



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)

(Accredited by NBA – ECE, EEE & MECH UG Programs)

Dindigul – Palani Highway, Dindigul 624 002

## CRITERIA 2- TEACHING- LEARNING AND EVALUATION

### Key Indicator- 2.5. Evaluation Process and Reforms (40)

Metric No.	Description
2.5.1 QIM	<i>Mechanism of internal/ external assessment is transparent and the grievance redressal system is time-bound and efficient</i>



Principal

Dr.D.SENTHIL KUMARAN, M.E.,Ph.D.,(HUS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindlagundu (Po),

Palani Road, Dindigul - 624 002.



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

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(Accredited by NBA – ECE, EEE & MECH UG Programs)

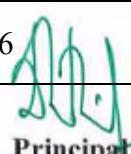
Dindigul – Palani Highway, Dindigul 624 002

## CRITERIA – 2 TEACHING - LEARNING AND EVALUATION

### 2.5 Evaluation Process and Reforms

#### **2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient**

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Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (NUS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindlagundu (Po),

Palani Road, Dindigul - 624 002.



**ANNA UNIVERSITY :: CHENNAI - 600 025**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**

External Appointment - Copy to Home College

28 January 2023

**From**

**The Zonal Coordinator**

Anna University

Chennai 25.

**To**

**The Principal**

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY (9221)

Through the Principal

Sir / Madam,

**Sub: Appointment of External Examiners for Practical/Project**

**Viva-voce Examinations Nov. / Dec. Examination,2022 - Intimation Reg.**

\*\*\*\*\*

Based on the information received from you, the list of the External Examiners appointed to different Colleges to conduct the Practical/Project Viva-voce Examinations Nov. / Dec. Examination,2022 along with their schedule of the Examinations are given below.

S.No.	Name of the Faculty appointed as External Examiner	Code and Name of the Reporting College	Degree,Branch University	&	Name of the Practical Subject with code	Date	Time	Number of candidates appearing (approx.)
1	9208176 - MERLIN RANI C	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC		CE8711 - Creative and Innovative Project (Activity Based - Subject Related)	21-01-2023	09:30 AM	26
<b>URL :</b>								
2	9215294 - K SUREKA	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	104 - B.E. Computer Science and Engineering - AUC		CS3351 - Digital Principles and Computer Organization	21-01-2023	09:30 AM	28
<b>URL :</b>								
3	9221080 - PRAVEEN JESURAJ V	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC		CE8311 - Construction Materials Laboratory	21-01-2023	09:30 AM	1
<b>URL :</b>								
4	9221067 - SIVAGANESAN T	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC		CE8512 - Water and Waste Water Analysis Laboratory	21-01-2023	09:30 AM	15
<b>URL :</b>								
5	9213348 - MOHANBABU G	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	105 - B.E. Electrical and Electronics Engineering - AUC		EE3311 - Electrical Machines - I Laboratory - I	21-01-2023	09:30 AM	28
<b>URL :</b>								
6	9221080 - PRAVEEN JESURAJ V	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC		CE8711 - Creative and Innovative Project (Activity Based - Subject Related)	21-01-2023	09:30 AM	12
<b>URL :</b>								
7	9208176 - MERLIN RANI C	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC		CE8711 - Creative and Innovative Project (Activity Based - Subject Related)	21-01-2023	12:30 PM	25
<b>URL :</b>								
8	9215294 - K SUREKA	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	104 - B.E. Computer Science and Engineering - AUC		CS3351 - Digital Principles and Computer Organization	21-01-2023	13:00 PM	28
<b>URL :</b>								

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## External Appointment - Copy to Home College

9	9221067 - SIVAGANESAN T	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	CE8512 - Water and Waste Water Analysis Laboratory	21-01-2023	13:00 PM	15
URL :							
10	9221124 - SABAREESWARAN M	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	114 - B.E. Mechanical Engineering - AUC	ME8511 - Kinematics and Dynamics Laboratory	23-01-2023	09:30 AM	23
URL :							
11	9129084 - ALDO TENIS A	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	23-01-2023	09:30 AM	23
URL :							
12	9215292 - M MOOHAMBIKAI	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS3381 - Object Oriented Programming Laboratory	23-01-2023	09:30 AM	31
URL :							
13	9217075 - SUJATHA	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	105 - B.E. Electrical and Electronics Engineering - AUC	EC3311 - Electronic Devices and Circuits Laboratory	23-01-2023	09:30 AM	28
URL :							
14	9221080 - PRAVEEN JESURAJ V	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	CE8512 - Water and Waste Water Analysis Laboratory	23-01-2023	09:30 AM	30
URL :							
15	9215292 - M MOOHAMBIKAI	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS3381 - Object Oriented Programming Laboratory	23-01-2023	13:00 PM	30
URL :							
16	9129084 - ALDO TENIS A	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	23-01-2023	13:00 PM	23
URL :							
17	9221124 - SABAREESWARAN M	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	114 - B.E. Mechanical Engineering - AUC	ME8511 - Kinematics and Dynamics Laboratory	23-01-2023	13:00 PM	23
URL :							
18	9221159 - M MUTHUKANNAN	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	114 - B.E. Mechanical Engineering - AUC	ME3382 - Manufacturing Technology Laboratory	24-01-2023	09:30 AM	18
URL :							
19	9215292 - M MOOHAMBIKAI	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS3311 - Data Structures Laboratory	24-01-2023	09:30 AM	31
URL :							
20	9221077 - KANDAELV V	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	114 - B.E. Mechanical Engineering - AUC	ME8512 - Thermal Engineering Laboratory	24-01-2023	09:30 AM	23
URL :							
21	9221111 - SELVABHARATHI G	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	CE8511 - Soil Mechanics Laboratory	24-01-2023	09:30 AM	30
URL :							
22	9221014 - V NIVEDHITHA	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	104 - B.E. Computer Science and Engineering - AUC	CS3361 - Data Science Laboratory	24-01-2023	09:30 AM	28
URL :							
23	9221128 - PADMA PRIYA N	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	24-01-2023	09:30 AM	22
URL :							
24	9215294 - K SUREKA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS8711 - Cloud Computing Laboratory	24-01-2023	09:30 AM	23



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URL :	25	9215294 - K SUREKA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS8481 - Database Management Systems Laboratory	24-01-2023	09:30 AM	11
URL :	26	9221067 - SIVAGANESAN T	9236 - JAINEE COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	CE8711 - Creative and Innovative Project (Activity Based - Subject Related)	24-01-2023	10:00 AM	2
URL :	27	9221198 - MURUGAN G	9219 - SRI SUBRAMANYA COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS8581 - Networks Laboratory	24-01-2023	10:00 AM	1
URL :	28	9221198 - MURUGAN G	9219 - SRI SUBRAMANYA COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	IT8761 - Security Laboratory	24-01-2023	10:00 AM	6
URL :	29	9221111 - SELVABHARATHI G	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	CE8511 - Soil Mechanics Laboratory	24-01-2023	12:30 PM	30
URL :	30	9215294 - K SUREKA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS8711 - Cloud Computing Laboratory	24-01-2023	12:30 PM	23
URL :	31	9221159 - M MUTHUKANNAN	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	114 - B.E. Mechanical Engineering - AUC	ME3382 - Manufacturing Technology Laboratory	24-01-2023	13:00 PM	17
URL :	32	9221014 - V NIVEDHITHA	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	104 - B.E. Computer Science and Engineering - AUC	CS3361 - Data Science Laboratory	24-01-2023	13:00 PM	28
URL :	33	9215292 - M MOOHAMBIKAI	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS3311 - Data Structures Laboratory	24-01-2023	13:00 PM	30
URL :	34	9221128 - PADMA PRIYA N	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	24-01-2023	13:00 PM	21
URL :	35	9221198 - MURUGAN G	9219 - SRI SUBRAMANYA COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS3381 - Object Oriented Programming Laboratory	24-01-2023	13:00 PM	4
URL :	36	9221077 - KANDAVEL V	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	114 - B.E. Mechanical Engineering - AUC	ME8512 - Thermal Engineering Laboratory	24-01-2023	13:00 PM	23
URL :	37	9221014 - V NIVEDHITHA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	IT8761 - Security Laboratory	25-01-2023	09:30 AM	23
URL :	38	6130200 - MANIKANDAN	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	EC8711 - Embedded Laboratory	25-01-2023	09:30 AM	32
URL :	39	9507122 - S KARTHIGAI LAKSHMI	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	EC8681 - Microprocessors and Microcontrollers Laboratory	25-01-2023	09:30 AM	27



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40	9221109 - K RAJESH	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	EC3352 - Digital Systems Design	25-01-2023	09:30 AM	22
URL : <a href="#">Click Here</a>							
41	9215292 - M MOOHAMBIKAI	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	25-01-2023	09:30 AM	19
URL : <a href="#">Click Here</a>							
42	9129084 - ALDO TENIS A	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	105 - B.E. Electrical and Electronics Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	25-01-2023	09:30 AM	21
URL : <a href="#">Click Here</a>							
43	9221198 - MURUGAN G	9219 - SRI SUBRAMANYA COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	CS3361 - Data Science Laboratory	25-01-2023	10:00 AM	4
URL : <a href="#">Click Here</a>							
44	9221014 - V NIVEDHITHA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	IT8761 - Security Laboratory	25-01-2023	12:30 PM	23
URL : <a href="#">Click Here</a>							
45	9221014 - V NIVEDHITHA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	GE3171 - Problem Solving and Python Programming Laboratory	25-01-2023	12:30 PM	2
URL : <a href="#">Click Here</a>							
46	9221014 - V NIVEDHITHA	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	103 - B.E. Civil Engineering - AUC	GE8161 - Problem Solving and Python Programming Laboratory	25-01-2023	12:30 PM	1
URL : <a href="#">Click Here</a>							
47	6130200 - MANIKANDAN	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	EC8711 - Embedded Laboratory	25-01-2023	13:00 PM	33
URL : <a href="#">Click Here</a>							
48	9129084 - ALDO TENIS A	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	105 - B.E. Electrical and Electronics Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	25-01-2023	13:00 PM	20
URL : <a href="#">Click Here</a>							
49	9507122 - S KARTHIGAI LAKSHMI	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	104 - B.E. Computer Science and Engineering - AUC	EC8681 - Microprocessors and Microcontrollers Laboratory	25-01-2023	13:00 PM	26
URL : <a href="#">Click Here</a>							
50	9215292 - M MOOHAMBIKAI	9223 - UNIVERSITY COLLEGE OF ENGINEERING , DINDIGUL	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	25-01-2023	13:00 PM	18
URL : <a href="#">Click Here</a>							
51	9221109 - K RAJESH	9208 - N P R COLLEGE OF ENGINEERING AND TECHNOLOGY	106 - B.E. Electronics and Communication Engineering - AUC	EC3352 - Digital Systems Design	25-01-2023	13:00 PM	21
URL : <a href="#">Click Here</a>							
52	9221176 - SAHAYARAJ G	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AU3311 - Mechanical Sciences Laboratory	28-01-2023	09:00 AM	8
URL : <a href="#">Click Here</a>							
53	9221124 - SABAREESWARAN M	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AT8712 - Vehicle Maintenance Laboratory	28-01-2023	09:00 AM	5
URL : <a href="#">Click Here</a>							
54	9221176 - SAHAYARAJ G	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AT8511 - Automotive Electrical and Electronics Laboratory	28-01-2023	12:00 PM	7
URL : <a href="#">Click Here</a>							



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55	9221091 - JAYAKUMAR S	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	419 - M.E. VLSI Design - AUC	VL4111 - FPGA Laboratory	29-01-2023	09:30 AM	10
URL : <a href="#">View</a>							
56	9215165 - JOSEPH DOMINIC VIJAYAKUMAR S	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	414 - M.E. Thermal Engineering - AUC	TE4111 - Thermal Engineering Laboratory	29-01-2023	11:00 AM	16
URL : <a href="#">View</a>							
57	7110243 - SEENIVASAPERUMAL V	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AT8411 - Automotive Components Laboratory	30-01-2023	09:00 AM	1
URL : <a href="#">View</a>							
58	9221159 - M MUTHUKANNAN	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AT8711 - Engine Performance and Emission Testing Laboratory	30-01-2023	09:00 AM	5
URL : <a href="#">View</a>							
59	8123046 - VINOTH KUMAR K	9216 - SBM COLLEGE OF ENGINEERING AND TECHNOLOGY	419 - M.E. VLSI Design - AUC	VL4112 - Analog IC Design Laboratory	30-01-2023	09:30 AM	10
URL : <a href="#">View</a>							
60	9221022 - V P JAY FANTIN	9201 - BHARATH NIKETAN ENGINEERING COLLEGE	403 - M.E. Communication Systems - AUC	EL4161 - Digital Communication Systems Laboratory	30-01-2023	10:00 AM	9
URL : <a href="#">View</a>							
61	9221159 - M MUTHUKANNAN	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AT8512 - Automotive Fuels and Lubricants Laboratory	30-01-2023	12:00 PM	7
URL : <a href="#">View</a>							
62	7110243 - SEENIVASAPERUMAL V	9214 - R.V.S. EDUCATIONAL TRUST'S GROUP OF INSTITUTION	102 - B.E. Automobile Engineering - AUC	AT8612 - Two and Three Wheelers Laboratory	30-01-2023	12:00 PM	1
URL : <a href="#">View</a>							
63	9221109 - K RAJESH	9201 - BHARATH NIKETAN ENGINEERING COLLEGE	403 - M.E. Communication Systems - AUC	CU4161 - Advanced Digital Signal Processing Laboratory	31-01-2023	10:00 AM	10
URL : <a href="#">View</a>							

You are requested to ensure that all the faculty members of your college attend the above examination-duties without fail.

The above orders have to be kept strictly confidential. Your kind cooperation is requested in this regard.

Yours Faithfully,

Zonal Coordinator



Principal  
Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (WUS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindlagundi (Po),

Palani Road, Dindigul - 624 002.



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Internal / External Appointment - Copy to Reporting College

28 January 2023

**From**

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Anna University

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Through the Principal

Sir / Madam,

**Sub: Appointment of Internal/External Examiners for Practical/Project**

**Viva-voce Examinations Nov. / Dec. Examination,2022 - Intimation Reg.**

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Based on the information received from the Principals of the Colleges concerned and the information provided by you, the list of the Internal and the External Examiners appointed to your College to conduct the Practical/Project Viva-voce Examinations Nov. / Dec. Examination,2022 along with the schedule of the Examinations are given below.

S.No.	Degree,Branch University	&	Name of the Practical Subject with code	Date	Time	Number of candidates appearing (approx.)	Name of the Internal Examiner / Supervisor	Name of the External Examiner
1	104 - B.E. Computer Science and Engineering - AUC		CS3361 - Data Science Laboratory	27-01-2023	09:30 AM	33	9215323 - DHANALAKSHMI J	9208358 - AROCKIA IRUDAYARAJA M Ph.:9944563164
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
2	114 - B.E. Mechanical Engineering - AUC		ME8381 - Computer Aided Machine Drawing	27-01-2023	09:30 AM	2	9221179 - DHEENATHAYALAN P	9208383 - SARAVANA KANNAN T Ph.:9941033755
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
3	105 - B.E. Electrical and Electronics Engineering - AUC		CS3362 - C Programming and Data Structures Laboratory	27-01-2023	09:30 AM	25	9221195 - SUGANYA S	9216083 - RAJAPANDI P Ph.:9943341166
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
4	106 - B.E. Electronics and Communication Engineering - AUC		EC8562 - Digital Signal Processing Laboratory	27-01-2023	09:30 AM	21	9221109 - K RAJESH	9130015 - SARAVANA RAM R Ph.:9442376853
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
5	106 - B.E. Electronics and Communication Engineering - AUC		EC8761 - Advanced Communication Laboratory	27-01-2023	09:30 AM	29	7303089 - M MANIKANDAN	9223007 - SENTHILKUMAR M Ph.:9965672227
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
6	114 - B.E. Mechanical Engineering - AUC		ME8512 - Thermal Engineering Laboratory	27-01-2023	09:30 AM	28	9221159 - M MUTHUKANNAN	9208383 - SARAVANA KANNAN T Ph.:9941033755
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
7	104 - B.E. Computer Science and Engineering - AUC		IT8761 - Security Laboratory	27-01-2023	09:30 AM	28	9221128 - PADMA PRIYA N	4226031 - A POOBALAN Ph.:9994463623
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
8	106 - B.E. Electronics and Communication Engineering - AUC		EC8563 - Communication Networks Laboratory	27-01-2023	09:30 AM	23	9221042 - K S ARUN KUMAR	9208395 - ALLWYN ANAND S Ph.:9443425508
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
9	102 - B.E. Automobile Engineering - AUC		AT8711 - Engine Performance and Emission Testing Laboratory	27-01-2023	09:30 AM	18	9221176 - SAHAYARAJ G	9214057 - ARUN KUMAR L Ph.:9944699025
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								
10	106 - B.E. Electronics and Communication Engineering - AUC		EC3352 - Digital Systems Design	27-01-2023	09:30 AM	29	9221022 - V P JAY FANTIN	9221069 - GOPI SAMINATHAN A Ph.:9994261961
URL : <a href="#">http://www.annauniv.edu/zonelist/12_ZONE_AU_1.html</a>								


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11	106 - B.E. Electronics and Communication Engineering - AUC	EC3361 - Electronic Devices and Circuits Laboratory	27-01-2023	09:30 AM	29	8123046 - VINOTH KUMAR K	9129023 - K KANIMOZHI Ph.:7200340766
URL : <a href="#">Click here</a>							
12	114 - B.E. Mechanical Engineering - AUC	ME3381 - Computer Aided Machine Drawing	27-01-2023	09:30 AM	19	9221179 - DHEENATHAYALAN P	9216010 - J SURESH Ph.:8940755831
URL : <a href="#">Click here</a>							
13	105 - B.E. Electrical and Electronics Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	27-01-2023	13:00 PM	26	9221195 - SUGANYA S	9216083 - RAJAPANDI P Ph.:9943341166
URL : <a href="#">Click here</a>							
14	106 - B.E. Electronics and Communication Engineering - AUC	EC3352 - Digital Systems Design	27-01-2023	13:00 PM	28	9221022 - V P JAY FANTIN	9221069 - GOPI SAMINATHAN A Ph.:9994261961
URL : <a href="#">Click here</a>							
15	114 - B.E. Mechanical Engineering - AUC	ME3381 - Computer Aided Machine Drawing	27-01-2023	13:00 PM	19	9221179 - DHEENATHAYALAN P	9216010 - J SURESH Ph.:8940755831
URL : <a href="#">Click here</a>							
16	104 - B.E. Computer Science and Engineering - AUC	IT8761 - Security Laboratory	27-01-2023	13:00 PM	27	9221128 - PADMA PRIYA N	4226031 - A POOBALAN Ph.:9994463623
URL : <a href="#">Click here</a>							
17	114 - B.E. Mechanical Engineering - AUC	ME8512 - Thermal Engineering Laboratory	27-01-2023	13:00 PM	27	9221159 - M MUTHUKANNAN	9208383 - SARAVANA KANNAN T Ph.:9941033755
URL : <a href="#">Click here</a>							
18	106 - B.E. Electronics and Communication Engineering - AUC	EC8761 - Advanced Communication Laboratory	27-01-2023	13:00 PM	29	7303089 - M MANIKANDAN	9223007 - SENTHILKUMAR M Ph.:9965672227
URL : <a href="#">Click here</a>							
19	104 - B.E. Computer Science and Engineering - AUC	CS3361 - Data Science Laboratory	27-01-2023	13:00 PM	33	9215323 - DHANALAKSHMI J	9208358 - AROCKIA IRUDAYARAJA M Ph.:9944563164
URL : <a href="#">Click here</a>							
20	106 - B.E. Electronics and Communication Engineering - AUC	EC8563 - Communication Networks Laboratory	27-01-2023	13:00 PM	22	9221042 - K S ARUN KUMAR	9208395 - ALLWYN ANAND S Ph.:9443425508
URL : <a href="#">Click here</a>							
21	106 - B.E. Electronics and Communication Engineering - AUC	EC8562 - Digital Signal Processing Laboratory	27-01-2023	13:00 PM	21	9221109 - K RAJESH	9130015 - SARAVANA RAM R Ph.:9442376853
URL : <a href="#">Click here</a>							
22	106 - B.E. Electronics and Communication Engineering - AUC	EC3361 - Electronic Devices and Circuits Laboratory	27-01-2023	13:00 PM	28	8123046 - VINOTH KUMAR K	9129023 - K KANIMOZHI Ph.:7200340766
URL : <a href="#">Click here</a>							
23	105 - B.E. Electrical and Electronics Engineering - AUC	CS8383 - Object Oriented Programming Laboratory	29-01-2023	09:30 AM	22	9221188 - DIVYA NJ	9208284 - PRISCA MARY J Ph.:9942403819
URL : <a href="#">Click here</a>							
24	104 - B.E. Computer Science and Engineering - AUC	CS8581 - Networks Laboratory	29-01-2023	09:30 AM	29	9221195 - SUGANYA S	8100065 - D RAMESH Ph.:9489384535
URL : <a href="#">Click here</a>							
25	106 - B.E. Electronics and Communication Engineering - AUC	EC8563 - Communication Networks Laboratory	29-01-2023	09:30 AM	21	9221129 - KARTHIK S	9116057 - SATHIS A Ph.:9965656181
URL : <a href="#">Click here</a>							
26	106 - B.E. Electronics and Communication Engineering - AUC	EC3352 - Digital Systems Design	29-01-2023	09:30 AM	29	9221182 - SANGEETHA R	9208374 - AMEENA BANU M Ph.:8667588200
URL : <a href="#">Click here</a>							
27	106 - B.E. Electronics and Communication Engineering - AUC	EC3361 - Electronic Devices and Circuits Laboratory	29-01-2023	09:30 AM	29	9221193 - ABIRAMI	9116009 - JAYAPRAKASAM K Ph.:9840210177
URL : <a href="#">Click here</a>							
28	104 - B.E. Computer Science and Engineering - AUC	CS3311 - Data Structures Laboratory	29-01-2023	09:30 AM	33	9215292 - M MOOHAMBIKAI	9223058 - SASIKALA DEVI Ph.:9655332238
URL : <a href="#">Click here</a>							
29	106 - B.E. Electronics and Communication Engineering - AUC	EC8562 - Digital Signal Processing Laboratory	29-01-2023	09:30 AM	23	7142098 - R SENTHIL KUMAR	8139027 - GOVINDARAJ S Ph.:9790602104
URL : <a href="#">Click here</a>							
30	106 - B.E. Electronics and Communication Engineering - AUC	EC8761 - Advanced Communication Laboratory	29-01-2023	09:30 AM	29	9216039 - JEYALAKSHMIM	9107051 - SUDHAKAR S Ph.:9884497228
URL : <a href="#">Click here</a>							



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31	106 - B.E. Electronics and Communication Engineering - AUC	EC3352 - Digital Systems Design	29-01-2023	13:00 PM	28	9221182 - SANGEETHA R	9208374 - AMEENA BANU M Ph.:8667588200
URL :							
32	104 - B.E. Computer Science and Engineering - AUC	CS3311 - Data Structures Laboratory	29-01-2023	13:00 PM	33	9215292 - M MOOHAMBIKAI	9223058 - SASIKALA DEVI Ph.:9655332238
URL :							
33	104 - B.E. Computer Science and Engineering - AUC	CS8581 - Networks Laboratory	29-01-2023	13:00 PM	29	9221195 - SUGANYA S	8100065 - D RAMESH Ph.:9489384535
URL :							
34	106 - B.E. Electronics and Communication Engineering - AUC	EC3361 - Electronic Devices and Circuits Laboratory	29-01-2023	13:00 PM	28	9221193 - ABIRAMI	9116009 - JAYAPRAKASAM K Ph.:9840210177
URL :							
35	106 - B.E. Electronics and Communication Engineering - AUC	EC8562 - Digital Signal Processing Laboratory	29-01-2023	13:00 PM	22	7142098 - R SENTHIL KUMAR	8139027 - GOVINDARAJ S Ph.:9790602104
URL :							
36	106 - B.E. Electronics and Communication Engineering - AUC	EC8563 - Communication Networks Laboratory	29-01-2023	13:00 PM	21	9221129 - KARTHIK S	9116057 - SATHIS A Ph.:9965656181
URL :							
37	106 - B.E. Electronics and Communication Engineering - AUC	EC8761 - Advanced Communication Laboratory	29-01-2023	13:00 PM	29	9216039 - JEYALAKSHMIM	9107051 - SUDHAKAR S Ph.:9884497228
URL :							
38	106 - B.E. Electronics and Communication Engineering - AUC	EC8711 - Embedded Laboratory	30-01-2023	09:30 AM	29	6130200 - MANIKANDAN	9223015 - R GOMATHI Ph.:9442464998
URL :							
39	104 - B.E. Computer Science and Engineering - AUC	CS8711 - Cloud Computing Laboratory	30-01-2023	09:30 AM	28	9221198 - MURUGAN G	9219045 - M ARULPRAKASH Ph.:9442991723
URL :							
40	403 - M.E. Communication Systems - AUC	CU4161 - Advanced Digital Signal Processing Laboratory	30-01-2023	09:30 AM	1	9221109 - K RAJESH	9203012 - CHITRA T Ph.:9994298032
URL :							
41	105 - B.E. Electrical and Electronics Engineering - AUC	EC3311 - Electronic Devices and Circuits Laboratory	30-01-2023	09:30 AM	25	9221186 - BAVITHRA S	9208165 - J G SABARISH Ph.:9789526732
URL :							
42	106 - B.E. Electronics and Communication Engineering - AUC	EC8461 - Circuits Design and Simulation Laboratory	30-01-2023	09:30 AM	5	9219013 - PREMKUMAR M	9223015 - R GOMATHI Ph.:9442464998
URL :							
43	106 - B.E. Electronics and Communication Engineering - AUC	EC8561 - Communication Systems Laboratory	30-01-2023	09:30 AM	21	9219013 - PREMKUMAR M	9219012 - AYYAPPAN S Ph.:9789437706
URL :							
44	102 - B.E. Automobile Engineering - AUC	AT8712 - Vehicle Maintenance Laboratory	30-01-2023	09:30 AM	18	9221176 - SAHAYARAJ	9214057 - ARUN KUMAR L G Ph.:9944699025
URL :							
45	114 - B.E. Mechanical Engineering - AUC	ME8511 - Kinematics and Dynamics Laboratory	30-01-2023	09:30 AM	28	9221181 - KARTHICK U	8221026 - MUKESH KUMAR P C Ph.:9443829244
URL :							
46	114 - B.E. Mechanical Engineering - AUC	ME3382 - Manufacturing Technology Laboratory	30-01-2023	09:30 AM	19	9221048 - PRABAKARAN M	9223065 - SEETHARAMAN R Ph.:9442573993
URL :							
47	104 - B.E. Computer Science and Engineering - AUC	CS8582 - Object Oriented Analysis and Design Laboratory	30-01-2023	09:30 AM	29	9215294 - K SUREKA	9633194 - K RAMANAN Ph.:9442664938
URL :							
48	103 - B.E. Civil Engineering - AUC	CE8512 - Water and Waste Water Analysis Laboratory	30-01-2023	09:30 AM	23	9221111 - SELVABHARATHI G	9532007 - SASHIKUMAR M C Ph.:9487828555
URL :							
49	103 - B.E. Civil Engineering - AUC	CE8711 - Creative and Innovative Project (Activity Based - Subject Related)	30-01-2023	09:30 AM	15	9221202 - M P KARTHIK	8100017 - ILANGOVAN Ph.:9443393649
URL :							
50	114 - B.E. Mechanical Engineering - AUC	ME8781 - Mechatronics Laboratory	30-01-2023	09:30 AM	24	9221077 - KANDADEV V	9223028 - PREM ANANTH Ph.:9442093694
URL :							



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70	105 - B.E. Electrical and Electronics Engineering - AUC	EE3311 - Electrical Machines - I Laboratory - I	31-01-2023	09:30 AM	25	9221020 - D MANOJ	9221157 - K VIJAYAKUMAR Ph.:9486521381
URL :							
71	106 - B.E. Electronics and Communication Engineering - AUC	EC8561 - Communication Systems Laboratory	31-01-2023	09:30 AM	23	9219143 - SARANYA G	9216007 - SENTHIL KUMARAN S Ph.:9791570530
URL :							
72	114 - B.E. Mechanical Engineering - AUC	ME8462 - Manufacturing Technology Laboratory - II	31-01-2023	09:30 AM	1	7135507 - KARTHICK U	9130065 - K RAJA Ph.:9443457539
URL :							
73	114 - B.E. Mechanical Engineering - AUC	ME8513 - Metrology and Measurements Laboratory	31-01-2023	09:30 AM	28	9221175 - SELWIN M	9130065 - K RAJA Ph.:9443457539
URL :							
74	106 - B.E. Electronics and Communication Engineering - AUC	EC8711 - Embedded Laboratory	31-01-2023	09:30 AM	29	9221091 - JAYAKUMAR S	9201146 - VIJAYARAJAN S.M Ph.:9994645671
URL :							
75	114 - B.E. Mechanical Engineering - AUC	ME8711 - Simulation and Analysis Laboratory	31-01-2023	09:30 AM	24	9221124 - SABAREESWARAN M	9213176 - PALPANDI M Ph.:9843046150
URL :							
76	106 - B.E. Electronics and Communication Engineering - AUC	EC3271 - Circuits Analysis Laboratory	31-01-2023	09:30 AM	1	9219143 - SARANYA G	9216007 - SENTHIL KUMARAN S Ph.:9791570530
URL :							
77	105 - B.E. Electrical and Electronics Engineering - AUC	EE8711 - Power System Simulation Laboratory	31-01-2023	09:30 AM	22	9221120 - SATHEESH KUMAR	9223016 - VASANTHI Ph.:9750068023
URL :							
78	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	31-01-2023	09:30 AM	29	9221127 - GEETHA A	9216308 - KEERTHIKA V Ph.:7598457512
URL :							
79	403 - M.E. Communication Systems - AUC	EL4161 - Digital Communication Systems Laboratory	31-01-2023	09:30 AM	1	9219013 - PREMKUMAR M	9203003 - THARCIS P Ph.:9840345810
URL :							
80	104 - B.E. Computer Science and Engineering - AUC	EC8681 - Microprocessors and Microcontrollers Laboratory	31-01-2023	09:30 AM	29	9221185 - SUBHAMATHI A S F	9216147 - SANKARANARAYANAN R Ph.:9944998982
URL :							
81	105 - B.E. Electrical and Electronics Engineering - AUC	HS8581 - Professional Communication	31-01-2023	09:30 AM	22	9221102 - J JOHN PRATEEBA	9219002 - SUTHAKAR B Ph.:9865291235
URL :							
82	104 - B.E. Computer Science and Engineering - AUC	CS3381 - Object Oriented Programming Laboratory	31-01-2023	09:30 AM	33	9221191 - ANU LAVANYA N	9208387 - UMMUGULTHUM NATCHIAR S Ph.:9442023055
URL :							
83	103 - B.E. Civil Engineering - AUC	CE8511 - Soil Mechanics Laboratory	31-01-2023	09:30 AM	23	9208176 - MERLIN RANI C	9223064 - MADHAVAN V Ph.:9942842167
URL :							
84	414 - M.E. Thermal Engineering - AUC	TE4111 - Thermal Engineering Laboratory	31-01-2023	09:30 AM	2	9221159 - M MUTHUKANNAN	9215145 - S SIVAKUMAR Ph.:9943610734
URL :							
85	104 - B.E. Computer Science and Engineering - AUC	CS3271 - Programming in C Laboratory	31-01-2023	13:00 PM	1	9221191 - ANU LAVANYA N	9216308 - KEERTHIKA V Ph.:7598457512
URL :							
86	106 - B.E. Electronics and Communication Engineering - AUC	EC8711 - Embedded Laboratory	31-01-2023	13:00 PM	29	9221091 - JAYAKUMAR S	9201146 - VIJAYARAJAN S.M Ph.:9994645671
URL :							
87	105 - B.E. Electrical and Electronics Engineering - AUC	EE3311 - Electrical Machines - I Laboratory - I	31-01-2023	13:00 PM	26	9221020 - D MANOJ	9221157 - K VIJAYAKUMAR Ph.:9486521381
URL :							
88	105 - B.E. Electrical and Electronics Engineering - AUC	EE8711 - Power System Simulation Laboratory	31-01-2023	13:00 PM	22	9221120 - SATHEESH KUMAR	9223016 - VASANTHI Ph.:9750068023
URL :							
89	106 - B.E. Electronics and Communication Engineering - AUC	CS3362 - C Programming and Data Structures Laboratory	31-01-2023	13:00 PM	28	9221127 - GEETHA A	9216308 - KEERTHIKA V Ph.:7598457512
URL :							



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90	104 - B.E. Computer Science and Engineering - AUC	EC8681 - Microprocessors and Microcontrollers Laboratory	31-01-2023	13:00 PM	29	9221185 - SUBHAMATHI A S F	9216147 - SANKARANARAYANAN R Ph.:9944998982
URL : <a href="#">View</a>							
91	104 - B.E. Computer Science and Engineering - AUC	CS3381 - Object Oriented Programming Laboratory	31-01-2023	13:00 PM	33	9221191 - ANU LAVANYA N	9208387 - UMMUGULTHUM NATCHIAR S Ph.:9442023055
URL : <a href="#">View</a>							
92	106 - B.E. Electronics and Communication Engineering - AUC	EC8561 - Communication Systems Laboratory	31-01-2023	13:00 PM	22	9219143 - SARANYA G	9216007 - SENTHIL KUMARAN S Ph.:9791570530
URL : <a href="#">View</a>							
93	103 - B.E. Civil Engineering - AUC	CE3361 - Surveying and Levelling Laboratory	31-01-2023	13:00 PM	15	9221067 - SIVAGANESAN T	9223064 - MADHAVAN V Ph.:9942842167
URL : <a href="#">View</a>							
94	114 - B.E. Mechanical Engineering - AUC	ME8513 - Metrology and Measurements Laboratory	31-01-2023	13:00 PM	27	9221175 - SELWIN M	9130065 - K RAJA Ph.:9443457539
URL : <a href="#">View</a>							
95	114 - B.E. Mechanical Engineering - AUC	ME8711 - Simulation and Analysis Laboratory	31-01-2023	13:00 PM	24	9221124 - SABAREESWARAN M	9213176 - PALPANDI M Ph.:9843046150
URL : <a href="#">View</a>							

You are requested ensure the conduct of the practical examinations as per the above schedule in the presence of both the Internal and External Examiners and to give necessary instructions to the Internal Examiner i) to keep the lab ready ii) to apprise the External Examiners about the Laboratory facilities available well in advance

You are further requested to send the following documents pertaining to all the Practical Examinations to the Controller of the Examinations by name within two days after the completion of the all the Practical Examinations.

- i. The mark statement signed by both Internal and External examiner in a sealed cover.
- ii. The attendance sheets.
- iii. A copy of the question paper

Allowance to incidental expenses and remuneration for conducting the Practical Examinations has to be paid by you to the staff concerned on the last day of the examination concerned.

The above orders have to be kept strictly confidential. Your kind cooperation is requested in this regard.

Yours Faithfully,

Zonal Coordinator



  
**Principal**  
**Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (WUS)**  
**Principal**  
**SSM Institute of Engineering and Technology**  
**Kuttathupatti Village, Sindelagundu (Po),**  
**Palani Road, Dindigul - 624 002.**



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Dindigul – Palani Highway, Dindigul – 624 002

## Department of Mechanical Engineering

Academic Year 2022-2023 (ODD SEM)

### (INTERNAL TEST -II) TIME TABLE

Year & Semester	Date	Session	Sub.Code. and Name
III & V	19.10.2022	FN	ME8595-Thermal Engineering- II
		AN	ME8593-Design of Machine Elements
	20.10.2022	FN	ME8501-Metrology and Measurements
		AN	ME8594-Dynamics of Machines
	21.10.2022	FN	ORO551-Renewable Energy Sources
IV & VII	19.10.2022	FN	ME8792-Power Plant Engineering
		AN	ME8793-Process Planning and Cost Estimation
	20.10.2022	FN	ME8791-Mechatronics
		AN	OML751- Testing of Materials
	21.10.2022	FN	ME8099-Robotics ME8097-Non-Destructive Testing and Evaluation
		AN	GE8077-Total Quality Management ME8073-Unconventional Machining

Note : FN – 11.00 AM to 12.30 PM

AN - 03.00 PM to 04.30 PM

S. M. Jams  
Dept. Exam. Coordinator

  
HOD/Mech.

  
Principal



## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

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C. No. 2022-2023 / EC-07

Date: 10.10.2022

### CIRCULAR

The Second Internal Assessment Exam for V & VII semesters has been planned to conduct from 19<sup>th</sup> to 21<sup>st</sup> October 2022 (Two exams per day FN & AN). Syllabus for the same should be informed to the students prior to the conduct of exam. Faculty members are requested to submit question papers for Internal Assessment Exam (duly signed by the HoD), to College Exam Cell, on or before **12.10.2022, 04.00 p.m.**

#### **Test Timing:**

FN: 11.00 am to 12.30 pm

AN: 03.00 am to 04.30 pm

#### **Question paper format:**

<b>Part A</b>	$5*2 = 10$ Marks
<b>Part B</b>	$2*16 = 32$ Marks
<b>Part C</b>	$1*8=8$ Marks

EXAMCELL

PRINCIPAL

#### **Copy To:**

1. Administrative Officer

2. Notice Board

3. All HoD's :

AUTO	CIVIL	CSE	ECE	EEE	MECH	S&H
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4. Exam-cell Coordinators

AUTO	CIVIL	CSE	ECE	EEE	MECH	S&H
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**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)  
Dindigul – Palani Highway, Dindigul 624 002DEPARTMENT OF MECHANICAL ENGINEERING**INTERNAL TEST - I**Subject Code: ME8099  
Year & SEM: IV & VII  
Section: A & BSubject :Robotics  
Date : 13.09.2023  
Max. Marks: 50Answer all the questionsPart A (5 x2 = 10 marks)

- 1) Write two laws of Robotics R,CO1  
 2) Draw the revolving and twisting joints. U,CO1  
 3) What do you understand from the notation 'TRR' of a robot? U,CO1  
 4) What is meant by robot anatomy? R,CO1  
 5) List out the robot's major components? R,CO1

Part B (2 x16 = 32 marks)

- 6) Discuss the four types of robot controls. A,CO1

**OR**

- 7) Enumerate four different types of mechanical joints used in robot A,CO1  
 8) Explain the various drive system used with an industrial robot and compare their features, merits and demerits. A,CO2

**OR**

- 9) With neat sketch, explain the working principle, construction, application, advantages and disadvantages of a stepper motor. A,CO2

Part C (1 x 8 = 8 marks)

- 10) Describe the important specifications of a robot and choose a suitable configuration for transferring 200-gram rod of 150 mm length. Give your justification. A<sub>2</sub>,CO1

M. Sabareeswaran  
 Faculty-in-charge  
 (Dr.M.Sabareeswaran)

L. S.  
 12/09/2023  
 HOD/Mech

Part	Bloom's Taxonomy level						Total Marks
	Remember R	Understand U	Apply A	Analyze Az	Evaluate E	Create C	
Part A	6	4	0	0	-	-	10
Part B	0	0	32	0	--	--	32
Part C	0	0	0	8	--	--	8
Total	6	4	32	8	0	0	50
	12%	8%	64%	16%	--	--	
	20%		80%		--	--	
	Maximum 20%		Maximum 80%				



Reg. No. : 

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Question Paper Code : 90864

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022

Fourth / Fifth Semester

Mechanical Engineering

ME 8594 – DYNAMICS OF MACHINES

(Common to : Mechanical Engineering (Sandwich)/ Mechatronics Engineering)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State D' Alembert's principle.
2. Define coefficient of fluctuation of energy.
3. What is dynamic balancing?
4. What are the different types of balancing machines?
5. What is meant by degrees of freedom in a vibrating system?
6. When do you say a vibrating system is under-damped?
7. What is meant by harmonic forcing?
8. Define transmissibility.
9. What is the function of the Governor?
10. What is the effect of gyroscopic couple on the rolling of the ship? Why?

PART B — (5 × 13 = 65 marks)

11. (a) The crank-pin circle radius of a horizontal engine is 300 mm. The mass of the reciprocating parts is 250 kg. When the crank has travelled  $60^\circ$  from I.D.C., the difference between the driving and the back pressures is  $0.35 \text{ N/mm}^2$ . The connecting rod length between centres is 1.2 m and the cylinder bore is 0.5 m. If the engine runs at 250 r.p.m. and if the effect of piston rod diameter is neglected.

Calculate (i) pressure on slide bars, (ii) thrust in the connecting rod, (iii) tangential force on the crank-pin, and (iv) turning moment on the crank shaft.

Or

- (b) The equation of the turning moment curve of a three-crank engine is  $(5000 + 1500 \sin 3\theta) \text{ N-m}$ . where  $\theta$  is the crank angle in radians. The moment of inertia of the flywheel is  $1000 \text{ kg m}^2$  and the mean speed is 300 r.p.m. Calculate: (i) power of the engine, and (ii) the maximum fluctuation of the speed of the flywheel in percentage when (6+7)

- (1) the resisting torque is constant, and  
(2) the resisting torque is  $(5000 + 600 \sin \theta) \text{ N-m}$ .

12. (a) A shaft carries four masses A, B, C and D of magnitude 200 kg, 300 kg, 400 kg and 200 kg respectively and revolving at radii 80 mm, 70 mm, 60 mm and 80 mm in planes measured from A at 300 mm, 400 mm and 700 mm. The angles between the cranks measured anticlockwise are A to B  $45^\circ$ , B to C  $70^\circ$  and C to D  $120^\circ$ . The balancing masses are to be placed in planes X and Y. The distance between planes A and X is 100 mm, between X and Y is 400 mm and between Y and D is 200 mm. If the balancing masses revolve at a radius of 100 mm, find their magnitudes and angular positions.

Or

- (b) The cranks and connecting rods of a 4-cylinder in-line engine running at 1800 r.p.m. are 60 mm and 240 mm each respectively and the cylinders are spaced 150 mm apart. If the cylinders are numbered 1 to 4 in sequence from one end, the cranks appear at intervals of  $90^\circ$  in an end view in the order 1-4-2-3. The reciprocating mass corresponding to each cylinder is 1.5 kg.

Determine:

- (i) Unbalanced primary and secondary forces, if any, and (6)  
(ii) Unbalanced primary and secondary couples with reference to central plane of the engine (7)

15. (a) A Porter governor has all four arms 250mm long. The upper arms are attached on the axis of rotation and the lower arms are attached to the sleeve at a distance of 30 mm from the axis. The mass of each ball is 5 kg and the sleeve has a mass of 50 kg. The extreme radii of rotation are 150 mm and 200 mm. Determine the range of speed of the governor.

Or

- (b) A ship propelled by a turbine rotor which has a mass of 5 tonnes and a speed of 2100 r.p.m. The rotor has a radius of gyration of 0.5 m and rotates in a clockwise direction when viewed from the stern. Find the gyroscopic effects in the following conditions:

- (i) The ship sails at a speed of 30 km/h and steers to the left in a curve having 60 m radius. (4)
- (ii) The ship pitches 6 degree above and 6 degree below the horizontal position. The bow is descending with its maximum velocity. The motion due to pitching is simple harmonic and the periodic time is 20 seconds. (4)
- (iii) The ship rolls and at a certain instant it has an angular velocity of 0.03 rad/s clockwise when viewed from stern. (3)

Determine also the maximum angular acceleration during pitching. Explain how the direction of motion due to gyroscopic effect is determined in each case. (2)

PART C — (1 × 15 = 15 marks)

16. (a) A vehicle has a mass of 490 kg and the total spring constant of its suspension system is 58800 N/m. The profile of the road may be approximated to a sine wave of amplitude 40 mm and wavelength 4.0 meters. Determine

- (i) The critical speed of the vehicle (5)
- (ii) The amplitude of the steady state motion of the mass when the vehicle is driven at critical speed and the damping factor is 0.5 and (5)
- (iii) The amplitude of steady state motion of the mass when the vehicle is driven at 57 km/hr and the damping factor is 0.5. (5)

Or

- (b) The turning moment diagram for a multi-cylinder engine has been drawn to a scale of 1 mm to 500 N-m torque and 1 mm to  $6^\circ$  of crank displacement. The intercepted areas between output torque curve and mean resistance line taken in order from one end, in sq. mm are - 30, + 410, - 280, + 320, - 330, + 250, - 360, + 280, - 260 sq. mm, when the engine is running at 800 r.p.m. The engine has a stroke of 300 mm and the fluctuation of speed is not to exceed  $\pm 2\%$  of the mean speed. Determine a suitable diameter and cross-section of the flywheel rim for a limiting value of the safe centrifugal stress of 7 MPa. The material density may be assumed as  $7200 \text{ kg/m}^3$ . The width of the rim is to be 5 times the thickness.

13. (a) A vibratory system consists of a mass of 8 kg, spring stiffness 5.6 N/mm and a dashpot of damped coefficient of 40 N/m/s. Find:

- (i) the critical damping coefficient, (2)
- (ii) the damping factor, (2)
- (iii) the natural frequency of damped vibration, (2)
- (iv) the logarithmic decrement, (2)
- (v) the ratio of two consecutive amplitudes, and (2)
- (vi) the number of cycles after which the original amplitude is reduced to 20 percent (3)

Or

(b) A steel shaft ABCD 1.5 m long has flywheels at its ends A and D. The mass of the flywheel A is 600 kg and has a radius of gyration of 0.6 m. The mass of the flywheel D is 800 kg and has a radius of gyration of 0.9 m. The connecting shaft has a diameter of 50 mm for portion AB which is 0.4 m long; and has a diameter of 60mm for portion BC which is 0.5 m long, and has a diameter of d mm for portion CD which is 0.6 m long. Determine:

- (i) The diameter 'd' of the portion CD so that the node of the torsional vibration of the system will be at the centre of the length BC; and (6)
- (ii) The natural frequency of the torsional vibrations. The modulus of rigidity for the shaft material is 80 GN/m<sup>2</sup>. (7)

14. (a) A mass of 10 kg is suspended from one end of a helical spring, the other end being fixed. The stiffness of the spring is 10 N/mm. The viscous damping causes the amplitude to decrease to one-tenth of the initial value in four complete oscillations. If a periodic force of  $150 \cos 50 t$  N is applied at the mass in the vertical direction, find the amplitude of the forced vibrations? What is its values of resonance?

Or

(b) A single-cylinder engine has an out-of-balance force of 500 N at an engine speed of 300 r.p.m. The total mass of the engine is 150 kg and it is carried on a set of springs of total stiffness 300 N/cm.

- (i) Find the amplitude of the steady motion of the mass and the maximum oscillating force transmitted to the foundation. (6)
- (ii) If a viscous damping is interposed between the mass and the foundation, the damping force being 1000 N at 1 m/s of velocity, find the amplitude of the forced damped oscillation of the mass and its angle of lag with disturbing force. (7)



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										58	60	74
										55	60	72
										12	14	74
										22	70	14
										14	20	70
										11	14	66
										21	25	73
										44	45	76
										15	15	69
922120114028	SARAVANA PANDI P	ME8501	6	6	11	13	72	15	16	59	15	15
		ME8511								60	60	65
		ME8512								54	60	76
		ME8513								50	60	69
		ME8593	11	14	14	14	76	18	22	65	14	14
		ME8594	11	14	14	14	65	19	22	82	18	20
		ME8595	8	11	12	14	66	18	22	50	11	14
		ORO551	7	9	8	9	76	9	10	62	23	25
		SB8006								41	45	90
922120114029	SIVARAMAN S	ME8501	6	6	13	13	85	16	16	92	14	15
		ME8511								59	60	92
		ME8512								58	60	98
		ME8513								60	60	70
		ME8593	12	14	14	14	98	21	22	92	14	14
		ME8594	12	14	14	14	92	20	22	89	13	20
		ME8595	11	11	14	14	74	21	22	82	14	14
		ORO551	8	9	8	9	98	10	10	98	24	25
		SB8008								45	45	98
922120114030	SUGAN B	ME8501	6	6	10	13	80	16	16	93	15	15
		ME8511								60	60	89
		ME8512								60	60	98
		ME8513								55	60	72
		ME8593	14	14	12	14	98	21	22	89	12	14
		ME8594	14	14	12	14	89	22	22	90	20	20
		ME8595	11	11	13	14	70	21	22	92	14	14
		ORO551	9	9	8	9	98	10	10	98	23	25
		SB8012								45	45	98
922120114031	TAMIL SELVAN S	ME8501	6	6	13	13	85	16	16	87	13	15
		ME8511								60	60	100
		ME8512								60	60	98
		ME8513								60	60	68
		ME8593	14	14	14	14	98	22	22	100	14	14
		ME8594	14	14	14	14	100	22	22	95	20	20
		ME8595	11	11	14	14	94	22	22	94	14	14
		ORO551	9	9	9	9	98	9	10	98	25	25
		SB8012								45	45	100
922120114032	VASANTH R	ME8501	5	6	12	13	70	16	16	75	14	15
		ME8511								52	60	80
		ME8512								56	60	94
		ME8513								55	60	73
		ME8593	10	14	11	14	94	20	22	80	11	14
		ME8594	10	14	11	14	80	16	22	88	14	20
		ME8595	9	11	13	14	60	20	22	64	12	14
		ORO551	7	9	7	9	94	8	10	85	22	25
		SB8006								45	45	74
922120114033	VIDYASARAN P	ME8501	6	6	11	13	70	16	16	64	13	15
		ME8511								60	60	78
		ME8512								58	60	84
		ME8513								60	60	68
		ME8593	12	14	13	14	84	20	22	78	13	14
		ME8594	12	14	14	14	78	19	22	85	18	20



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922120114302	ABISHEK N	ME8595	9	11	14	14	74	20	22	72	12	14	60
		ORO551	8	9	9	9	84	9	10	70	24	25	69
		SB8008									45	45	92
		ME8501	5	7	11	12	90	13	16	90	16	16	88
		ME8511									52	60	84
		ME8512									52	60	88
		ME8513									60	60	88
		ME8593	6	10	17	17	72	14	17	71	17	19	75
		ME8594	7	11	15	16	72	14	18	90	18	20	90
		ME8595	6	8	20	20	85	16	20	80	15	15	88
922120114303	ARUN KANNAN K	ORO551	3	6	8	9	72	8	12	92	19	20	70
		SB8008									45	45	90
		ME8501	3	7	10	12	90	13	16	90	15	16	92
		ME8511									55	60	94
		ME8512									52	60	95
		ME8513									60	60	95
		ME8593	5	10	17	17	82	15	17	91	19	19	92
		ME8594	4	11	13	16	70	14	18	100	19	20	100
		ME8595	3	8	18	20	90	16	20	76	15	15	94
		ORO551	3	6	8	9	68	8	12	100	19	20	65
922120114304	ASWIN RAJ V	SB8006									45	45	81
		ME8501	2	7	12	12	75	13	16	82	11	16	80
		ME8511									53	60	79
		ME8512									52	60	78
		ME8513									45	60	80
		ME8593	2	10	16	17	72	17	17	77	16	19	72
		ME8594	6	11	11	16	72	14	18	50	14	20	70
		ME8595	4	8	12	20	56	16	20	85	12	15	70
		ORO551	2	6	6	9	74	9	12	76	20	20	68
		SB8006									43	45	57
922120114305	BOMMURAJ K	ME8501	5	7	10	12	80	14	16	85	16	16	92
		ME8511									59	60	80
		ME8512									52	60	96
		ME8513									60	60	96
		ME8593	7	10	17	17	72	15	17	79	19	19	80
		ME8594	4	11	13	16	70	16	18	78	20	20	85
		ME8595	7	8	19	20	78	18	20	85	15	15	80
		ORO551	4	6	7	9	70	12	12	60	18	20	76
		SB8008									45	45	90
		ME8501	6	7	12	12	85	15	16	94	15	16	92
922120114306	DEVAPRAKASH N	ME8511									52	60	72
		ME8512									56	60	94
		ME8513									60	60	95
		ME8593	8	10	17	17	80	17	17	79	19	19	82
		ME8594	8	11	16	16	72	17	18	78	20	20	85
		ME8595	8	8	20	20	80	20	20	80	14	15	82
		ORO551	5	6	9	9	70	11	12	100	19	20	70
		SB8008									41	45	90
		ME8501	6	7	11	12	75	14	16	80	16	16	84
		ME8511									58	60	83
922120114308	DHIWAKAR C	ME8512									60	60	90
		ME8513									50	60	86
		ME8593	9	10	16	17	74	15	17	71	16	19	72
		ME8594	10	11	14	16	72	15	18	75	19	20	75
		ME8595	7	8	17	20	90	18	20	80	14	15	84
		ORO551	6	6	8	9	72	12	12	94	16	20	90
		SB8006									44	45	74
		ME8501	7	7	12	65	16	16	68	13	16	60	
		ME8511											
		ME8512											
922120114309	HARIHARASUDHAN M	ME8513											



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ME8513												60	60	96
ME8593	9	10	17	17	84	17	17	94	19	19	19	96		
ME8594	8	11	15	16	100	18	18	88	20	20	20	100		
ME8595	5	8	17	20	19	19	20	94	15	15	15	92		
ORO551	4	6	9	9	98	12	12	100	18	20	20	90		
SB8012									45	45	45	99		
922120114014 MANIKANDAN G	ME8501	7	7	10	12	75	15	16	80	15	16	85		
	ME8511									50	60	80		
	ME8512									52	60	90		
	ME8513									60	60	92		
	ME8593	10	10	17	17	74	16	17	83	18	19	82		
	ME8594	11	11	14	16	72	17	18	75	20	20	87		
	ME8595	8	8	19	20	70	20	20	60	14	15	78		
	ORO551	6	6	7	9	80	12	12	78	19	20	74		
	SB8008									45	45	95		
922120114015 MOHAMED RIAZ S	ME8501	5	7	7	12	70	13	16	70	14	16	75		
	ME8511									60	60	75		
	ME8512									52	60	80		
	ME8513									50	60	85		
	ME8593	7	10	16	17	70	14	17	70	17	19	70		
	ME8594	9	11	11	16	86	14	18	65	15	20	50		
	ME8595	7	8	12	20	60	12	20	65	14	15	70		
	ORO551	4	6	6	9	76	8	12	80	19	20	60		
	SB8006									44	45	74		
922120114016 MUTHU PRAKALATHAN V	ME8501	1	7	11	12	75	13	16	72	16	16	70		
	ME8511									57	60	88		
	ME8512									52	60	78		
	ME8513									45	60	80		
	ME8593	3	10	16	17	74	16	17	70	16	19	70		
	ME8594	6	11	13	16	78	14	18	80	16	20	80		
	ME8595	1	8	18	20	58	16	20	84	14	15	68		
	ORO551	2	6	9	9	68	10	12	60	17	20	79		
	SB8005									45	45	88		
922120114017 MUTHU SANTHOSH M.9	ME8501	7	7	12	12	85	15	18	88	18	18	92		
	ME8511									53	60	74		
	ME8512									60	60	95		
	ME8513									60	60	95		
	ME8593	10	10	17	17	72	14	17	80	19	19	80		
	ME8594	11	11	16	16	96	16	18	86	20	20	98		
	ME8595	8	8	20	20	88	20	20	92	15	15	90		
	ORO551	6	6	9	9	76	10	12	88	18	20	75		
	SB8006									44	45	85		
922120114018 NAWFUL GHYAS M	ME8501	6	6	11	13	69	14	16	65	12	15	72		
	ME8511									60	60	83		
	ME8512									60	60	85		
	ME8513									60	60	73		
	ME8593	13	14	14	14	85	20	22	83	14	14	85		
	ME8594	13	14	14	14	83	19	22	82	15	20	83		
	ME8595	11	11	14	14	82	20	22	82	12	14	60		
	ORO551	8	9	8	9	85	9	10	85	21	25	72		
	SB8006									45	45	77		
922120114019 NITHESH S	ME8501	5	6	10	13	69	16	16	60	14	15	68		
	ME8511									53	60	70		
	ME8512									54	60	74		
	ME8513									55	60	69		
	ME8593	10	14	14	14	74	20	22	60	14	14	74		
	ME8594	10	14	14	14	60	18	22	80	15	20	60		
	ME8595	9	11	14	14	76	20	22	58	13	14	60		



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	ORO551	7	9	9	9	74	9	10	65	24	25	68	
	SB8006									45	45	76	
922120114020	NITHIS KUMAR J	ME8501	5	6	10	13	72	16	16	60	15	15	70
	ME8511									60	60	80	
	ME8512									56	60	76	
	ME8513									55	60	68	
	ME8593	10	14	14	14	76	20	22	80	14	14	76	
	ME8594	10	14	14	14	80	20	22	92	19	20	80	
	ME8595	9	11	13	14	86	20	22	60	14	14	70	
	ORO551	8	9	9	9	76	9	10	70	21	25	70	
	SB8008									45	45	93	
922120114022	RAJARAJESHWARAN S	ME8501	6	6	10	13	67	14	16	90	14	15	73
	ME8511									59	60	92	
	ME8512									56	60	89	
	ME8513									55	60	71	
	ME8593	12	14	12	14	89	18	22	92	12	14	89	
	ME8594	12	14	12	14	92	18	22	89	17	20	92	
	ME8595	10	11	13	14	84	18	22	92	12	14	76	
	ORO551	8	9	8	9	89	9	10	92	22	25	73	
	SB8008									36	45	93	
922120114023	RAJASEKARAN V	ME8501	4	6	13	13	60	10	16	61	13	15	73
	ME8511									42	60	70	
	ME8512									54	60	70	
	ME8513									55	60	72	
	ME8593	10	14	10	14	70	16	22	70	10	14	70	
	ME8594	10	14	10	14	70	12	22	78	13	20	70	
	ME8595	8	11	10	14	60	18	22	60	12	14	60	
	ORO551	6	9	7	9	70	6	10	62	17	25	73	
	SB8006									44	45	50	
922120114024	RAJESH B	ME8501	4	6	9	13	60	10	16	60	0	15	0
	ME8511									15	60	0	
	ME8512									15	60	0	
	ME8513									10	60	0	
	ME8593	10	14	10	14	72	11	22	66	10	14	0	
	ME8594	10	14	10	14	66	10	22	70	0	20	0	
	ME8595	8	11	10	14	56	17	22	50	0	14	0	
	ORO551	6	9	6	9	70	5	10	62	0	25	0	
	SB8008									0	45	0	
922120114025	SANJAY KUMAR S	ME8501	4	6	9	13	60	11	16	68	14	15	73
	ME8511									42	60	71	
	ME8512									56	60	70	
	ME8513									55	60	69	
	ME8593	10	14	10	14	70	18	22	71	10	14	70	
	ME8594	10	14	10	14	71	14	22	78	12	20	71	
	ME8595	8	11	10	14	64	18	22	52	11	14	55	
	ORO551	6	9	6	9	70	8	10	63	22	25	73	
	SB8005									27	45	73	
922120114026	SANMUGAPANDIM	ME8501	4	6	13	13	67	16	16	63	13	15	70
	ME8511									55	60	80	
	ME8512									54	60	72	
	ME8513									55	60	71	
	ME8593	10	14	14	14	72	18	22	80	14	14	72	
	ME8594	10	14	14	14	80	17	22	80	17	20	80	
	ME8595	8	11	11	14	60	18	22	50	12	14	62	
	ORO551	7	9	7	9	72	6	10	62	22	25	70	
	SB8008									34	45	90	
922120114027	SANTHOSH KUMAR M	ME8501	6	6	13	13	68	16	16	56	13	15	73
	ME8511									52	60	70	



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Branch Code / Name : 114 : B.E. Mechanical Engineering      University : AUC

Semester : 05

Register No.	Name of the Student	Subjects	Attend hr 1	Total hr 1	Attend hr 2	Total hr2	IM 2	Attend hr 3	Tot hr 3	IM 3	Attend hr 4	Total hr4	IM 4
922120114001	ABDUL HARSHATH A	ME8501	2	7	12	12	70	13	16	75	11	16	70
		ME8511									58	60	77
		ME8512									52	60	72
		ME8513									55	60	75
		ME8593	2	10	14	17	72	17	17	70	16	19	70
		ME8594	6	11	12	16	78	14	18	80	14	20	80
		ME8595	4	8	17	20	52	16	20	60	12	15	60
		ORO551	2	6	6	9	72	8	12	60	20	20	78
		SB8008									34	45	90
922120114002	ARISHRAJAN I	ME8501	4	7	12	12	75	14	16	78	15	16	75
		ME8511									59	60	71
		ME8512									52	60	80
		ME8513									60	60	88
		ME8593	5	10	15	17	74	15	17	76	17	19	70
		ME8594	4	11	15	16	84	14	18	85	16	20	85
		ME8595	5	8	20	20	66	18	20	66	15	15	62
		ORO551	2	6	9	9	76	10	12	56	18	20	86
		SB8005									45	45	80
922120114003	ARUN KUMAR G	ME8501	4	7	6	16	75	13	16	70	13	16	65
		ME8511									50	60	70
		ME8512									52	60	62
		ME8513									52	60	60
		ME8593	4	10	11	17	74	17	17	70	16	19	72
		ME8594	4	11	11	16	80	17	18	50	13	20	50
		ME8595	4	8	15	20	50	19	20	60	14	15	50
		ORO551	2	6	3	9	70	12	12	60	19	20	76
		SB8000									34	45	86
922120114004	BALAMURUGAN S	ME8501	6	7	12	12	70	14	16	80	14	16	82
		ME8511									55	60	72
		ME8512									52	60	88
		ME8513									60	60	90
		ME8593	8	10	16	17	72	16	17	74	17	19	72
		ME8594	9	11	16	16	80	17	18	85	18	20	85
		ME8595	8	8	19	20	60	20	20	75	14	15	70
		ORO551	5	6	8	9	71	11	12	72	19	20	70
		SB8006									44	45	56
922120114005	DANUSHMANI S	ME8501	6	7	10	12	72	14	16	76	12	16	75
		ME8511									51	60	71
		ME8512									56	60	84
		ME8513									60	60	86
		ME8593	4	10	17	17	74	15	17	77	17	19	77
		ME8594	9	11	12	16	70	14	18	70	16	20	70
		ME8595	6	8	18	20	72	16	20	70	12	15	64
		ORO551	5	6	7	9	70	10	12	70	20	20	80
		SB8008									45	45	92
922120114006	DINESH S	ME8501	4	7	11	12	65	13	16	70	13	16	75
		ME8511									55	60	70
		ME8512									52	60	70
		ME8513									55	60	75
		ME8593	3	10	16	17	72	15	17	76	17	19	70
		ME8594	6	11	11	16	54	14	18	60	17	20	60
		ME8595	5	8	15	20	60	16	20	60	12	15	62
		ORO551	2	6	9	70	9	12	60	20	20	76	



**ANNA UNIVERSITY :: CHENNAI - 600 025**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**

Assessment Details Entered

**NOV. / DEC. EXAMINATION, 2022 - EXAMINATIONS**

Inst Code & Name : 9221 - SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

										40	45	94	
922120114007	EDISON S	ME8012	4	7	11	12	90	15	16	80	16	16	85
		ME8501									51	60	81
		ME8511									52	60	88
		ME8512									60	60	90
		ME8513									19	19	76
		ME8593	8	10	17	17	72	16	17	76	19	19	76
		ME8594	6	11	13	16	72	14	18	85	19	20	50
		ME8595	4	8	18	20	76	16	20	78	15	15	66
		ORO551	3	6	7	9	75	10	12	70	20	20	65
		SB8008									36	45	85
922120114008	JAIKUMAR PANDIAN J	ME8012	6	7	12	12	90	15	16	90	15	16	92
		ME8501									58	60	98
		ME8511									56	60	96
		ME8512									60	60	95
		ME8513									19	19	75
		ME8593	9	10	17	17	88	15	17	70	17	20	90
		ME8594	10	11	16	16	92	15	18	86	17	20	90
		ME8595	5	8	20	20	86	17	20	84	11	15	78
		ORO551	5	6	9	9	88	11	12	100	18	20	85
		SB8012									45	45	95
922120114009	JOHNSON M	ME8012	6	7	9	12	70	14	16	75	13	16	85
		ME8501									50	60	80
		ME8511									60	60	84
		ME8512									60	60	87
		ME8513									19	19	78
		ME8593	10	10	15	17	74	15	17	78	17	20	70
		ME8594	9	11	13	16	56	14	18	70	16	20	70
		ME8595	8	8	15	20	68	18	20	70	11	15	70
		ORO551	5	6	8	9	72	10	12	72	19	20	68
		SB8006									44	45	76
922120114010	KARTHICK D	ME8012	5	7	11	12	75	15	16	80	14	16	78
		ME8501									59	60	75
		ME8511									56	60	68
		ME8512									60	60	70
		ME8513									19	19	72
		ME8593	6	10	17	17	74	16	17	79	17	20	70
		ME8594	7	11	14	16	70	16	18	70	16	20	70
		ME8595	6	8	19	20	80	19	20	72	13	15	72
		ORO551	3	6	8	9	73	11	12	66	18	20	67
		SB8006									45	45	66
922120114011	KARTHICK RAJA R	ME8012	6	7	12	12	78	14	16	82	14	16	80
		ME8501									57	60	88
		ME8511									60	60	90
		ME8512									60	60	90
		ME8513									19	19	92
		ME8593	9	10	15	17	80	16	17	91	18	20	95
		ME8594	10	11	13	16	90	14	18	80	16	20	95
		ME8595	5	8	19	20	80	16	20	90	11	15	86
		ORO551	5	6	9	9	71	10	12	86	20	20	74
		SB8008									41	45	92
922120114012	KARTHIKEYAN N	ME8012	7	7	7	12	75	13	16	80	13	16	75
		ME8501									57	60	72
		ME8511									56	60	90
		ME8512									55	60	90
		ME8513									19	19	72
		ME8593	9	10	14	17	72	14	17	76	17	20	80
		ME8594	11	11	8	16	60	14	18	72	17	20	80
		ME8595	8	8	12	20	74	16	20	80	12	15	80
		ORO551	6	6	5	9	82	9	12	60	19	20	70
		SB8005									41	45	85
922120114013	LAKSHMIN	ME8012	5	7	11	12	95	16	16	96	16	16	92
		ME8501									56	60	98
		ME8511									52	60	96
		ME8512											

Inst.Code/Name : 9221 - SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY Semester No.: 06 DATE OF PUBLICATION : DD-MM-YYYY

Branch : 106-B.E. Electronics and Communication Engineering

Reg. Number	Subject Code ->	EC8302	EC8004	EC8395	EC8651	EC8652	EC8691	MG8591
Stud. Name	Stud. Name	Grade						
922119106001	ABITHA DEVADHARSHINI A.G	NC						
922119106002	ABUFIAZ A							NC
922119106006	AMRITHA M					NC		NC
922119106008	ARCHANA ROY A	NC						
922119106010	ARUL NANDHINI R	B+	B	B	B			
922119106012	ASLEENA A							
922119106013	ASWINI T							
922119106015	BALAJI G	B						
922119106021	DINESH R		B					
922119106022	DIVYA K					NC		NC
922119106026	FEBRONIA J	NC						
922119106030	HARIHARAN P					NC		
922119106032	HEMADHARSHINI S					NC		
922119106034	JAYASSEE M				NC			
922119106040	KEERTHIKA S			B+		B		NC
922119106041	KISHORE S	B				B		
922119106045	KOUSHALYAA B J							
922119106048	LAKSHMI PREETHA S	NC						
922119106058	MUNIYAPAN P							A
922119106063	NISHANTHINI S					B		B
922119106064	NISHITHA JOAN I							NC
922119106070	PANDU DEVI S	NC	NC	NC	NC			NC
922119106072	PONBALAJI S							
922119106074	PRYADHARSHINI S	A+						B+
922119106076	RANJANI M							NC
922119106081	SABAREE RAJ R							
922119106084	SANTHOSH T	B						
922119106095	SANTHOSH KUMAR G							
922119106092	SHANJUVIKASINI J							
922119106094	SHOBANA M							
922119106095	SITHARA R							
922119106100	SOWMYA S							
922119106102	SUDHARSUN B	NC						
922119106111	VEDHA R	B						

25

  
**Dr. D. SENTHIL KUMARAN, M.E., M.B., M.Tech.**

Principal

**SSSI Institute of Engineering and Technology**  
 Kuttathupatti Village, Sindhalagundu (Po),  
 Palani Road, Dindigul - 624 002.



**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)

Dindigul – Palani Highway, Dindigul – 624 002.

**DEPARTMENT OF MECHANICAL ENGINEERING**

Date: 30.09.2022

CLASS COMMITTEE MEETING – II (Minutes of the Meeting)

The class committee meeting for III Year Mechanical Engineering ‘A’ Section was conducted on 29.09.2022 at 03:45 P.M. to 04:15 P.M. in Thermal Engineering Lab – II in Mechanical Engineering Department. The following students and faculty members attended the meeting.

**Chairperson:** Dr.G.Sankaranarayanan, Prof. & Head / Mechanical. **Convener:** Dr.S. Joseph Dominic Vijayakumar, ASP / Mechanical.

**Mentors:** Mr.U.Karthick, Mr.P.Sankarkannan, Mrs.V.Preethi.

Class Committee Student Members- Present:

S.NO	REGISTER NUMBER	STUDENT NAME
1	922120114008	Jaikumar Pandian J
2	922120114013	Lakshmi N
3	922120114312	Kavinraj P

Points Discussed:

Sub Code & Name	Name of the Faculty	Syllabus Completion	General Comments	Books, Class notes & Univ Q&A Materials	Action taken	Signature of the faculty
ME8595/ I.E.II	Mr.P.Shankar AP/Mech.	Kannan, 1,2 unit completed and Third Unit is going on.	Students attention is required during class hours	Students are Satisfied with some of the innovative teaching methods (Quiz) involved in this Subject.	-	P.S. Joseph Dominic Vijayakumar

ME8593/ DME	Mr.P.Dheenathayalan, AP/Mech.	One and Half Unit Completed.	Too big syllabus – so more hours needed. Students should bring their Design Data for better understanding.	Design Data book to be given.	-	
ME8594/ DOM	Mr.M.Prabakaran, AP/Mech.	2 units Completed and Third Unit introduction is given.	Students are insisted to be present in their classroom in time after the break. Good interaction is required.	Students are satisfied with the class handling and the methods of teaching.	<i>Students need to solve more numerical problems</i>	<i>M.P</i>
ME8501/ M&M	Mr.M.Selwin, AP/Mech.	Completion of 3 Units.	Classes going well.	Students are satisfied with the class handling and the methods of teaching.	-	
ORO551/ RES	Mr.C.Silambarasan,AP/Me ch.	1, 2, 3 Units completed and Fourth Unit is going on.	Classes going well, good interaction among students in the class but needed improvement in internal examination.	Study materials are to be provided.	-	

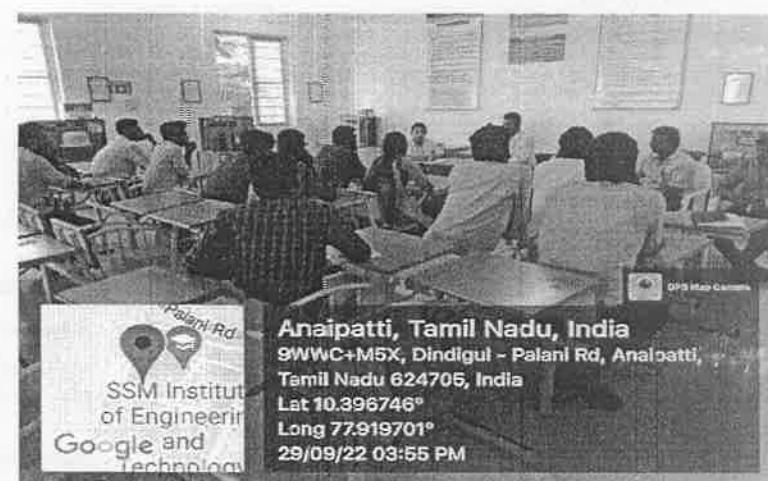
ME8512/ PE LAB	Mr.P.Shankar Kannan, AP/Mech.	8 Experiments completed.	Lab classes going well.	Satisfied with lab handling and practical.	-	
ME8513/ M&M LAB	Mr.M.Selwin, AP/Mech.	10 Experiments completed.	Lab classes going well.	Satisfied with lab handling and practical.	-	
ME8511/ K&D LAB	Mr.U.Karthick,AP/Mech.	8 Experiments completed.	Lab classes going well.	Satisfied with lab handling and practical.	-	

\* Note: Question bank & two marks Q&A needed for all subjects.

#### Facilities to be improved:

Comments from the students and faculty members	Action Taken	Signature of the HoD/ Principal
<ul style="list-style-type: none"> <li>➢ Common Discussion on the Industrial Visit-CECRI.</li> <li>➢ Instructed to maintain attendance.</li> <li>➢ Strictly instructed not to come late often after the break hours.</li> <li>➢ Common talks on the industry connect-we will guide you all accordingly which in turn we need a proper response from your side- Technology Training.</li> <li>➢ Discussed the Exam Results of the previous semester.</li> <li>➢ Insisted the students to improve their pass percentage.</li> <li>➢ Finally, advised the students to share the points discussed in this CCM.</li> </ul>	<ul style="list-style-type: none"> <li>• Report on CECRI Visit to be submitted by the students.</li> <li>• Students are instructed to avoid absenteeism and the late coming to the regular classes.</li> <li>• Faculty members to Cate the slow Learners for the Previous Semester subjects.</li> </ul>	 01/10/2012

## GLIMPSES OF THE CLASS COMMITTEE MEETING II-III YEAR (ODD SEMESTER)



1. *[Signature]*  
2. *[Signature]*  
3. *[Signature]*  
Mentor(s)  
1. V. PREETHI  
2. P. shankar kumar  
3. C. Karthick

8/10/22  
Convener  
(V.P.)

*[Signature]*  
CCM Coordinator  
T. KARTHIK MUNISAMY

*[Signature]*  
(11)10/10/22  
HoD / Mech. Engg.

*[Signature]*  
PRINCIPAL



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

[Approved by MHRD, New Delhi • Affiliated to Anna University, Chennai • Accredited by NAAC]

**Principal**

SSMIET/AU/COE/024/June/2022

Date: 30.06.2022

To

Dr.M.Venkatesan Ph.D.,  
The Controller of Examinations  
Anna University  
Chennai – 600025

Respected Sir,

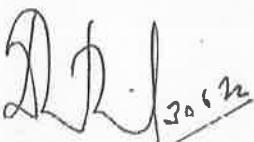
**Sub:** Requisition of permission to appoint scribe for a physically challenged student-reg.

This is bring to your kind notice that Mr V.Gokul (Reg No: 922121103001) is a physically challenged candidate. He cannot write the examinations by his own. Hence it is requested to permit him to write examination with a scribe. Herewith we have attached the list of staff members willing to act as scribe. Kindly appoint one staff from below list.

Sl. no	Staff Name	Qualification	Designation
1	Ms. M.Amutha	DTED, B.LiSc	Assistant Librarian
2	Mr. M.M.Mayilvahanan	DME	Lab Technician
3	Mr.S.R.Karikalan	DEE	Lab Technician

Kindly acknowledge the receipt of our communication, please

Thank You

  
**PRINCIPAL**  
 Dr. D. SENTHIL KUMARAN, M.E, Ph.D., (RNU)  
*Principal*  
 SSM Institute of Engineering and Technology  
 Kattalloorpetti Village, Sundangundur  
**Encl:** Palani Road, Dindigul-624 002.

1. Scribe appointment by COE for I semester the student Ref :Lr.No. 9221/COE/C36/2022-6333.
2. Medical certificate for disability
3. Photo of the candidate with disability



0451 - 2448800-2448899



0451-2448855



ssmietdgl@gmail.com

 Dindigul - Palani Highway, Dindigul - 624 002.



Form - IV  
Disability Certificate  
(In cases other than those mentioned in Forms II and III)

NAME AND ADDRESS OF THE MEDICAL AUTHORITY ISSUING THE CERTIFICATE:



R. S. S. Surgeon

Reg. No : 86266

Govt. Head Quarters Hospital,  
carefully examined

Certificate No.

Date:

This is to certify that I

have

Shri/Smt./Kum.

V. DOKKU

Date of

son/wife/daughter of Shri Vellaisamy

Birth 21/12/2003 Age years, male/female Male  
(DD / MM / YY)

Registration No.

permanent resident of House No. 10/B,

Ward/Village/Street VIDIKUL NIVAS,

Post-Office Ward No 55 District

Diamond Nagar East, State of Tamilnadu whose photograph is affixed above, and am satisfied that he/she is a case of Locomotor Disability. His/her extent of permanent physical impairment/disability has been evaluated as per guidelines (to be specified) and is shown against the relevant disability in the table below:-

S. No.	Disability	Affected Part of Body	Diagnosis	Permanent physical impairment/mental disability (in %)
1	Locomotor Disability	@	Un�anged	PF 10/11
2.	Low Vision	#		
3.	Blindness	Both eyes		Paraplegic
4.	Hearing Impaired	£	60%	Severe
5.	Mental Retardation	X		
6.	Mental Illness	X	Permanent	

(Please strike out the disabilities which are not applicable)

GCP-10-8-4,00,000 Cpy -24-9-2014. (HCL-II)





ANNA UNIVERSITY  
CHENNAI 600 025  
Office of the Controller of Examinations

Off:	22301631, 22357244
Fax:	22357295, 22357296
	22357288, 22357263
E mail:	91-44-22301134 coe@annauniv.edu

Lr. No. 9221/COE/C36/2022

Date: 09.03.2022

From

The Controller of Examinations,  
Anna University,  
Chennai – 600 025.

To

The Principal,  
SSM Institute of Engineering and,  
Technology,  
Dindigul – 624 002.

Sir,

Sub: Office of the Controller of Examinations - Anna University, Chennai - 25 –  
B.E.(Civil Engineering) Examinations during Nov/Dec 2021 - Scribe facilities  
granted to Mr. Gokull V, B.E.(Civil Engineering) student of SSM Institute of  
Engineering and Technology, Dindigul - Reg.

Ref: 1. Your Lr. No. SSMIET/AU/COE/006/Feb/2022, dt: 21.2.2022.  
2. This office Lr. No. 9221/COE/C36/2022 – 6333, dt: 02.03.2022.  
3. Your Lr. No. SSMIET/AU/COE/006/March/2022, dated 08.03.2022, from the  
Principal, SSM Institute of Engineering and Technology, Dindigul.

\* \* \* \*

In continuation of this office letter cited, It is informed that Mr. Gokull V with Reg.No. 922121103002, B.E.(Civil Engineering) is permitted to write the 1<sup>st</sup> Semester Theory and Practical examinations in Nov/Dec 2021 with the assistance of Ms. M. Amutha ; Assistant Librarian as per your request in reference cited to act as a Scribe on the basis of Medical Certificate produced as a special case. The Guidelines in respect of the appointment of a scribe and the related procedures are noted below.

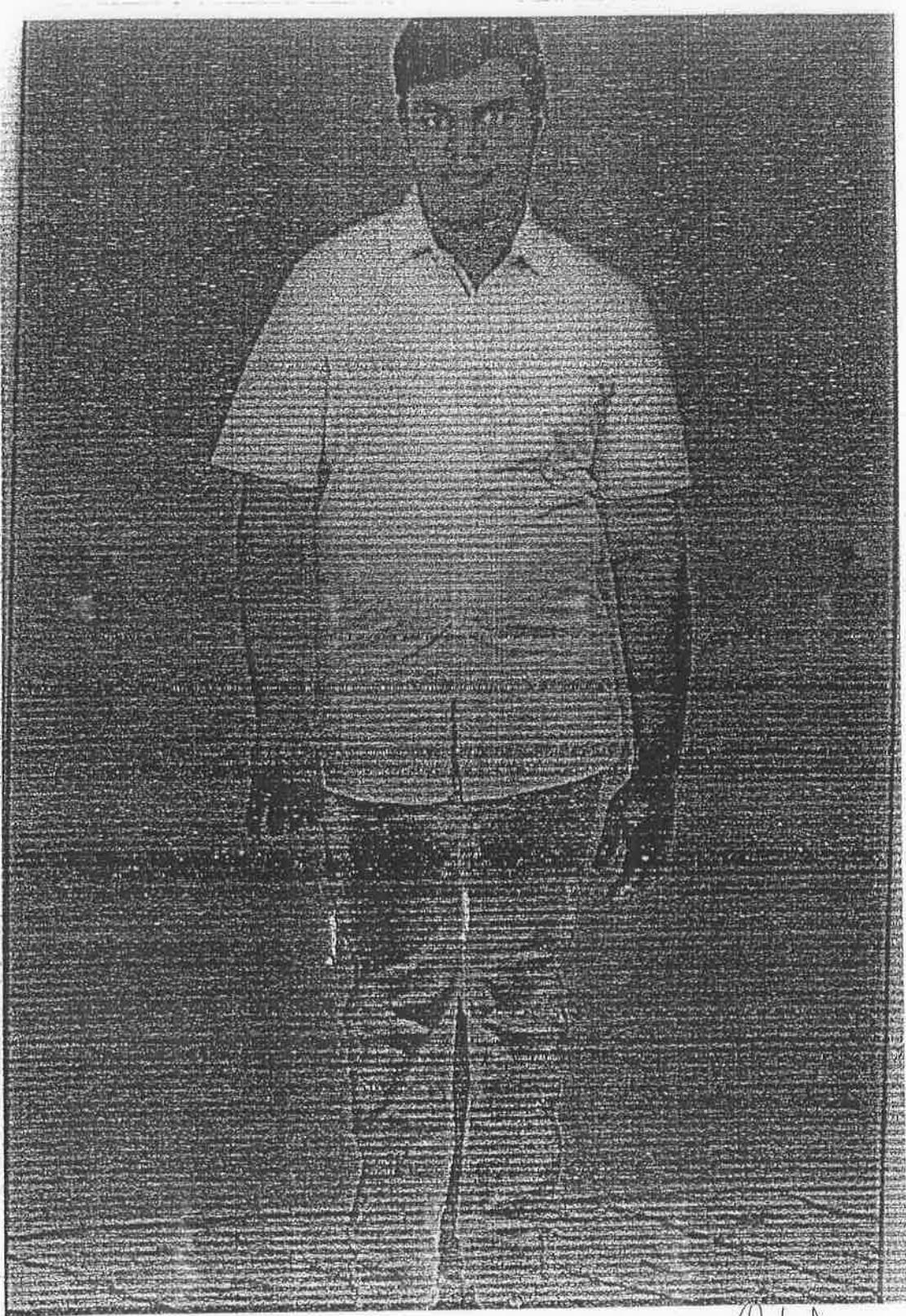
1. The scribe should be a person who should not be well versed with the subject. It is enough if the scribe is a person who can just carry out what all the examinee dictates.
2. He/She may be a non-teaching staff of the College.
3. The scribe must be suggested by the Chief Superintendent for approval of the University on the above condition.
4. A fee of Rs.500/- is to be collected for each subject from the candidate and it may be handed over to the scribe towards remuneration.

09. 03/03/2022

CONTROLLER OF EXAMINATIONS

Copy to:

1. The Zonal Officer, Zone – XV.
- ✓ 2. The student through the Principal, SSM Institute of Engineering and Technology,  
Dindigul – 624 002.
3. Ms. M. Amutha, Assistant Librarian, SSM Institute of Engineering and Technology,  
Dindigul.



R.H.J.

S.Priya Dharshini,

922119106074

ECE,

SSMIET -

To

The Principal,

SSMIET,

Dindigul.

Respected Sir,

I am writing to bring to your attention a discrepancy in my recent marksheet that I received from the <sup>University</sup> college for sixth semester. Upon reviewing my marksheet, I have noticed an error in my grades which I believe requires immediate correction. For the subject Wireless networks <sup>(EC8004)</sup>, I have received arrear but I had already applied for revaluation and got the result of pass in it. I would like to request your assistance in rectifying this mistake as soon as possible, as it may have an impact on my academic standing and future opportunities. I understand that corrections in the official records can take time, but I urge you to expedite the process so that I receive my corrected marksheet as soon as possible.

Thank you,

A.J. 2042  
Principal Sign

Yours sincerely,

S.Priya Dharshini

88  
10/10/2022  
Mentor Sign  
S.P. Jay Renthin  
HOD Sign

for HOD  
Sign



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi • Affiliated to Anna University, Chennai • Accredited by NAAC)  
Dr.D.Senthil Kumaran, M.E., Ph.D

Principal  
SSMIET/AU/COE/018/April /2023

Date: 21.04.2023

To

The Controller of Examinations  
Anna University  
Chennai – 600025

Respected Sir

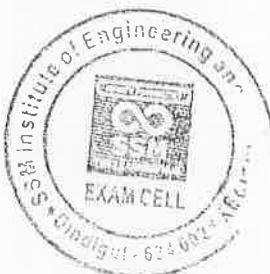
Sub: Grade change in Sixth semester grade sheet – Ms.S.Priyadarshini (Reg No: 922119106074)  
- reg

This to inform you that in the 6<sup>th</sup> semester (April/May 2022 examination) grade sheet of Ms.S.PRIYADHARSHINI (Reg No: 922119106074) the grade point for the subject EC8004 – Wireless Network was printed as "U". She cleared the above said subject with a grade point of "A+" through revaluation. Therefore, we request you to kindly make the required correction in her grade sheet and issue a new one.

We shall be much obliged for your kind consideration.

Thank You

*Received*



PRINCIPAL

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS)  
Principal

SSM Institute of Engineering and Technology  
Kuttathupatti Village, Sindalagundu (Po),  
Palani Road, Dindigul - 624 002.

**Enclosure:**

1. Sixth semester grade sheet of the student
2. Student result copy of April/May 2022 examinations



0451 - 2448800-2448899



0451-2448855



Dindigul - Palani Highway, Dindigul - 624 002.



ssmietdgl@gmail.com



ANNA UNIVERSITY, CHENNAI - 25  
B.E. DEGREE EXAMINATIONS  
GRADE SHEET



SI.NO: MA 6858624

Folio No. AUK5156874

NAME OF THE CANDIDATE	PRIYADHARSHINI S				REGISTER NO.	922119106074
DATE OF BIRTH	12-JAN-2002	GENDER	FEMALE	MONTH & YEAR OF EXAMINATION	APR 2022	DATE OF PUBLICATION
COLLEGE OF STUDY	SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY				REGULATIONS	2017(CBCS)
PROGRAMME & BRANCH	B.E. Electronics and Communication Engineering					

SEM. NO.	COURSE CODE	COURSE TITLE	CREDITS	LETTER GRADE	GRADE POINT	RESULT
06	EC8004	Wireless Networks	3	U	0	RA
06	EC8095	VLSI Design	3	B	6	PASS
06	EC8611	Technical Seminar	1	O	10	PASS
06	EC8651	Transmission Lines and RF Systems	3	A	8	PASS
06	EC8652	Wireless Communication	3	A+	9	PASS
06	EC8661	VLSI Design Laboratory	2	O	10	PASS
06	EC8681	Microprocessors and Microcontrollers Laboratory	2	O	10	PASS
06	EC8691	Microprocessors and Microcontrollers	3	B+	7	PASS
06	HS8581	Professional Communication	1	A+	9	PASS
06	MG8591	Principles of Management	3	B+	7	PASS

\*\*\* End of Statement \*\*\*

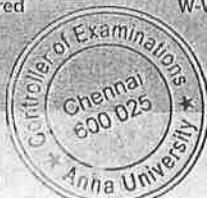
Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	
Credits Registered						24					
Credits Earned						21					
Grade Points Earned						76					
Grade Point Average (GPA)						8.095					
Cumulative Credits Earned	145	Cumulative Grade Point Average (CGPA)				8.31	Medium of Instruction : ENGLISH				

RA - Reappearance is Required

W-Withdrawal

SE - Sports Exemption

\* Absent for University Examination



## Result for April / May Examination,2022

Register Number : 922119106074

Name : PRIYADHARSHINI S

Branch : B.E. Electronics and Communication Engineering

Semester	Subject Code	Grade	Result
06	EC8004	U	RA
06	EC8095	B	PASS
06	EC8611	O	PASS
06	EC8651	A	PASS
06	EC8652	A+	PASS
06	EC8661	O	PASS
06	EC8681	O	PASS
06	EC8691	B+	PASS
06	HS8581	A+	PASS
06	MG8591	B+	PASS

### Revaluation / Photocopy Result

Semester	Subject Code	Grade	Result
06	EC8004	A+	PASS

  
**Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)**  
 Principal  
**SSM Institute of Engineering and Technology**  
 Guttathupatti Village, Sindalagundu(Po),  
 Palani Road, Dindigul - 624 002.

S/N: MA 5911040

AUKE/158874

NAME OF THE CANDIDATE

PRIYADHARSHINI S

REGISTER NO.

022119106074

DATE OF BIRTH

12-JAN-2002

GENDER

FEMALE

MONTH &amp; YEAR OF EXAMINATION

APR 2022

DATE OF PUBLICATION

18-SEP-2022

COLLEGE OF STUDY

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

REGULATIONS

2017(CBCS)

PROGRAMME &amp; BRANCH

B.E, Electronics and Communication Engineering

SEM. NO.	COURSE CODE	COURSE TITLE	CREDITS	LETTER GRADE	GRADE POINT	RESULT
06	EC8004	Wireless Networks	3	A+	9	PASS
06	EC8095	VLSI Design	3	B	6	PASS
06	EC8611	Technical Seminar	1	O	10	PASS
06	EC8651	Transmission Lines and RF Systems	3	A	8	PASS
06	EC8652	Wireless Communication	3	A+	9	PASS
06	EC8661	VLSI Design Laboratory	2	O	10	PASS
06	EC8681	Microprocessors and Microcontrollers Laboratory	2	O	10	PASS
06	EC8691	Microprocessors and Microcontrollers	3	B+	7	PASS
06	HS8581	Professional Communication	1	A+	9	PASS
06	MG8591	Principles of Management	3	B+	7	PASS

\*\*\* End of Statement \*\*\*

Received

S-Priya Dharshini

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	
Credits Registered						24					
Credits Earned						24					
Grade Points Earned						85					
Grade Point Average (GPA)						8.208					
Cumulative Credits Earned	148	Cumulative Grade Point Average (CGPA)				8.32	Medium of Instruction : ENGLISH				

RA - Reappearance is Required

W-Withdrawal

SE - Sports Exemption

\* Absent for University Examination



**ANNA UNIVERSITY:: CHENNAI 600 025**

**Internal Assessment Schedule for Non Autonomous Affiliated Institutions**

**AUGUST2022 - DECEMBER 2022 - For all UG - Programmes (ODD SEMESTER-EXCEPT III SEMESTER)**

Report No	Report Period	Test Period	Report Entry Period
I	10-08-2022 –23-08-2022	----	29-09-2022 – 06-10-2022
II	24-08-2022 -- 21-09-2022	16-09-2022 -- 21-09-2022	29-09-2022 -- 06-10-2022
III	22-09-2022 -- 21-10-2022	17-10-2022 -- 21-10-2022	21-10-2022 --29-10-2022
IV	22-10-2022 -- 19-11-2022	14-11-2022 -- 19-11-2022	19-11-2022 -- 21-11-2022

Saturdays may be included as working days to make good the Shortages, if any.

P. Senthil Kumar  
19.09.2022  
CONTROLLER OF EXAMINATIONS

10  
19-09-2022



Principal  
**Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)**  
Principal  
SSM Institute of Engineering and Technology  
Kuttathupatti Village, Sindulagundu(Po),  
Palani Road, Dindigul - 624 002.





**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL-624002**  
**DEPARTMENT OF MECHANICAL ENGINEERING**

**Academic Year 2022-23- ODD SEM**

**Internal Test -II (19.10.2022 To 21.10.2022)**

**EXAM HALL INVIGILATION DUTY**

S.No	Name of Faculty	19.10.22		20.10.22		21.10.22		No of Duties	Signature of Faculty
		FN	AN	FN	AN	FN	AN		
1	Dr. S.Joseph Dominic Vijayakumar	✓				✓		2	
2	Dr. V.Kandavel			✓				1	<i>Ndn</i>
3	Dr. M. Sabareeswaran		✓					1	
4	Dr.M.Muthukannan				✓		✓	2	
5	Prof.C.Silambarasan			✓		✓		2	
6	Prof.P.Shankarkannan	✓				✓		2	
7	Prof.V.Preethi							0	
8	Prof. M.Selwin							0	<i>SL</i>
9	Prof. P.Dheenathayalan		✓					1	
10	Prof.T.Karthickmunisamy				✓			1	
Total Duty		2	2	2	2	2	2	12	

\*Faculty Members are requested to note the respective duties and attend the duty without fail. They are requested to collect the answer booklets and question papers from CAD LAB and be inside their hall at 10.50 am. and 02.50 pm respectively.

*The Department*

*J.S 18.10.2022*  
HOD/Mech.

**ANNA UNIVERSITY CHENNAI, CHENNAI - 25**

**From**

The Chief Superintendent  
University Examinations  
9221-SSM Institute of Engineering & Technology,

**To:**

**Mr.P. Satheesh Kumar**  
9214-RVSETGI  
Dindigul

**APPOINTMENT ORDER**

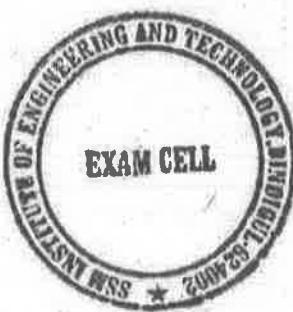
Thru/Tmt **Mr.P. Satheesh Kumar** is hereby appointed as Hall Superintendent for the Anna University Theory Examinations scheduled during APR/MAY-2022 in this College. The date and time of invigilation work is notified here under. He is directed to report to the Chief Superintendent of the University Examination at least thirty minutes before the commencement of the Examination. Those who are coming late will not be allowed to function as Hall Superintendents.

The Hall Superintendents shall not absent themselves from attending the invigilation work without obtaining the written permission of the Chief Superintendent. In case Hall Superintendent is unable to accept the order, he/she has to find a substitute and the acceptance of the substitute to undertake the responsibility of Hall Superintendent shall be produced to the Chief Superintendent. Request for leave without making an alternative arrangement will not be entertained.

Particulars of invigilation work:

Date	Session		Date	Session
19.07.2022	FN			
21.07.2022	FN			
22.07.2022	FN			

Date: 17.05.2022  
Station: Dindigul-05



  
**9221-SSMIET**  
 Chief Superintendent  
 University Examinations  
**CHIEF SUPERINTENDENT**  
**9221 - SSM Institute of Engineering and Technology**  
 Sindalagunda (Po), Dindigul 624 002

**ANNA UNIVERSITY CHENNAI, CHENNAI - 25**

**From**

The Chief Superintendent  
University Examinations  
9221-SSM Institute of Engineering & Technology,

**To:**

**Mr.C.Kalimuthu**  
9214-RVSETGI  
Dindigul

**APPOINTMENT ORDER**

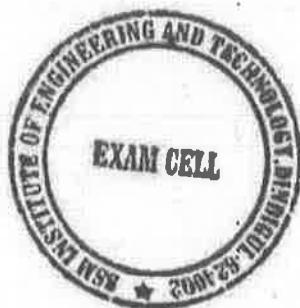
Thiru/Tmt **C.Kalimuthu** is hereby appointed as Hall Superintendent for the Anna University Theory Examinations scheduled during APR/MAY-2022 in this College. The date and time of invigilation work is notified here under. He is directed to report to the Chief Superintendent of the University Examination at least thirty minutes before the commencement of the Examination. Those who are coming late will not be allowed to function as Hall Superintendents.

The Hall Superintendents shall not absent themselves from attending the invigilation work without obtaining the written permission of the Chief Superintendent. In case Hall Superintendent is unable to accept the order, he/she has to find a substitute and the acceptance of the substitute to undertake the responsibility of Hall Superintendent shall be produced to the Chief Superintendent. Request for leave without making an alternative arrangement will not be entertained.

Particulars of invigilation work:

Date	Session		Date	Session
18.07.2022	FN			
21.07.2022	FN			
26.07.2022	FN			

Date: 15.07.2022  
Station: Dindigul-05



  
9221-SSMIET  
Chief Superintendent  
University Examinations  
**CHIEF SUPERINTENDENT**  
9221 - SSM Institute of Engineering and Technology  
Siodlagundu (P.O), Dindigul - 624 002

**ANNA UNIVERSITY CHENNAI, CHENNAI - 25**

**From**

The Chief Superintendent  
University Examinations  
9221-SSM Institute of Engineering & Technology,

**To:**

Ms.P.NivethaNirmal  
9214-RVSETGI  
Dindigul

**APPOINTMENT ORDER**

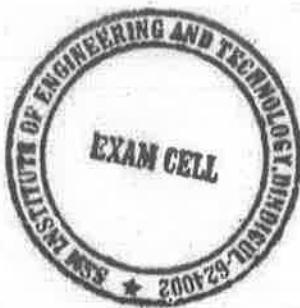
Thiru/Tmt P.NivethaNirmal is hereby appointed as Hall Superintendent for the Anna University Theory Examinations scheduled during APR/MAY-2022 in this College. The date and time of invigilation work is notified here under. He is directed to report to the Chief Superintendent of the University Examination at least thirty minutes before the commencement of the Examination. Those who are coming late will not be allowed to function as Hall Superintendents.

The Hall Superintendents shall not absent themselves from attending the invigilation work without obtaining the written permission of the Chief Superintendent. In case Hall Superintendent is unable to accept the order, he/she has to find a substitute and the acceptance of the substitute to undertake the responsibility of Hall Superintendent shall be produced to the Chief Superintendent. Request for leave without making an alternative arrangement will not be entertained.

Particulars of invigilation work:

Date	Session		Date	Session
18.07.2022	FN			
20.07.2022	FN			

Date: 15.07.2022  
Station: Dindigul-05



  
9221-SSMIET  
Chief Superintendent  
UNIVERSITY EXAMINERENTS  
9221 - SSM Institute of Engineering and Technology  
Sindhalagundu (Po), Dindigul - 624 002



**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL-624 002**  
 Approved by AICTE, Delhi and affiliated to Anna University  
 Accredited by NAAC

College Code	9221	INTERNAL TEST I / II	922120114020	Register Number
College Name	SSNIEET			
Degree/Branch	B.E/MECHANICAL		Semester	6
Subject Code	ME 8651		Date & Session	11.4.23 / FN
Subject Title	Design of Transmission System		No. of Pages Used	10
Question Paper Code			All particulars given are verified	
		Signature of the Hall Supdt. with date		
<i>R.S.L.</i>		<i>P.Dheenathayalan</i>		
DO NOT WRITE THE REGISTER NUMBER, COLLEGE CODE AND THE NAME IN ANY OTHER PART OF THE ANSWER BOOK				
Date	11.4.23		Session	FN
Subject Code/Title	ME 8651		Design of Transmission System	
Question Paper Code			No. of Pages used	10
Put a tick mark (✓) for the questions attempted (to be ticked by the candidate)				
PART - A		PART - B & C		
Question No.	Marks	Question No.	Marks	Total
1	11	a		
2	12	b		
3	12	a		
4	12	b		
5	11	a		
6	13	b		
7		a		
8	14	b		
9		a		
10	15	b		
TOTAL				
13.4.23		Date		
<i>WV</i>		Signature of the Examiner		
		Name of the Examiner		

ASSIGNMENT SHEET

NAME OF THE STUDENT	C. Akash Martin	
REG. NO	922121114002	
SUBJECT/ CODE	Thermal Engineering / ME3451	
ASSIGNMENT TOPIC	Diesel cycle, otto cycle, Brayton cycle	
COURSE OUTCOME	Co-I	
ASSIGNMENT MARK	19 <i>19</i>	20
REMARKS:		

Brayton Cycle (the initial condition of air is  $25^\circ\text{C}$  and 1bar. The maximum pressure and temperature are limited to 8bar and  $650^\circ\text{C}$ . Determine the cycle efficiency, heat supplied and heat rejected per kg of air, the work output per kg of air and the exhaust temperature.

Given:

$$T_1 = 25^\circ\text{C}$$

$$= 298\text{ K}$$

$$P_1 = 1\text{ bar}$$

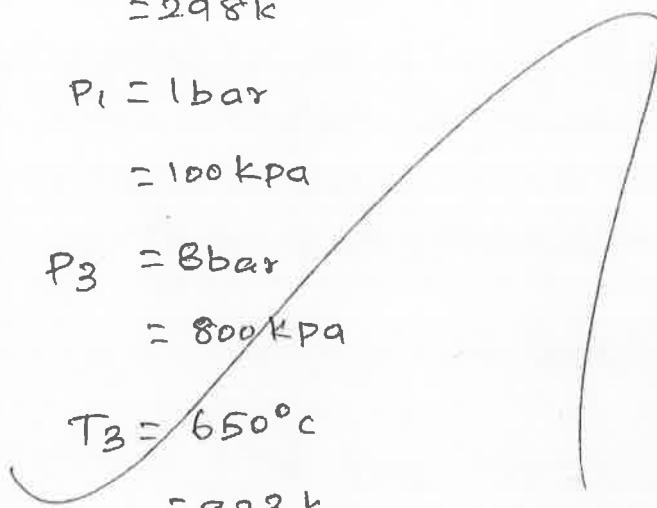
$$= 100\text{ kPa}$$

$$P_3 = 8\text{ bar}$$

$$= 800\text{ kPa}$$

$$T_3 = 650^\circ\text{C}$$

$$= 923\text{ K}$$



To Find:

$N_{\text{Brayton}}, Q_S, Q_R, T_4, W$

P Sol:

Process 1-2

$$\frac{P_2}{P_1} = \frac{T_2}{T_1}^{r/\gamma - 1}$$

$$P_2 \cdot r^{1/r}, \dots - T$$

$T_2 = 298 \text{ K}$

$$\frac{T_4}{T_3} = \frac{T_4}{T_3} \cdot \frac{V_2/V_1}{V_2/V_1}$$

$$\frac{P_1}{P_3} \cdot \frac{V_1/V_3}{V_1/V_3} \times T_3 = T_4$$

$$T_4 = \frac{100}{1800} \cdot \frac{1.4 - 1}{1.4} \times 923$$

$$T_4 = 510 \text{ K}$$

Process 2-3

$$Q_S = m c_p (T_3 - T_2)$$

$$Q_S = 1 \times 1005 (923 - 539)$$

$$= 385.92 \text{ kJ/kg}$$

Process 4-1

$$Q_R = m c_p (T_4 - T_1)$$

$$= 1 \times 1005 (510 - 298)$$

$$= 212.8 \text{ kJ/kg}$$

$$334 \times 270$$

$$= C_{p,m} \sigma \propto T^2$$

$$= 42.9 \text{ J}$$

$$W = W_T + W_c$$

$$W_c = m c P (T_3 - T_4)$$

$$= 1 \times 1.005 (539 - 298)$$

$$= 242.2$$

$$W_T = m c P (T_3 - T_4)$$

$$= 1 \times 1.005 (923 - 510)$$

$$= 415.06$$

$$W = 415.06 - 242.2$$

$$= 172.86 \text{ kJ/kg}$$

$$T_2 = \frac{800}{100}^{1.4-1}/1.4 \times 298$$

$$T_2 = 539$$

Given data

$$V_5 = 0.00053 \text{ m}^3$$

$$V_C = 0.00035 \text{ m}^3$$

$$P_s = 65 \text{ bar} = 65000 \text{ bar} \quad P_4$$

Cut off ratio

$$V_H - V_5 = 5\% \cdot V_S$$

$$P_1 = 0.9 \text{ bar} = 90 \text{ bar}$$

$$T_1 = 80^\circ = 273 + 80 = 353 \text{ K}$$

$$\gamma = 1.4$$

Solution:

$$R_C = \frac{V_C + V_S}{V_C}$$
$$= \frac{0.00035 + 0.00053}{0.00035}$$

$$\gamma = 16.14$$

$$V_H - V_3 = 5\% \cdot V_S$$

$$V_A - 0.00035 = 0.05 \times 0.0053$$

$$V_H = 0.00061 \text{ m}^3$$

$$e = \frac{V_H}{V_3} = \frac{0.000615}{0.00035}$$

$$e = 1.757$$

$$P_2 = P_1 (\gamma)^{\nu}$$

$$= 90 (16.14)^{1.4}$$

$$P_2 = 4418.83$$

$$k = P_3 / P_2$$

$$= \frac{6500}{4418.82}$$

$$k = 1.47$$

$$\eta_{\text{Duel}} = \frac{1 - (k_e^{\nu-1})}{(\gamma)^{\nu} [(k-1) + k(\nu-1)]}$$

$$= \frac{1 - (1.47 \times 1.7)^{1.4-1}}{(16.14)^{1.4-1} [(1.47-1) + (1.4 \times 1.47) \times (1.7-1)]}$$

$$= \frac{1.838}{3.042 \times 0.47 \times 0.05 \times 0.7}$$

$$= 0.64$$

$$= 0.64 \times 100$$

$$\eta = 64\%$$

$$\frac{P_5}{P_4} = \left(\frac{\gamma_4}{\gamma_5}\right)^{\gamma} + \left(\frac{\gamma_4}{\gamma_5}\right)^{1-\gamma}$$

$$\gamma_4 = \frac{V_5}{V_4}$$

$$\begin{aligned}\gamma_4 &= \frac{c}{e} \\ &= \frac{16}{1.22}\end{aligned}$$

$$\gamma_4 = 13.12$$

$$\frac{P_5}{P_4} = \left(\frac{V_4}{V_5}\right)^{\gamma}$$

$$P_5 = \left(\frac{V_4}{V_5}\right)^{\gamma} \times P_4$$

$$= \frac{1}{\gamma_4} \times P_4$$

$$= \frac{1}{13.12} \times P_4$$

$$P_5 = 190.54 \text{ kPa}$$

$$T_5 = 615.36 \text{ K}$$

$$\begin{aligned}\eta_{\text{Dual}} &= \frac{1 - (k_e^{\gamma-1})}{(\gamma)^{\gamma-1} [(k-1) + \gamma^2 k (e-1)]} \\ &= \frac{1 - (1.44 \times 1.22^{1.4-1})}{(16)^{1.4-1} [(P_3/P_2-1) + 1.4 (P_5/P_2) (1.22-1)]} \\ &= 1 - 0.3665\end{aligned}$$

$$\eta_{\text{Dual}} = 0.66 \times 100 = 66\%$$

$$P_{av} = \frac{w}{V_1 - V_2}$$

$$\eta = \frac{w}{Q_s}$$

$$Q_s = Q_{s1} + Q_{s2}$$

$$= mcv(T_3 - T_2) + mcp(T_4 - T_5)$$

$$= 1 \times 0.718 (1413.12 - 4850.28) + 1 \times 1.005 (1723.16 - 1413.12)$$

$$= 311.59 + 311.59$$

$$Q_s = 623.18 \text{ kJ/kg}$$

~~$$0.663 \times 623.18 = w$$~~

$$w = 4113.29$$

$$V_1 = 0.927$$

$$V_2 = 0.06$$

The swept Volume of the diesel engine work under the dual cycle is  $0.0053^3$  and clearance volume  $0.00035^3$  the max pressure is 65 bar fuel engine end at 5% of stroke the temp and pressure at begining of compression are  $80^\circ\text{C}$  and 0.9 bar determine the air standard efficiency of the cycle take  $\gamma = 1.4$

Process 1-2 (constant volume heat addition)

$$\frac{P_2}{P_1} = \left(\frac{V_1}{V_2}\right)^{\gamma} \quad \left(\frac{T_1}{T_2}\right)^{\gamma-1}$$

$$V_2 = V_1 (2)^{\gamma}$$

$$100 \times (16)^{1/4}$$

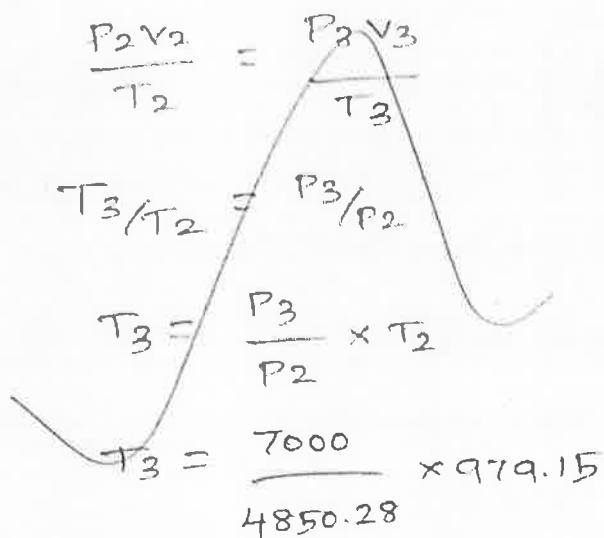
$$P_2 = [4850.28 \text{ kPa}]$$

$$T_2 = T_1 (2)^{\gamma-1}$$

$$= 323 (16)^{1/4-1}$$

$$T_2 = 979.15 \text{ K}$$

Process 2-3 (constant volume heat supply)



$$T_3 = 1413.12 \text{ Kpa}$$

$$K = \frac{P_3}{P_2}$$

1. ~~Dual cycle~~  
 air standard with dual cycle has a compression ratio of 16 and compression begins at 1 bar and  $50^{\circ}\text{C}$  and maximum pressure is 7 bar per heat transfer to air at the constant pressure is equal to constant volume estimate the following.

- i) pressure and temperature cardinal point.
- ii) cycle efficiency
- iii) mean effective pressure.

So take:  $C_V = 0.718$ ,  $C_P = 1.005 \text{ kJ/kgK}$

Given

$$\gamma = 16$$

$$P_1 = 1 \text{ bar} = 100 \text{ kPa}$$

$$T_1 = 50^{\circ}\text{C} = 323 \text{ K}$$

$$P_4 = 7 \text{ bar} = 700 \text{ kPa} = P_3$$

$$Q_{S1} = Q_{S2}$$

$$C_P = 1.005 \text{ kJ/kgK}$$

$$C_V = 0.718 \text{ kJ/kgK}$$

To Find

$$T, P, \eta_{\text{dual}}, P_m$$

$$T_1 = T_{in} + \Delta T_{in}$$

$$T_2 = T_{out} + \Delta T_{out}$$

$$T_{in} = T_{in}$$

$$T_{out} = T_{out}$$

$$\phi = \sqrt{n}/\sqrt{g}$$

$$Q_{S_1} = \rho \phi_2$$

$$\text{mcv}(T_3, T_2) = \text{mcv}(T_H - T_2)$$

$$\frac{1}{1-\eta} (m_{2,12} - m_{1,12}) = (T_H - m_{1,12})$$

where,

$$\frac{C_P}{C_V} = \gamma$$

$$\left[ \frac{C_V}{C_P} = \frac{1}{\gamma} \right]$$

$$\frac{1}{1-\eta} (m_{2,12}) = (T_H - m_{1,12})$$

$$T_H = 172.3 + 16 \text{ K}$$

$$\eta = \frac{172.3 + 16}{141.2} = 1.22$$

$$\eta = \frac{T_H}{T_2} = 1.22$$

# **SSM Institute of Engineering and Technology**

Sindalagundu Post, Palani Road, Dindigul - 624 002.

Ph : 0451 - 2448800 - 2448899 (100 lines) Fax : 0451 - 2448855

E-mail: ssmietdgl@gmail.com

[www.ssmiet.ac.in](http://www.ssmiet.ac.in)



## **RECORD NOTE BOOK**

ME8711 - SIMULATION AND ANALYSIS ..... Laboratory record

Certified that this a bonafide record of work done by

Mr./Ms. .... R. AND MADHURALA .....

of ..... MECHANICAL ENGINEERING ..... branch during the year & 022-2023

Date: 25.01.2023

Staff - In - Charge

HoD

Submitted for the ..... ANNA UNIVERSITY .....

Practical Examination held on 31.01.2023 at SSM Institute of Engineering and

Technology, Dindigul - 624 002.

Register No.

9	2	2	1	1	9	1	1	4	0	0	2
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Internal Examiner

External Examiner

# INDEX

S.No	Date	Name of the Experiment	Page No	Marks	Initials
1.	26.09.22	MATLAB basics, dealing with matrices , Graphing- Functions of one variable & two variable	1.	24	WHR 26/09/22
2.	26.08.22	Vibration response of the Spring Mass system using MATLAB	9.	22	WHR 26/08/22
3.	09.09.22	Static Analysis on Two- dimensional TRUSS-I	15	23	WHR 09/09/22
4.	09.09.22	Static Analysis on two-D TRUSS-II	37	22	WHR 09/09/22
5.	16.09.22	Static Analysis on Cantilever beam with point load at its freeend	55	23	WHR 16/09/22
6.	16.09.22	Static Analysis on simply supported beam with midpoint load	63	23	WHR 16/09/22
7.	16.09.22	Static Analysis on simply supported beam with UDL	71	24	WHR 16/09/22
8.	23.09.22	Static Analysis on overhanging beam with point load and moment	79	22	WHR 23/09/22
9.	26.09.22	Static Analysis on simply supported beam with UDL and Point load.	85	23	WHR 26/09/22

# INDEX

S.No	Date	Name of the Experiment	Page No	Marks	Initials
10.	23.09.22	Static Analysis on simply supported beam with inclined load	89	23	N.M.Rajesh
11.	23.09.22	Static Analysis on a plate with hole	93	23	N.M.Rajesh
12.	23.09.22	static Analysis on a plate with Multi-hole	97	23	N.M.Rajesh
13.	20.09.22	Structural Analysis on L Blocked	101	22	N.M.Rajesh
14.	14.10.22	Thermal Analysis on L Blocked	105	24	N.M.Rajesh
15.	14.10.22	Thermal Analysis on A Block (Conduction/Convection/Insulation)	109	25	N.M.Rajesh
16.	28.10.22	Modal analysis on cantilever beam	111	23	N.M.Rajesh
17.	29.10.22	Modal Analysis on simply supported Beam	115	22	N.M.Rajesh
18.	04.11.22	Harmonic Analysis on Cantilever Beam	121	23	N.M.Rajesh
19.	04.11.22	Stress Analysis on closed cylindrical vessel (Axis Symmetry Condition)	129	22	N.M.Rajesh

## Vibration Response of the Spring Mass System using MATLAB

Aim:

Plot the vibration response of the spring mass system using MATLAB for  $\omega_n = 5 \text{ rad/s}$ , Damping factor ( $\xi$ ) = 0.05, 0.1, 0.3, subjected to the initial conditions  $x_0 = 0$ .

Procedure:

Frequency of damped vibration

$$(w_d) = \sqrt{\frac{k}{m} - \left(\frac{c}{2m}\right)^2}$$

$$w_d = \omega_n \sqrt{1 - \xi^2}$$

where

$k$  = stiffness of a spring (N/m)

$m$  = mass of the system ( $\text{kg}$ )

$\xi$  = damping factor =  $\frac{c}{c_c}$

$c$  = damping co-efficient ( $\text{N} \cdot \text{m/s}$ )

$c_c$  = critical damping co-efficient ( $\text{N} \cdot \text{m/s}$ )

Mathlab code:

```
clear
clc
wn = 5; % Natural frequency
z1 = 0.05; % Damping ratio
z2 = 0.1;
z3 = 0.8;
t0 = 0; % Initial time
timestep = 0.01; % time step
tf = 6; % Final time
t = (t0 : timestep : tf);
wd = sqrt(1 - z1^2) * wn % Damped frequency
x1 = exp(-z1 * wn * t) .* cos(wd * t);
wd = sqrt(1 - z2^2) * wn
x2 = exp(-z2 * wn * t) .* cos(wd * t);
wd = sqrt(1 - z3^2) * wn
x3 = exp(-z3 * wn * t) .* cos(wd * t);
```

```
plot(t, x1, 'm', 'LineWidth', 3)
hold on
```

```
plot(t, x2, 'g', 'LineWidth', 1.5)
plot(t, x3, 'b', 'LineWidth', 1.5)
```

```
lgd = legend('z1 = 0.05', 'z2 = 0.1',
'z3 = 0.8');
```

```
title('Response to Initial excitation')
```

