingam M	IV/MECH	28	93	20	80	87
10	811219114013	Vikash R	IV/MECH	28	93	18	72	83



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S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100)(B)	(50% of A + 50% of B)
11	811219114301	Hariharan R	IV/MECH	29	97	17	68	82
12	811219114302	Mohanraj G	IV/MECH	29	97	18	72	84
13	811219114303	Sivash K	IV/MECH	28	93	19	76	85
14	811219114701	Gokul R	IV/MECH	29	97	21	84	90
15	811219114702	Madhan Murugan S	IV/MECH	29	97	20	80	88
16	811219114703	Muthukaruppan M	IV/MECH	29	97	22	88	92
17	811219114704	Inigo Rithish P	IV/MECH	28	93	20	80	87
18	811220114001	Abinesh As	III/MECH	28	93	21	84	89
19	811220114003	Anbarasan M	III/MECH	29	97	20	80	88
20	811220114005	Arunkumar M	III/MECH	29	97	22	88	92
21	811220114008	Balamurugan R	III/MECH	28	93	18	72	83
22	811220114013	Dhanushraja P	III/MECH	29	97	19	76	86
23	811220114015	Durai Pandi A	III/MECH	30	100	18	72	86
24	811220114017	Hariharan M	III/MECH	29	97	21	84	90
25	811220114020	Kanishkavardhini S	III/MECH	29	97	22	88	92
26	811220114026	Loganathan C	III/MECH	28	93	20	80	87
27	811220114032	Mohamed Ashif A	III/MECH	29	97	21	84	90

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COLLEGE OF ENGINEERING

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S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100)(B)	(50% of A + 50% of B)
28	811220114039	Sanjay Kumar M	II/MECH	28	93	20	80	87
29	811220114040	Santhosh Kumar R	III/MECH	29	97	22	88	92
30	811220114042	Saranya Sree Tr	III/MECH	29	97	20	80	88
31	811220114043	Saravanan M	III/MECH	29	97	22	88	92
32	811220114044	Sathishkumar V	III/MECH	30	100	20	80	90
33	811220114047	Sheik Ameer M	III/MECH	28	93	21	84	89
34	811220114052	Thamaraiselvan K	III/MECH	29	97	20	80	88
35	811220114056	Vigneswaran K	III/MECH	28	93	22	88	91
36	811220114057	Vijayakumar G	III/MECH	29	97	21	84	90
37	811220114060	Yuvaraja A	III/MECH	29	97	22	88	92
38	811220114302	Chellapandian R	III/MECH	30	100	20	80	90
39	811220114305	Mohamed Nafil A	III/MECH	29	97	21	84	90
40	811220114306	Ruban A	III/MECH	29	97	20	80	88
41	811221114006	Dhanasejaram D	II/MECH	27	98	22	88	92
42	811221114008	Dhiwakar R	II/MECH	28	99	20	80	90
43	811221114014	Kannan P	II/MECH	29	94	21	84	89
44	811221114022	Naveen M	II/MECH	30	97	20	80	88

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S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100)(B)	(50% of A + 50% of B)
45	811220114043	Saravanan M	II/MECH	28	93	22	88	91
46	811220114044	Sathishkumar V	II/MECH	29	97	21	84	90
47	811220114047	Sheik Ameer M	II/MECH	29	97	22	88	92
48	811220114052	Thamaraiselvan K	II/MECH	30	100	20	80	90


VAC Coordinator


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HOD/MECHANICAL



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Report on Value Added Course

Title:	Heat ventilation Air conditioning Technology				
Resource Person:	Mr. Deepak Executive UNIQ-MEP Trichy.		Mr. Dhineshwaran G Executive UNIQ-MEP Trichy.		
Date of conduct from :	22.05.2023	To:	27.05.2023	Duration:	30 Hours
Organized Department :	MECHANICAL ENGINEERING				
Participant Year:	2,3, 4		No. of Students Registered :	48	
Venue:	Mechanical Seminar Hall Third Floor Mechanical Department IGCE				

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

- Knowledge about HVAC system
- Application of HVAC clearly students known
- Various gases usage in HVAC system Explained.
- Load circuits and pipeline circuits are explained clearly


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Manikandam, Trichy-620 012.

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


VAC Coordinator


HoD/MECH


Principal



Indra Ganesan

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Sample Photos of Value Added Course

Title: Heat ventilation Air conditioning Technology

Resource Person: Mr. Deepak
Executive
UNIQ-MEP
Trichy.

Mr. Dhineshwaran G
Executive
UNIQ-MEP
Trichy.

Date of conduct from : 22.05.2023 To: 27.05.2023 Duration: 30 Hours


Organized Department : MECHANICAL ENGINEERING

Participant Year: 2,3,4 No. of Students Registered : 48

Venue: Seminar Hall
Third Floor- Mechanical Department
IGCE

Sample Photo




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


VAC Coordinator


HOD/MECH


Principal



UNI UNIQUE
MEP

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. Ruban A, IV Year, MECH has successfully completed the value added course on "Heat ventilation Air conditioning Technology" organized by Department of Mechanical Engineering and IQAC of our institution in association with UNIQUE MEP from 22.05.2023 to 27.05.2023 (5days) during the Academic Year 2022-2023

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

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

Mr. K. Deepak
UNIQUE MEP

PRINCIPAL
IGCE

