



### **2.5.1**

**Mechanism of Internal assessment is transparent and robust in term of frequency and mode**

- Question paper setting**
- Conduction**
- Assessment**
- Result Declaration**



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Frequency of Internal Examination  
followed as per the Academic Calendar**

# Academic Calendar



Shri Vithal Education and Research Institute's

Academic Calendar

College of Engineering, Pandharpur

Semester II A.Y. 2021-2022

MAR 2022		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	
TY and BE		F1							FNI														F2	SCM							ARCM		
APR 2022		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT		
TY and BE			F3			GRM			MP/SC		F4				FN2 / SV/F5	F6		IV	IV			MP/SC					ISE-I	ISE-I	ISE-I	ISE-I	ISE-I	LT	
FY and SY																	Sem Start																
MAY 2022		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	
TY and BE		F7	LT	F8	LT	LT	LT/R			MP/SC			RSHM			MP/SC		F9			SCM			PM	MP/SC		UGP	UGP			UGS		
FY and SY		F7		F8									RSHM				F9			SCM			PM	ISE-I	ISE-I	ISE-I	ISE-I	ISE-I	LT		LT	LT	
JUN 2022		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU		
TY and BE			D		SC																												
FY and SY		LT	LT/R																														
JUL 2022		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	
TY and BE		PG	PG		UE	UE	UE	UE	UE	F10	F10/F11	F10	UE	UE	UE	UE	UE		UE	UE	UE	UE	UE	UE			R&D	R&D	R&D	R&D	R&D	R&D	
FY and SY										F10	F10/F11	F10	ISE-II	ISE-II	ISE-II	ISE-II	ISE-II					D		SC			IO	PG	PG	PG	UE	UE	

Date	Symbol	SEMESTER-II for TY & BE students (March 2022 to June.2022) <i>*Consider the same pattern with different dates for FY and SY students</i>
10th Mar to 10th Jun		Teaching Period
As per schedule		Weekly Off /Festival
1st Mar	<b>F1</b>	Mahashivratri
2nd Mar to 9th Mar		Certificate/Add-on Course (TY and BE student)
8th Mar	<b>FN1</b>	International Womens' Day
22nd Mar	<b>F2</b>	Rang Panchami
23rd Mar	<b>SCM</b>	Students' Council Meeting
29th Mar	<b>ARCM</b>	Anti- Ragging Committee Meeting
2nd Apr	<b>F3</b>	Gudhi Padwa
5th Apr	<b>GRM</b>	Grievance Redressal Meeting
8th Apr	<b>MP/SC</b>	Mock- Parliament / Mock Security Council (MECH Dept.)
10th Apr	<b>F4</b>	Ram Navami
14th Apr	<b>FN2</b>	Dr. Babasaheb Ambedkar Birth Anniversary & Annual Prize Distribution
14th Apr	<b>SV</b>	SVERIAN Quarterly Issue Release Day
14th Apr	<b>F5</b>	Mahaveer Jayanti
15th Apr	<b>F6</b>	Good Friday
17th to 18th Apr	<b>IV</b>	Industrial Visit
21st Apr	<b>MP/SC</b>	Mock- Parliament / Mock Security Council (CIVIL Dept.)
25th to 29th Apr	<b>ISE-I/R</b>	ISE- I (Result on 5th Day after last paper)
30th Apr to 6th May	<b>LT</b>	Lab Test on Practical session after ISE of the concerned subject
1st May	<b>F7</b>	Maharashtra Din
3rd May	<b>F8</b>	Ramjan Eid
9th May	<b>MP/SC</b>	Mock- Parliament / Mock Security Council (ENTC Dept.)
11th May	<b>RSHM</b>	Restriction of Sexual Harassment Meeting
14th May	<b>MP/SC</b>	Mock- Parliament / Mock Security Council (ELE Dept.)
16th May	<b>F9</b>	Buddha Pournima
19th May	<b>SCM</b>	Students' Council Meeting
22nd May	<b>PM</b>	Parents' Meet For FE , MECH & ENTC.
23rd May	<b>MP/SC</b>	Mock- Parliament / Mock Security Council ( CSE Dept.)
25th to 26th May	<b>UGP</b>	Internal Presentation of B.E. Project
30th May	<b>UGS</b>	B.E. Project Submission
2nd Jun	<b>D</b>	Display of Defaulters List and Letters to Parents Accordingly
4th Jun	<b>SC</b>	Syllabus Completion
13th to 17th Jun	<b>ISE-II/R</b>	ISE- III (Result on 5th Day after last paper)
18th to 23rd Jun	<b>LT</b>	Lab Test on 1st Practical session after ISE of the concerned subject
27th Jun	<b>IO</b>	Internal Oral and Term Work submission/ Displaying of Marks
28th Jun to 2nd Jul	<b>P.G</b>	Preparation and Guidance Sessions
4th Jul to 23rd Jul	<b>U.E</b>	Tentative Period for University Examination
9th to 11th Jul	<b>F10/F11</b>	Ashadhi Ekadashi/Bakari Eid
25th Jul to 30th Jul	<b>R&amp;D</b>	STTP/Conference/Workshop/Seminar /National Conference/Dept.Workshop

**Dr. B. P. Ronge**  
**PRINCIPAL**



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**In Semester Examination (ISE)  
Question paper setting**



SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S

## COLLEGE OF ENGINEERING, PANDHARPUR

P.B. No. 54, Gopalpur -Ranjani Road, Gopalpur, Tal.- Pandharpur- 413 304,Dist.- Solapur (Maharashtra)

Tel.: 02186-216063, 9503103757, E-mail : [coe@sveri.ac.in](mailto:coe@sveri.ac.in), Website: [www.sveri.ac.in](http://www.sveri.ac.in)

(Approved by A.I.C.T.E., New Delhi and affiliated to Solapur University, Solapur)

NBA Accredited all Eligible UG Programmes and , NAAC A+, Accredited Institute,

Accredited by the Institute of Engineers (India), Kolkata and TCS, Pune ISO 9001-2015 Certified Institute



ISO 9001:2015



Date: 28/05/2022

### Office order

The following faculty members of our department are entrusted the duties for reviewing the In-Semester Exam (ISE) Question papers for the Second semester of academic year 2021-22.

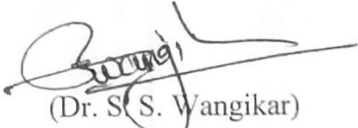
Sr. No.	Class	Subject	Name of Question Paper Setter	Name of Reviewer
1	S.Y.	PP & EE	Mr. A.K.Parkhe	/Mrs. P. K. Patil
2		FM & FM	Mr. S. R. Gavali	Mr. S. M. Kale
3		EM-III	Mrs. S. R. Zadbuke	Dr. H. H. Pawar
4		K-TOM	Mr. S. Y. Salunkhe	Dr. R. R. Gidde
5		MT	Mr. P. B. Asabe	Dr. S. B. Bhosale
6		IAE	Dr. S. V. Jadhav	Dr. R. R. Gidde

  
HEAD  
Dept of Mechanical Engg  
C O E Pandharpur

To make effective implementation of the question paper reviewing work following Committee is constituted for the smooth functioning.

Sr. No.	Name of Member	Designation
1	Dr. S. B. Bhosale	Chairman
2	Prof. S. N. More	Coordinator S.Y.-A
3	Prof. P. B. Asabe	Coordinator S.Y.-B
4	Prof. A. A. Shinde	Coordinator T.Y.-A
5	Prof. S. Y. Salunkhe	Coordinator T.Y.-B
6	Prof. S. M. Kale	Coordinator L.Y.-A
7	Prof. K. S. Pukale	Coordinator L.Y.-B

All are requested to take note of same and act accordingly.

  
(Dr. S. S. Wangikar)

**HOD, Mech. Engg. Dept.**

HEAD,  
Dept. of Mechanical Engg  
C.O.E. Pandharpur

SVERI's College of Engineering, Pandharpur  
S.Y. B.Tech (Mechanical) ISE-I Academic Year: 2021-22  
Subject: Power Plant and Energy Engineering

Div: A

Day and Date: Monday & 06/06/2022

Time: 10.00 am - 11.30 am

Marks - 20

Duration-1:30 Hours

CO	CO STATEMENT	BLOOMS LEVEL	MAX. MARKS
CO 1	Describe Effective use of available Energy Sources and their role in power development in India	BL2	06
CO 2	Explain various Power Plants and illustrate the effect of variable loads and load factors on Power Plants.	BL3	08
CO 4	Explain various methods of Economic analysis of power plants and explain various factors for selection of power stations.	BL2	06

**Instructions -** I) All questions are compulsory.  
II) Assume suitable data if required.

Q. 1	MCQ's/objectives type questions.	02 M	Related CO & BL	PI												
1.	Which of the following is a non-renewable resource? a) Water      b) Wildlife      c) Coal      d) Forests	01	CO 1	1.3.1												
2.	NPCIL stands for..... a) National Power Corporation of India Limited b) Nuclear Power Corporation of India Limited c) National Public Corporation of India Limited d) Nuclear Public Corporation of India Limited	01														
<b>Q. 2</b>	<b>MCQ's/objectives type questions.</b>	<b>02 M</b>	CO 2	1.3.1												
1.	The unvarying load, which occurs almost the whole day on the power plant, is called..... a) Discrete load      b) Peak load      c) Average load      d) Base load	01														
2.	Which of the following power plant cannot be used as base load plant? a) Hydroelectric power plant      b) Nuclear power plant c) Diesel elected plant      d) Thermal power plant	01														
<b>Q. 3</b>	Give the classification of Energy Sources and explain all in short. <b>OR</b> Explain role of Government & Private Sector in Power Development.	<b>04 M</b>	CO 1 BL 2	1.3.1												
<b>Q.4</b>	Define Variable Load? What are the effects of Variable Loads on Power Plant Design & Operation? <b>OR</b> The load supplied by a power station is given below: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Time (Hr.)</th> <th>0 - 6</th> <th>6 - 12</th> <th>12 - 14</th> <th>14 - 18</th> <th>18 - 24</th> </tr> </thead> <tbody> <tr> <td>Load (MW)</td> <td>35</td> <td>90</td> <td>65</td> <td>100</td> <td>50</td> </tr> </tbody> </table> Draw the Load Curve & Load Duration Curve. Also determine Load Factor, Plant Capacity Factor, if plant capacity is 140 MW.	Time (Hr.)	0 - 6	6 - 12	12 - 14	14 - 18	18 - 24	Load (MW)	35	90	65	100	50	<b>06 M</b>	CO 2 BL 3	1.3.1
Time (Hr.)	0 - 6	6 - 12	12 - 14	14 - 18	18 - 24											
Load (MW)	35	90	65	100	50											
<b>Q.5</b>	What is Depreciation Cost? Explain in detail any one Method of Depreciation. <b>OR</b> Explain the various factors considered during Selection of Boiler?	<b>06 M</b>	CO 3 BL 2	2.1.3												

.....All the Best.....





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ISO 9001:2015



**Department of Mechanical Engineering**  
**Question Paper Reviewing Report**

Class: S.Y.B.Tech Div: A

Test: ISE-I

Academic Year: 2022-23

Name of subject teacher:- Mrs. A.K. Parkhe,

Name of Reviewer:- (Mrs. P. K. Patil)

A]

Sr. No.	Recommended/Not Recommended	If not recommended comments of reviewer	Sign of Reviewer
01	Recommended	OK	

B] HOD Remark: ok

(Dr. S. S. Wangikar)

HOD Mech. Engg. Dept.

HEAD,  
Dept. of Mechanical Engg  
C.O.E. Pandharpur



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

## **Conduction of In Semester Examination (ISE)**

- **Circular**
- **Notice**
- **Time Table**
- **Seating Arrangement**
- **Supervision Duty Sheet**

# Circular



## Shri Vithal Education & Research Institute's COLLEGE OF ENGINEERING, PANDHARPUR

P.B.No. 54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413 304, Dist. Solapur (Maharashtra) Tel.: 7755990201.

Toll Free No.: 1800-3000-4131, E-mail: coe@sveri.ac.in, Website: www.sveri.ac.in (Approved by A.I.C.T.E., New Delhi and Affiliated to Solapur University, Solapur)

Accredited by The Indian Institution of Engineers (India), Kolkata and TCS, Pune. ISO 9001:2008 Certified Institute



Ref.: COE/P/P/2017-18/ CIR/67 (A)  
Circular

Date:- 03/01/2018

All the Students and Staff are hereby informed to note that the policy in respect of In Semester Examination (ISE) marks has been modified through the resolution in Students' Council meeting dated 12/10/2017. The modified policy is as given below:

- 1) If student passes in all the three ISEs of the Subject (Course) then the average of the best of two ISEs be considered for finalising ISE marks of that Subject (Course) for sending to University.
- 2) If student fails in one or more ISEs of Subject (Course) then the average of all the three ISEs is to be considered for finalising ISE marks of that subject for sending to University.
- 3) Student failing in or remaining absent for Subject(s)[(Course)(s)] in ISE(s) or willing to improve the performance in one or more Subject(s)[(Course)(s)] ,at his/her choice may opt for Re-ISE(s) ,within five days from the date of declaration of the concerned ISE result, once for each Subject (Course) by paying charges of Rs.300/- per Subject (Course) of ISE.
- 4) This policy be reflected in every notice of ISE henceforth.
- 5) This circular be part of Subject file under A2 as per Circular no.SVERI/2010-11/CIR/85 (A) dated 01/01/2011, alongwith other relevant circulars.

The policy shall come into force from Semester -II of the Academic Year 2017-18.  
All the concerned should take note of the above and act accordingly.

*B. P. Ronge*  
(Dr.B.P.Ronge)  
PRINCIPAL

### C.C.:

- |              |   |                                  |                          |
|--------------|---|----------------------------------|--------------------------|
| 1) All Deans | 2) All HODS : For effective circulation | 3) All Subject (Course) Teachers | 4) College Notice Boards |
| 5) FTP       | 6) Office Copy                          | 7) Office Copy                   | 8 ) Hostel Notice Board  |

### Revised Circular

All the Students and Staff are hereby informed to note that the policy in respect of In Semester Examination (ISE) has been revised through the resolution in Students' Council meeting dated 24/01/2019. The revised policy is as given below:

- 1) If student passes in all the three ISEs in a Subject (Course) then the average of the best of two ISEs be considered for finalising ISE mark of that subject (Course) for sending to University.
- 2) Student failing in or remaining absent for Subject(s) [(Course)s] in ISE(s) has to compulsory appear for Re-ISE(s), once for each Subject (course) by paying charges of Rs.100/- per Subject (Course) of ISE, as per the schedule decided by department.
- 3) Student clear pass in ISE, but willing to improve the performance in one or more Subject (s) [(Course)s] at his /her choice may opt for RE-ISE(s), once for each subject (Course) by paying charge of Rs. 100/- per subject (course) of ISE, as per the schedule decided by department.
- 4) If student fails in one or more ISEs of Subject (Course) then the average of all the three ISEs is to be considered for finalising ISE marks of that subject for sending to University.
- 5) This policy be reflected in every notice of ISE henceforth.
- 6) This circular be part of Subject file under A2 as per Circular no. SVERI/2010-11/CIR/85 (A) dated 01/01/2011, along with other relevant circulars.
- 7) The earlier circular in this respect No. COEPR/2017-18/Cir/67(A) dated 03/01/2018 stands cancelled.

The policy shall come into force from Sem-II of the Academic Year 2018-19.

All the concerned should take note of the above and act accordingly.



*B. Ronge*  
(Dr. B. P. Ronge)  
**PRINCIPAL**

#### C.C.

- |                         |                          |   |                                  |
|-------------------------|--------------------------|---|----------------------------------|
| 1) Campus Incharge      | 2) All Deans             | 3) All HODS : For effective circulation | 4) All Subject (Course) Teachers |
| 5) Hostel Notice Boards | 6) College Notice Boards | 7) FTP                                  | 8) Office Copy                   |



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ISO 9001:2015



Date: 28/05/2022

### Department of Mechanical Engineering

#### Notice

All the Faculty Members & Students of S.Y.B.Tech. Mechanical Engineering Department are hereby informed to note the following points regarding In Semester Exam (ISE-I) for semester-II of academic year 2021-2022.

1. ISE-I will be conducted from 06<sup>th</sup> June to 11<sup>th</sup> June.
2. ISE paper will be of 20 marks, which is distributed as 4 marks MCQs & 16 marks for descriptive questions.

\*IMP. NOTE: -

1. Student failing or remaining absent for subject in ISE or willing to improve the performance in one or more subjects at his/her choice may apply for RE-ISE within three days from the declaration of concern ISE result.
2. **If student fail in ISE, even though if student pass in university exam, it will be considered as fail in that particular subject.**

So take the note of same & act accordingly.

*Kant*  
*28/5/22*  
(Prof. S. S. Jadhav)  
ISE Co-ordinator  
Mech. Engg. Dept.

*S. S. Wangikar*  
*28/5/22*  
(Dr. S. S. Wangikar)  
H.O.D.  
Mech. Engg. Dept.

HEAD  
Dept of Mechanical Engg  
C.O.E. Pandharpur

**SVERI's COE, Pandharpur  
Mechanical Engineering Dept.**

**TIME TABLE**  
EXAMINATION: ISE-I  
SEMESTER-II  
A.Y. 2021-22

**CLASS: S.Y. Mechanical**

**Division: A&B.**

Paper No.	Subject	Date	Time
1	PP&EE	06/06/2022	10:00 AM To 11:30AM
2	FM&FM	07/06/2022	10:00 AM To 11:30AM
3	EM-III	08/06/2022	10:00 AM To 11:30AM
4	K-TOM	09/06/2022	10:00 AM To 11:30AM
5	MT	10/06/2022	10:00 AM To 11:30AM
6	IAE	11/06/2022	10:00 AM To 11:30AM

**Important Note:-**

1. After ISE Classes will run regularly.
2. OBT & THT will be conducted on the same day of the respective subject.

*Kant*  
*28/5/22*  
( Prof. S.S. Jadhav )  
**ISE Co-ordinator**  
**Mechanical**  
**Engineering Dept.**

*[Signature]*  
( Dr. S. S. Wangikar )  
**H. O. D.**  
**Mechanical Engineering**  
**Dept.**

HEAD,  
Dept of Mechanical Engg  
C O E, Pandharpur

Seating

**Seating Arrangement for All  
Students**





SVERI's College of Engineering, Pandharpur


Department of Mechanical Engineering

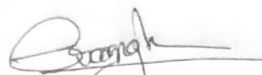
A.Y. 2021-22 SEM-I ISE-I

DAILY SUPERVISION DUTY

Date:- 7/6/2022

Sr. No.	Block	Class & Div.	Roll No.	Total	Name of Supervisor	Sign
1	515	S.Y. A	S.Y. A 01 to 35	35	PKP	
2	516	S.Y. A	S.Y. A 36 to 74	39	DTK	
3	517	S.Y. B	S.Y. B 01 to 35	35	SVJ	
4	518	S.Y. B	S.Y. B 36 to 67	32	SMKa	

  
Prof. S. S. Jadhav  
ISE Co-ordinator

  
(Dr. S. S. Wangikar)  
Head, Mech. Engg. Dept

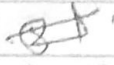
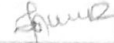
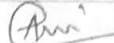

HEAD,  
Dept of Mechanical Engg  
C O E Pandharpur




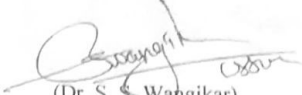
SVERP's College of Engineering, Pandharpur

Department of Mechanical Engineering  
A.Y. 2021-22 SEM-I ISE-I  
DAILY SUPERVISION DUTY

Date:- 06/06/2022

Sr. No.	Block	Class & Div.	Roll No.	Total	Name of Supervisor	Sign
1	515	S.Y. A	S.Y. A 01 to 35	35	KSP	
2	516	S.Y. A	S.Y. A 36 to 74	39	PBA	
3	517	S.Y. B	S.Y. B 01 to 35	35	AKP	
4	518	S.Y. B	S.Y. B 36 to 67	32	PSH	

  
Prof. S. S. Jadhav)  
ISE Co-ordinator

  
(Dr. S. S. Wangikar)  
Head, Mech. Engg. Dept  
HEAD,  
Dept. of Mechanical Engg  
C O E, Pandharpur



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Assessment of In Semester Examination  
(ISE)**



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

## **In Semester Examination (ISE)**

- **Marking Scheme of Assessment**
- **Answer Sheet**
- **Circular for Timely Assessment**
- **Result**



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

## **In Semester Examination (ISE)**

- **Marking Scheme of  
Assessment**

SVERI's College of Engineering, Pandharpur  
S.Y. B.Tech (Mechanical) ISE-1 Academic Year: 2021-22  
Subject: Power Plant and Energy Engineering  
Div: B

Day and Date: Monday & 06/06/2022  
Time: 10.00 am - 11.30 am

Marks - 20  
Duration-1:30 Hours

CO	CO STATEMENT	BLOOMS LEVEL	MAX. MARKS
CO 1	Describe Effective use of available Energy Sources and their role in power development in India	BL2	06
CO 2	Explain various Power Plants and illustrate the effect of variable loads and load factors on Power Plants.	BL3	08
CO 4	Explain various methods of Economic analysis of power plants and explain various factors for selection of power stations.	BL2	06

Instructions - I) All questions are compulsory.  
II) Assume suitable data if required.

Q. 1	MCQ's/objectives type questions.	02 M	Related CO & BL	PI									
1.	Which of the following is a non-renewable resource? a) Water      b) Wildlife      c) Coal      d) Forests	01	CO 1	1.3.1									
2.	NPCIL stands for..... a) National Power Corporation of India Limited b) Nuclear Power Corporation of India Limited c) National Public Corporation of India Limited d) Nuclear Public Corporation of India Limited	01											
Q. 2	MCQ's/objectives type questions.	02 M	CO 2	1.3.1									
1.	The unvarying load, which occurs almost the whole day on the power plant, is called..... a) Discrete load      b) Peak load      c) Average load      d) Base load	01											
2.	Which of the following power plant <b>cannot</b> be used as base load plant? a) Hydroelectric power plant      b) Nuclear power plant c) Diesel elected plant      d) Thermal power plant	01											
Q. 3	Give the classification of Energy Sources and explain all in short. <b>OR</b> Explain role of Government & Private Sector in Power Development.	04 M	CO 1 BL 2	1.3.1									
Q.4	Explain the pumped storage plant with neat sketch <b>OR</b> The load supplied by a power station is given below:	06 M	CO 2 BL 3	1.3.1									
	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Time (Hr.)</th> <th>0 - 6</th> <th>6 - 12</th> <th>12 - 14</th> <th>14 - 18</th> <th>18 - 24</th> </tr> </thead> <tbody> <tr> <th>Load (MW)</th> <td>35</td> <td>90</td> <td>65</td> <td>100</td> <td>50</td> </tr> </tbody> </table>				Time (Hr.)	0 - 6	6 - 12	12 - 14	14 - 18	18 - 24	Load (MW)	35	90
Time (Hr.)	0 - 6	6 - 12	12 - 14	14 - 18	18 - 24								
Load (MW)	35	90	65	100	50								
Q.5	Draw the Load Curve & Load Duration Curve. Also determine Load Factor, Plant Capacity Factor, if plant capacity is 140 MW.												
Q.5	Define Economics of power generation and Explain various cost of Electrical energy	06 M	CO 3 BL 2	2.1.3									

.....All the Best.....

SVERI's College of Engineering, Pandharpur  
Department of Mechanical Engineering

Academic Year: 2021-22

Model Answer Key

ISE: I

Subject Name: Power Plant & Energy Engineering

SEM: II

Class & Division: S.Y. B.Tech. (B)

Q. No.	Sub Q. No.	Answer details	Marking Scheme
1.	a)	Coal	01 M
	b)	Nuclear Power Corporation of India Limited	01 M
2.	a)	Peak load	01 M
	b)	Diesel elected plant	01 M
3.	a)	Classification Energy Sources. Explanation of all in short.	02 M 02 M
	b)	Role of Government in Power Development. Role of Private Sector in Power Development.	02 M 02 M
4.	a)	Diagram of Pumped storage power plant Explanation of Working	02 M 04 M
	b)	Load Curve & load duration curve Answer of load factor & Plant capacity factor	02 M 04 M
5.	a)	Definition Explanation various cost of electrical energy	02 M 04 M

  
Name & Sign of Subject Teacher

(I.P.K. Patil)



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**In Semester Examination (ISE)**

**Answer Sheet**



Shri Vithal Education & Research Institute's  
**COLLEGE OF ENGINEERING, PANDHARPUR**

ISE / Unit Test No.: 01

Date: 6-6-2022

Name of Student: Shriprasad Pandurang Karande

Class: S.Y. Btech (Mech)

Division: A

Roll No.: 48

Subject: PPEE

Sign of Supervisor:

Marks: 19  
20 B

CO:	BL	PI Code	Q.No.	a	b	c	d	e	f	Total
1			1	1	1					2
2			2	1	1					2
1	2		3	4						4
2	3		4	6						6
3	2		5	5						5
			6							
			7							
			8							
Grand Total										19

Q.1

1)

→ Coal

2)

→ NPCIL stands for Nuclear Power Corporation of India Limited.

Q.2

1)

→ The unvarying load, which occurs almost the whole day on the power plant is called Base load.

2)

→ Diesel elected plant



Q 3

→

Classification of energy sources :-

1) Primary energy source :-

These are the energy sources which are found or stored in nature.  
e.g. Coal, natural gas etc.

2) Secondary energy source :-

These are the energy sources which are formed by using primary energy sources by any process.  
e.g. electricity

3) Renewable energy source :-

These are the energy sources which are generated again & again and cannot exhaust after use.  
e.g. solar energy

4) Non-renewable energy source :-

These are the energy sources which can be exhausted and are not generated again and again.  
e.g. coal.

5) Commercial energy source :-

These are the energy sources which are available in market and can be purchased at a particular price from any agencies.  
e.g. gas, electricity

6) Non-commercial source energy source :-

These are the energy sources which are not available in market and cannot be purchased. These are energy sources are directly available in nature.  
e.g. solar energy.

7) Conventional energy sources :-

These are the energy sources which we are using in maximum quantity in day to day applications.

All non renewable and commercial energy sources are conventional energy sources.

8) Non-conventional energy sources :-

These are the energy sources which we are using in less quantities in day to day applications.

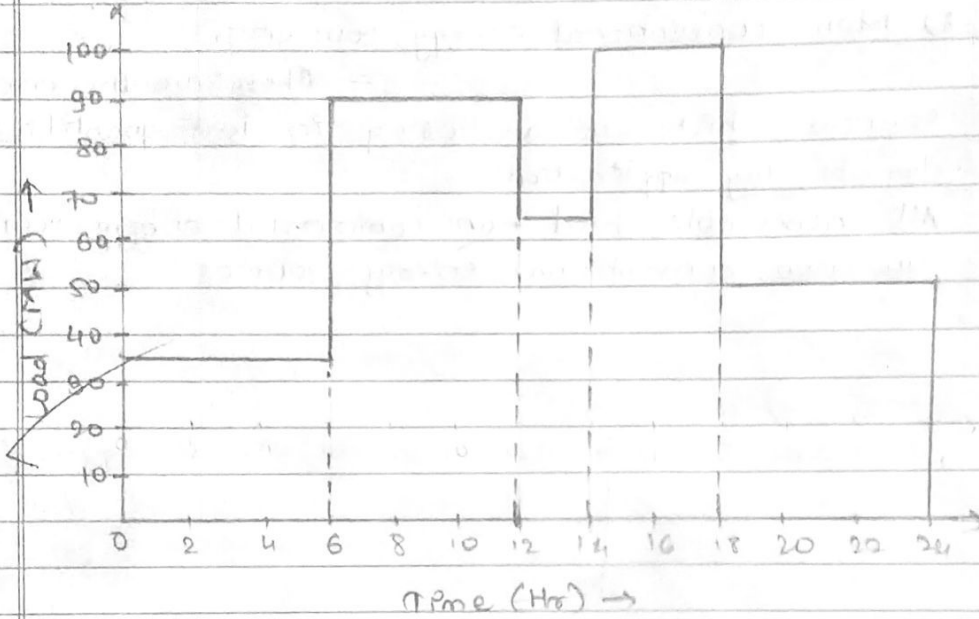
All renewable and non commercial energy sources are non-conventional energy sources.

Q.4

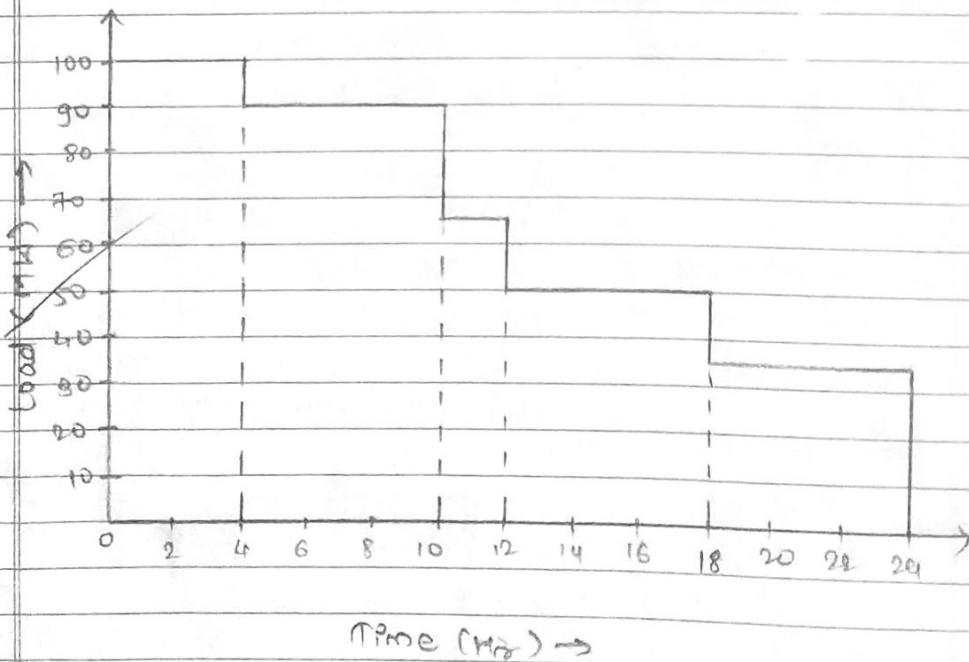


Time (Hr.)	0-6	6-12	12-14	14-18	18-24
Load (MW)	35	90	65	100	50

Load Curve is



Load duration curve is



Given: Plant capacity = 140 MW

No. of units: Load factor = ?

Plant capacity factor = ?

Soln:

$$\text{Average load} = \frac{\text{No. of units generated}}{\text{No. of hours}}$$

$$\therefore \text{Average load} = \frac{(35 \times 6) + (90 \times 6) + (65 \times 2) + (100 \times 4) + (50 \times 6)}{24}$$

$$\therefore \text{Average load} = \frac{210 + 540 + 130 + 400 + 300}{24}$$

$$\therefore \text{Average load} = \frac{1580}{24}$$

$$\therefore \text{Average load} = 65.83 \text{ MW}$$

1) Load factor:

Given: Max. demand = 100 MW

$$\therefore \text{Load factor} = \frac{\text{Average load}}{\text{Max. demand}}$$

$$\therefore \text{Load factor} = \frac{65.83}{100}$$

$$\therefore \text{Load factor} = 0.6583 \times 100$$

$$\text{Load factor} = 65.83 \%$$

2) Plant capacity factor:

Given: Plant capacity = 140 MW

$$\therefore \text{Plant capacity factor} = \frac{\text{Avg. load}}{\text{Plant capacity}} \times 100$$
$$= \frac{65.83}{140} \times 100$$

$$\text{Plant capacity factor} = 47.02 \%$$

Q.5

→

Boilers:

Boilers are the tank in which the heat is produced when coal is heated. Then heat is produced in boiler. Then temperature increases and wastes is converted to steam. This steam is passes through turbine.

Mainly boilers are used to  $\phi$  in thermal power plant.

Various sections for selection of boiler is

i) Efficiency

ii) Type of fuel

iii) Installation

iv) Cost of boiler

v) Economizer or pre heater.

i) Efficiency:

The boilers are made of alloy of steel because there is high temp. in the boiler. Boilers should be efficient to store heat and should be used for many years.

ii) Type of fuel:

For thermal energy boilers need fuels to produce heat. The fuels which are used to produce heat are oil, coal etc.

iii) Installation:

For installation of the boiler there is requirement of large space. Boilers need many space.

iv) cost of boiler is

Cost of boiler is also considered during the selection of power plant boiler. When the requirement or changes occur in fuels there is also change occurs in cost of boiler.

When the power plants are near the coal factories its cost becomes cheaper.

v) Type of firing is

The ~~coal~~ coal is used for production of heat in boiler. It has made emission of heat. The walls of boiler are heated. The heat is exchanged which is used to change the temp of walls of boiler which are made of alloys of steel.

vi) Economizers and pre heaters are used in the boilers.

~~5~~



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

## **In Semester Examination (ISE)**

- **Circular for Timely Assessment**

1/28/22, 6:03 PM

College of Engineering, SVERI Pandharpur Mail - Fwd: Notice-S.Y.B.Tech.-Regarding Submission of Result Analysis of ISE-I.



प्रा.चंद्रकांत व्हरे <ckvhare@coe.sveri.ac.in>

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## Fwd: Notice-S.Y.B.Tech.-Regarding Submission of Result Analysis of ISE-I.

2 messages

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**Shashikant Jadhav** <ssjadhav@coe.sveri.ac.in>

Fri, Jan 28, 2022 at 5:06 PM

To: "प्रा.चंद्रकांत व्हरे" <ckvhare@coe.sveri.ac.in>

----- Forwarded message -----

From: **Shashikant Jadhav** <ssjadhav@coe.sveri.ac.in>

Date: Fri, Jan 28, 2022 at 4:57 PM

Subject: Fwd: Notice-S.Y.B.Tech.-Regarding Submission of Result Analysis of ISE-I.

To: Dipti Tamboli <datamboli@coe.sveri.ac.in>

----- Forwarded message -----

From: **Shashikant Jadhav** <ssjadhav@coe.sveri.ac.in>

Date: Fri, Feb 7, 2020 at 11:28 AM

Subject: Notice-S.Y.B.Tech.-Regarding Submission of Result Analysis of ISE-I.

To: MR. RAMDAS D SOLAGE <rdsolage@coe.sveri.ac.in>, Mr. Sachin Kale <smkale@coe.sveri.ac.in>, Mr. Sachin Gavali <srgavali@coe.sveri.ac.in>, Mr. Khedkar Yashapal Marutirao <ymkhedkar@coe.sveri.ac.in>, MR. KULDIP SURESH PUKALE <kspukale@coe.sveri.ac.in>, <sdtaleskar@coe.sveri.ac.in>, <harshadagove@gmail.com>, MR. SALUNKHE SANDIPRAJ YSHWANTRAO <sysalunkhe@coe.sveri.ac.in>, Mr. Ranjitsinha Gidde <rrgidde@coe.sveri.ac.in>, Mr. SHASHIKANT SUBHASH. JADHAV <ssjadhav@coe.sveri.ac.in>, Sachin Sonawane <sasonawane@coe.sveri.ac.in>

**All the subject teachers of S.Y.B.Tech Mechanical are instructed to submit your respective subject ISE-I Result Analysis (Soft As well as Hard copy) on or before 08/02/2020 without fail.**

Send soft copy on: [dddubal@coe.sveri.ac.in](mailto:dddubal@coe.sveri.ac.in)  
[ssjadhav@coe.sveri.ac.in](mailto:ssjadhav@coe.sveri.ac.in)

--

(Prof. S. S. Jadhav)

Assistant Professor

Mechanical Engineering Department

SVERI's College of Engineering, Pandharpur

Mob. No.8055836682





**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**In Semester Examination (ISE)**

**Result**

**SVERI's COLLEGE OF ENGINEERING, PANDHARPUR**  
**MECHANICAL ENGINEERING DEPARTMENT**

**ACADEMIC YEAR: 2021-22**

**SEM- II**


**ISE-I: MARK LIST**


**CLASS: S.Y. B.Tech - A**

**SUBJECT: PPEE**

Roll. No.	Marks (20)	Roll. No.	Marks (20)	Roll. No.	Marks (20)	Roll. No.	Marks (20)
SA 01	16	SA 21	12	SA 41	17	SA 61	15
SA 02	13	SA 22	12	SA 42	11	SA 62	17
SA 03	11	SA 23	09	SA 43	08	SA 63	17
SA 04	16	SA 24	11	SA 44	15	SA 64	11
SA 05	17	SA 25	13	SA 45	14	SA 65	11
SA06	12	SA 26	19	SA 46	15	SA 66	20
SA 07	09	SA 27	10	SA 47	12	SA 67	16
SA 08	11	SA 28	17	SA 48	19	SA 68	12
SA 09	16	SA 29	13	SA 49	14	SA 69	14
SA 10	14	SA 30	17	SA 50	19	SA 70	19
SA 11	20	SA 31	17	SA 51	15	SA 71	15
SA 12	13	SA 32	20	SA 52	11	SA 72	08
SA 13	10	SA 33	11	SA 53	14	SA 73	14
SA 14	05	SA 34	09	SA 54	11	SA 74	14
SA 15	12	SA 35	10	SA 55	13		
SA 16	18	SA 36	17	SA 56	10		
SA 17	17	SA 37	15	SA 57	AB		
SA 18	12	SA 38	15	SA 58	20		
SA 19	17	SA 39	16	SA 59	17		
SA 20	12	SA 40	12	SA 60	16		

Sr. No.	Particulars	Total No.
01	Strength of Class	74
02	No. of students <b>Appeared</b> for Examination	73
03	No. of students <b>Absent</b> for Examination	01
04	No. of students <b>Failed</b> in Examination	01
05	No. of students <b>Passed</b> in Examination	72
06	No. of students <b>Scoring 60% &amp; above Up to 80% ( Marks 12-16)</b>	27
07	No. of students <b>Scoring above 80% ( Marks 17-20)</b>	14
08	<b>% Result</b> of the Subject	98.63 %

  
(Prof. A. K. Parkhe)  
Subject Teacher

  
(Dr. S. S. Wangikar)  
Head, Mech. Engg. Dept.

HEAD,  
Dept. of Mechanical Engg.  
C.O.E. Pandharpur



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

## **Open Book Test (OBT)**

- 1. Question Paper**
- 2. Answer sheet**
- 3. Result**



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Open Book Test (OBT)**

**Question Paper**





**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Open Book Test (OBT)**

**Answer sheet**



Shri Vithal Education & Research Institute's  
**COLLEGE OF ENGINEERING, PANDHARPUR**

ISE / Unit Test No. OBT-01 Date: 06/06/2022  
 Name of Student: Vasekar Ashwini Ananda.  
 Class.: S.Y.B.Tech.Mech Division.: A  
 Roll No.: 02 Subject: PPEE  
 Sign of Supervisor: [Signature] Marks: 19/20

CO.	BL	PI Code	Q.No.	a	b	c	d	e	f	Total
1			1	1	1	1				3
3			2	1	0	1				2
1	2		3							3
2	3		4							3
3	2		5							4
			6							
			7							
			8							
Grand Total										19

Que. 1.

- 1) a ✓
- 2) b ✓
- 3) c ✓

Que. 2.

- 1) d ✓
- 2) c ✓
- 3) c ✓

Que. 3.

Ans:

NPCIL : (Nuclear power Corporation of India limited) :-

The nuclear power corporation of India limited (NPCIL) is an Indian public sector which is governed by government of India and is responsible for the generation of electricity from nuclear power. The NPCIL is administered by department of atomic energy (DAE).

There are total 23 Nuclear reactors or Nuclear power plants in India having maximum capacity of 2000 MW of electricity generation.

- Tarapur Atomic power station (TAPS) Maharashtra.
- Rajasthan Atomic power station (RAPS) Rajasthan.
- Madras Atomic power station (MAPS), Tamilnadu.
- Kaiga Generating station (KGS), Karnataka.
- Kudankulam nuclear power station (KNPS) Tamilnadu.
- Narora Atomic power section (NAPS) Uttar Pradesh.



NHPC :- (National Hydroelectric power corporation) :-

The NHPC is an Indian government Hydropower plants which is govern by ministry of power government of india that was started in 1975 as private sector and from 1986 it is comes under government of India under which the Hydroelectric projects are started. This is also a largest organization who is handling total 22 projects in India for power generation. In addition to this it has also started some other power plants in the field of solar and wind energy.

Que. 4.

Ans: \* Load curves :-

• The curve showing the variation of load on power station w.r.t. time is known as load curve.

• The demand of power is different and it varies according to activities performed by consumers.

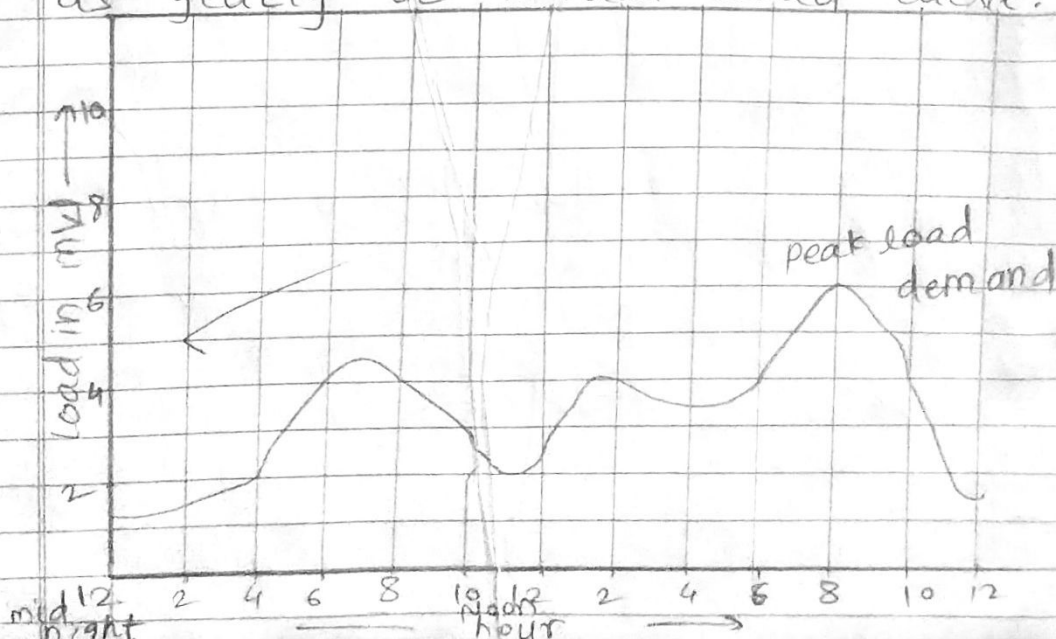
• The result in variation in demand is load on power station is never remain constant it varies w.r.t. time.

• This load curve is useful in predicting the annual requirement of energy and capacity of power plant required to take the peak load.

• If time is in hours load curve is known as daily load curve.

• If time is in day known as monthly load curve.

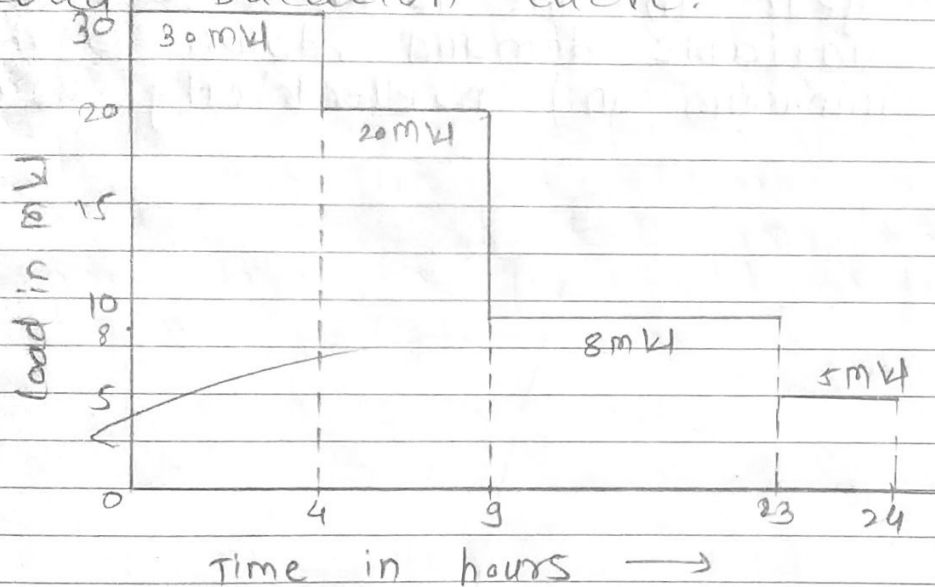
• If the time is in months known as yearly or annual load curve.



## Importance of load curve :-

- 1) It shows variation of load on power plant during different hours of the day.
- 2) Area under the load curve represents no. of units generated and energy consumed by consumer.

## \* Load duration curve :-



## Load duration curve

The load curve duration curve is also gives the variation of load but the loads are arrange in decending order of magnitude shown in above fig.

The area under load curve and load duration curve are equal.

The load duration curve gives the information about no. of hours for which the peeticular load remains constant for peeticular period.

This curve is useful to run the power plant in economic condition. Also it gives the information about minimum

load on power plant for specific period.

This load duration curve summarise the load day wise, week wise, month wise and year wise. the major advantage of load duration curve in desinging and operating the power plant. This single and simple curve give the anyalisis of load on power plant for entire one year in the form of peak demand, variable demand, down to the minimum and no electricity usage.

Que. 5

Ans: 1) It is also known as feed water heater it is device in which the waste heat of the fuel gases is utilized for heating the feed water.

2) Therefore the economizer is placed after the superheaters located in the feeding water circulation.

3) Economizers fuel reduce consumption.

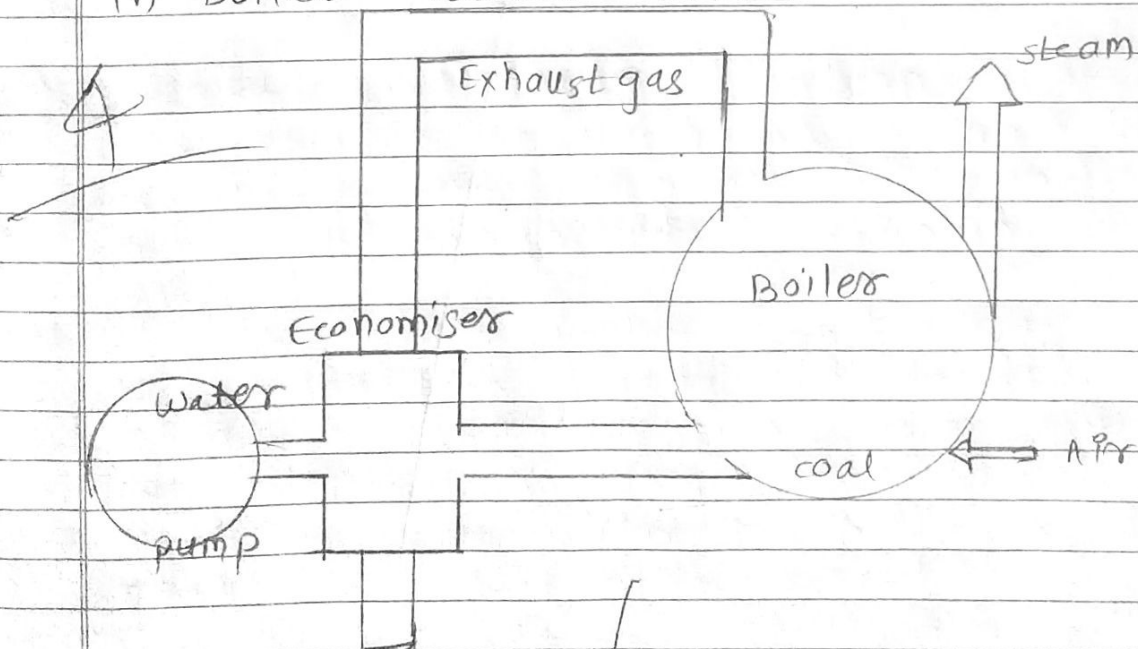
4)

4) Preheating of fluid they are increases the efficiency of power plant.

5) There are some advantage, there is about is to 20% of coal saving.

6) It increases the steam raising capacity of a boiler because it steam shortens time require to convert water into steam.

7) It prevents the formation of scale in boiler water tubes.





**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Open Book Test (OBT)**

**Result**

**SVERI's COLLEGE OF ENGINEERING, PANDHARPUR**  
**MECHANICAL ENGINEERING DEPARTMENT**

ACADEMIC YEAR: 2021-22

SEM- II


OBT-I: MARK LIST

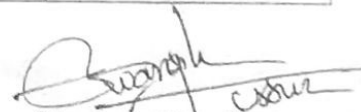
CLASS: S.Y. B.Tech - A

SUBJECT: PPEE

Roll. No.	Marks (20)	Roll. No.	Marks (20)	Roll. No.	Marks (20)	Roll. No.	Marks (20)
SA 01	18	SA 21	19	SA 41	20	SA 61	20
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SA 04	18	SA 24	20	SA 44	20	SA 64	20
SA 05	20	SA 25	20	SA 45	20	SA 65	20
SA 06	19	SA 26	20	SA 46	20	SA 66	20
SA 07	18	SA 27	20	SA 47	20	SA 67	20
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SA 10	20	SA 30	20	SA 50	20	SA 70	20
SA 11	20	SA 31	20	SA 51	20	SA 71	20
SA 12	20	SA 32	20	SA 52	20	SA 72	20
SA 13	20	SA 33	20	SA 53	20	SA 73	20
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Sr. No.	Particulars	Total No.
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03	No. of students <b>Absent</b> for Examination	00
04	No. of students <b>Failed</b> in Examination	00
05	No. of students <b>Passed</b> in Examination	73
06	No. of students <b>Scoring 60% &amp; above Up to 80% ( Marks 12-16)</b>	73
07	No. of students <b>Scoring above 80% ( Marks 16-20)</b>	73
08	<b>% Result of the Subject</b>	100 %

  
(Prof. A. K. Parkhe)  
Subject Teacher

  
(Dr. S. S. Wangikar)  
Head, Mech. Engg. Dept.  
HEAD,  
Dept of Mechanical Engg  
COE Pandharpur



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

## **Take Home Test (THT)**

- 1. Question Paper**
- 2. Answer sheet**
- 3. Result**





**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Take Home Test (THT)**

**Question Paper**

**SVERI's College of Engineering, Pandharpur**  
**S.Y. B.Tech (Mechanical) THT-I Academic Year: 2021-22**  
**Subject: Power Plant and Energy Engineering**

Div: A

Day and Date: Tuesday & 07/06/2022

Marks - 20

Duration-1:00 Hours

CO	CO STATEMENT	BLOOMS LEVEL	MAX. MARKS
CO 1	Describe Effective use of available Energy Sources and their role in power development in India	BL2	05
CO 2	Explain various Power Plants and illustrate the effect of variable loads and load factors on Power Plants.	BL3	10
CO 3	Explain various methods of Economic analysis of power plants and explain various factors for selection of power stations.	BL2	05

Q. No.	Question Statement	Marks	CO & BL
Q. 1	Explain Impacts of various Energy Sources on Environment.	05 M	CO 1 BL 2
Q. 2	Explain Gas Turbine Power Plant with neat sketch.	05 M	CO 2 BL 3
Q. 3	The yearly duration curve of a certain plant can be considered as a straight line from 300 MW to 80 MW. Power is supplied with one generating unit of 200 MW capacity and two units of 100 MW capacities each. Determine: Installed Capacity, Load Factor, Plant Factor, Maximum Demand and Utilization Factor. <i>400 x 10<sup>3</sup> kW 63.33    47.5    300 kW 75%</i>	05 M	CO 2 BL 3
Q.4	Explain the various Principles of Power Plant Design.	05 M	CO 3 BL 2

.....*All the Best*.....



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Take Home Test (THT)**

**Answer sheet**



Shri Vithal Education & Research Institute's  
**COLLEGE OF ENGINEERING, PANDHARPUR**

ISE / Unit Test No.: THT - 1 Date.: \_\_\_\_\_  
 Name of Student.: Ruthwick Anil Patil.  
 Class.: 5Y Division.: A  
 Roll No.: 65 Subject.: PPEE  
 Sign of Supervisor.: \_\_\_\_\_ Marks.: 19 20

CO:	BL	PI Code	Q.No.	a	b	c	d	e	f	Total
	1		1							5
	2		2							5
	2		3							5
	3		4							4
			5							
			6							
			7							
			8							
Grand Total										<u>19</u> <u>20</u>

Q1]

→ Impact of energy sources on environment:-

- i] Drilling & blasting - Noise pollution.
- ii] Mining activities - Noise pollution.
- iii] Health problems - Partial or permanent hearing loss

In addition to above effects on environment follow some renewable & non-renewable sources are also affect on environment local ecosystem

i] oil & natural gas energy:-

While taking this oil & natural gases are need some heavy compressors & pumping station for producing wells, so it affects on environment in form of noise pollution.

ii] solar energy :- it has impact on natural resource due to chemical.



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

**Take Home Test (THT)**

**Result**

**SVERI's COLLEGE OF ENGINEERING, PANDHARPUR**  
**MECHANICAL ENGINEERING DEPARTMENT**

ACADEMIC YEAR: 2021-22

SEM- II


THT-I: MARK LIST

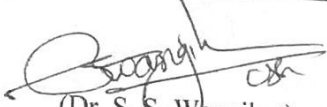
CLASS: S.Y. B.Tech - A

SUBJECT: PPEE

Roll. No.	Marks (20)	Roll. No.	Marks (20)	Roll. No.	Marks (20)	Roll. No.	Marks (20)
SA 01	18	SA 21	18	SA 41	20	SA 61	18
SA 02	20	SA 22	16	SA 42	20	SA 62	12
SA 03	20	SA 23	16	SA 43	18	SA 63	19
SA 04	20	SA 24	17	SA 44	20	SA 64	18
SA 05	17	SA 25	20	SA 45	17	SA 65	19
SA06	20	SA 26	17	SA 46	18	SA 66	18
SA 07	20	SA 27	17	SA 47	20	SA 67	18
SA 08	15	SA 28	18	SA 48	20	SA 68	19
SA 09	17	SA 29	19	SA 49	18	SA 69	18
SA 10	19	SA 30	19	SA 50	17	SA 70	15
SA 11	20	SA 31	19	SA 51	19	SA 71	20
SA 12	20	SA 32	17	SA 52	19	SA 72	18
SA 13	19	SA 33	20	SA 53	19	SA 73	17
SA 14	18	SA 34	16	SA 54	19	SA 74	18
SA 15	20	SA 35	17	SA 55	19		
SA 16	18	SA 36	17	SA 56	18		
SA 17	19	SA 37	19	SA 57	AB		
SA 18	19	SA 38	20	SA 58	18		
SA 19	18	SA 39	20	SA 59	16		
SA 20	18	SA 40	19	SA 60	17		

Sr. No.	Particulars	Total No.
01	Strength of Class	73
02	No. of students <b>Appeared</b> for Examination	73
03	No. of students <b>Absent</b> for Examination	00
04	No. of students <b>Failed</b> in Examination	00
05	No. of students <b>Passed</b> in Examination	73
06	No. of students <b>Scoring 60% &amp; above Up to 80% ( Marks 12-16)</b>	03
07	No. of students <b>Scoring above 80% ( Marks 16-20)</b>	70
08	<b>% Result of the Subject</b>	100 %

  
(Prof. A. K. Parkhe)  
Subject Teacher

  
(Dr. S. S. Wangikar)  
Head, Mech. Engg. Dept.



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

# **Internal Continuous Assessment (ICA) Circular**



Shri Vitthal Education & Research Institute's  
**COLLEGE OF ENGINEERING, PANDHARPUR**

P.B.No. 54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413 304, Dist. Solapur (Maharashtra) Tel.: 7755990201.

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Accredited by The Indian Institution of Engineers (India), Kolkata and TCS, Pune. ISO 9001:2008 Certified Institute



Ref.: COEPR/2017-18/66108

Date:- 03/04/2018

**Circular**

All the staff and students are hereby informed to note that the modified policy for giving Internal Continuous Assessment (ICA) (term work) marks is as per the details given below:

**PART-I: Continuous Evaluation**

Sr. No.	Particular	Split of Marks out of 25	
		For subjects with practice Session	For subjects without practice Session
<b>A. Subjects with only Assignments / Tutorials</b>			
		<b>A1</b>	<b>A2</b>
1.	Assignment / Tutorial (Timely submission and presentation of write up)	08	10
2.	Attendance in Practice Session	04	00
3.	Unit Tests (03 tests X 02 Marks)	06	06
4.	PPPE write up	05	07
5.	Oral	02	02
	<b>Total</b>	<b>25</b>	<b>25</b>
<b>B. Subjects with Lab Practical and Assignments / Tutorials</b>			
		<b>B1</b>	<b>B2</b>
1.	Assignment / Tutorial (Timely submission and presentation of write up)	03	04
2.	Lab Book (Timely submission and presentation of write up)	05	06
3.	Attendance in Practice Session	03	00
4.	Unit Tests (03 tests X 02 Marks)	06	06
5.	PPPE write up	04	04
6.	Oral	02	02
7.	Lab Tests	02	03
	<b>Total</b>	<b>25</b>	<b>25</b>
<b>C. Subjects with only Lab Practicals without Theory Paper</b>			
		<b>C1</b>	<b>C2</b>
1.	Lab Book (Timely submission and presentation of write up)	06	06
2.	Timely completion of Practical	05	05
3.	PPPE write up	02*	02*
4.	Oral	05	05
5.	Lab Tests	07	07
	<b>Total</b>	<b>25</b>	<b>25</b>

*B. Pange*



Note: \*For the subjects with no theory lectures, these one mark should be added to "Timely Completion of Practical and Performance" and "Lab Book (Timely submission and presentation of write up)" making corresponding marks as '06', '06' and '07', '07', respectively.

### Part-II: Attendance and Professional Behavior

#### A. Effect of Attendance on ICA (Term Work) Marks

Sr. No.	Percentage Attendance.	Variation in the Final Marks
1	100	+3
2	95-99	+1
3	90-94	No Effect i.e. 0
4	85-89	-2
5	80-84	-3

B. Total marks obtained by a student will be further smoothened /modified based on general behavior and participation of the student. The authority to smoothen/modify the marks based on this point shall be with HoD. However, exceptional cases be taken to Principal through Dean Students.

#### Note:

1. The detailed procedure for continuous evaluation and allocating marks with respect to each of the tools as per the type of subject is given in **Annexure-I**.
2. The above policy is for subjects having ICA (Term Work) marks out of 25. For the subjects having ICA marks other than 25, proportional conversion of the ICA (Term Work) marks be done.
3. Soft copy of the excel Sheets as per the type of subjects will be loaded on the FTP for assisting students to verify the correctness in their Term Work marks.
4. The earlier circular on 5+2 point formula dated 20/10/2014 with ref no. COEPR/2014-15/CIR/33 stands cancelled w.e.f 01/01/2018.
5. All the subject teachers have to update their files with this Circular in place of the previous circular dated 20/10/2014.

**All the concerned should take the note of the above and act accordingly.**

*B. Ronge*  
(Dr. B. P. Ronge)  
PRINCIPAL



## Annexure-I: Progressive Assessment Guidelines

**I] Progressive Assessment of Lab Books, Assignments or tutorials should be assessed out of 25 Marks for each Lab Practical/Assignment/Tutorial**

1. **Lab Book** shall be assessed as given below:

Attendance	Performance in Lab	Submission	Presentation	Oral	Total
Out of 5 Marks	Out of 5 Marks	Out of 5 Marks	Out of 5 Marks	Out of 5 Marks	Out of 25 Marks

**Attendance:** If the student is present for practical session should be given 5 marks, if he/she performs same practical in next session allot him/her 4 marks and reduce 1 mark for each subsequent session. Minimum 1 mark should be given if he/she performs practical during the semester.

**Performance in Lab:** Teacher should observe the performance of individual student e.g. Initiative, Reading taking, etc. It is expected to observe the student how he/she performs at the time of practical session. Faculty members should ensure that every student take initiative and perform the practical and in such cases accordingly 5 marks be given. Marks be allotted as per the involvement of the students.

**Submission:** Students are supposed to submit lab book in time. If he/she submits the practical writeup in same or immediate next practical session, give 5 marks and if he/she fails to submit 1 mark each be reduced for every subsequent session. If he/she submits the lab book thereafter during the semester 1 mark be given. And if he/she submits lab book during the semester 1 mark be given.

**Presentation:** Teacher should assess the lab book by verifying the neatness, content of write up, results and conclusion. This is subjective, if teacher finds lab work as per requirements 5 marks be given. Results and conclusion shall be based on what is understood/observed by the student and how the output is interpreted by the student.

**Oral:** Student be asked queries related to practical/ theory, and based on student's performance marks be allotted.

**Note: For B1 and B2:** The total marks of all experiments in Lab Book be converted out of 5 /6 marks at Sr. No. 1 under B in PART-I i.e. "Lab Book (Timely submission and presentation of writeup)", as the case may be.

**For C1 and C2:** The total marks of all experiments in Lab Book be converted out of 6 /7 marks at Sr. No. 1 under C in PART-I i.e. "Lab Book (Timely submission and presentation of writeup)", as the case may be, and marks related to Sr. No. 2 under C in PART-I i.e. "Timely

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completion of Practicals" be linked with the attendance of Practicals and be converted out of 5/6 marks as follows:

Attendance in %*	Marks
100	5/6
95-99	4/5
90-94	3/4

Attendance in %*	Marks
85-89	2/3
80-84	1/2
Below 80 and Completed by extra sessions	0/1

\* Sanctioned leave be considered as attendance after completion of the particular practical during extra session.

2. Each Assignment be assessed on the basis of timely submission (10 M), presentation (10 M) and oral (5 M)

Timely Submission	Presentation	Oral	Total
Out of 10 Marks	Out of 10 Marks	Out of 5 Marks	Out of 25 Marks

**Timely Submission:** Student is supposed to submit the assignment within the stipulated time to get full marks. If student fails to submit the assignment in time, 1 mark each for every late day be reduced. However, thereafter for the submission of the assignment during the semester he/she be given 2 marks.

**Presentation:** Presentation of assignment be judged based on contents, neatness, completeness, etc.

**Oral:** Questions on assignment be asked to verify the understanding of the student. If the student fails to answer, he/she be asked to prepare and appear for the oral once again. Marks be given based on oral performance.

*Note: The total marks of all assignments in the assignment book be converted; out of 8 or 10 at Sr. No. 1 under A1 and A2, respectively and out of 3 or 4 at Sr. No. 1 under B1 and B2, respectively in PART-I i.e. "Assignment / Tutorial (Timely submission and presentation of write up)".*

*B. P. Jc*

**III] Progressive Assessment for “Attendance in Practice Session”:**

- Attendance record of practice sessions be maintained separately.
- “Attendance in Practice Session” marks at Sr. No. 2 under A at A1 and Sr. No. 3 under B at B1 in PART-I be allotted based on attendance of practice sessions as given below:

Sr. No.	Percentage of Practice Session Attendance*	A1	B1
1	100	4	3
2	90-99	3	2
3	85-89	2	1
4	80-84	1	1
5	75-79	0	0
6	Below 75	-1	-1

\* Rounding be done to upper integer number

**III] Progressive Assessment for “Unit Tests” (6 Marks):**

- Minimum 3 unit tests be conducted as per ESE pattern i.e. 20% MCQs and 80% subjective questions.
- These tests be on syllabus of Unit No. 1, 3, 5, etc.
- **Final ICA (Term Work) marks distribution be as follows:**

Sr. No.	Particulars	Percentage marks in all the tests together	Marks to be given out of 6
1.	Student passes in all unit tests	80 and Above	6
2.	Student passes in all unit tests	70 and Above	5
3.	Student passes in all unit tests	60 and Above	4
4.	Student passes in all unit tests	50 and Above	3
5.	Student fails in or remains absent for any one of the unit tests	-	2
6.	Student fails in or remains absent for any two of the unit tests	-	1
7.	Student fails in or remains absent for all the unit tests	-	0

**Note:**

1. Above provisions are for subjects with 70 marks ESE. Modifications be made accordingly, for subjects having different marks for ESE.
2. Student, failing in or remaining absent for the test or willing to improve, at his/her choice may opt for retest, within 5 days from the date of declaration of the result, once for each test by paying charges of Rs. 100/- per test. Best performance be retained.

*B. Pongle*

**IV] Progressive Assessment for “PPPE write up”:**

- PPPE write up be checked at every practical/tutorial session by respective teacher.
- If there is no practical/tutorial session, one day in the week be decided by the concerned teacher for getting PPPE write up checked.
- Assessment Marks for each session be out of 10 and be given based on the following criterion:

<b>Submission</b>	<b>Presentation</b>	<b>Oral</b>	<b>Total</b>
(Out of 5 Marks)	(Out of 3 Marks)	(Out of 2 Marks)	(Out of 10 Marks)

**Submission:** Five (5) marks be given if the student submits the PPPE writeup in immediate next practical/tutorial session or the day assigned, as the case may be. If there is delay in submission, 1 mark each be reduced for every subsequent session. However, 1 mark be given for submission thereafter during the semester.

**Presentation:** Teacher should assess the PPPE write up by verifying the neatness, contents, completeness, etc. of the write up. Three (3) marks be given, if the teacher finds PPPE write up as per the requirements.

**Oral:** Questions on PPPE writeup be asked to verify the understanding of the student. If the student fails to answer, he/she be asked to prepare and appear for the oral once again. Marks be given based on oral performance.

*Note: The total marks of all PPPE write up be converted; out of 5 or 7 at Sr. No. 4 in A under A1 and A2, respectively, out of 4 at Sr. No. 5 in B under both B1 and B2, and out of 2 at Sr. No. 3 in C under both C1 and C2, if applicable, in PART-I i.e. “PPPE write up”.*

**V) Progressive assessment for “Lab Tests”:**

- Two Lab Tests be conducted during the semester, in line with first two ISEs, for the subjects where students have to perform experimental practicals.
- Weightage for each Lab Test be of 20 marks as per the distribution given below:

<b>Conduct of Experiment</b>	<b>Presentation</b>	<b>Results and Conclusion</b>	<b>Oral</b>	<b>20 Marks</b>
Out of 10	Out of 3	Out of 5	Out of 2	Out of 20

**Conduct of Experiment:** Ten (10) marks be given if the student conducts experiment as per the standard procedure of the experiment. If the experiment is not completed, appropriate marks be given based on number of steps completed.

**Presentation:** Teacher should assess the Lab Test write up by verifying the neatness, contents, completeness, etc. of the write up. Three (3) marks be given, if the teacher finds the write up as per the requirements.

*B. B. Singh*

**Results and Conclusion:** Five (5) marks be given if the results are appropriate and proper conclusion is drawn.

**Oral:** Questions on Lab Test be asked to verify the understanding of the student. If the student fails to answer, he/she be asked to prepare and appear for the oral once again. Marks be given based on oral performance.

**Final ICA (Term Work) marks distribution be as follows:**

Sr. No.	Particulars	Percentage marks in all the tests together	B1 (Out of 2 Marks)	B2 (Out of 3 Marks)	C1 and C2 (Out of 7 Marks)
1.	Student passes in all Lab Tests	80 and Above	2	3	7
2.	Student passes in all Lab Tests	70 and Above	1	2	5
3.	Student passes in all Lab Tests	60 and Above	1	1	4
4.	Student passes in all Lab Tests	50 and Above	1	1	3
5.	Student fails in or remains absent for any one of the Lab Tests	-	0	0	0
6.	Student fails in or remains absent for all the Lab Tests	-	-1	-1	-1

**Note:**

*Student, failing in or remaining absent for the Lab Tests or willing to improve, at his/her choice may opt for retest, within 5 days from the date of declaration of the result, once for each test by paying charges of Rs. 100/- per Lab Test. Best performance be retained.*

B. Panje



**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

# **Internal Continuous Assessment (ICA) Tools**

## **Assignment**

## INDEX

### (Assignment / Tutorial Book Assessment)

Sr. No.	Title of Assignment / Tutorial	Page No.	CO	Date of Assign./Tut.		Marks (25)			Total Marks (25)	Sign.
				Given	Checked	Timely Submission (10)	Presentation (10)	Oral (5)		
01	Assignment NO:-1 Pressure & Temp. Measurement	01	01	22/03	30/03	10	10	4	24	/
02	Assignment NO:-2 Force & Torque Measurement	02	02	30/3	15/04	10	10	4	24	/
03	Assignment NO:-3 Acceleration, Velocity & Displacement	04	03	15/04	29/04	10	10	4	24	/
04	Assignment NO:-4 Control System	06	04	29/04	12/05	10	10	4	24	/
05	Assignment NO:-5 Root locus Method	08	05	12/05	26/05	10	10	4	24	/
06	Assignment NO :-6 Bode Plots	09	06	26/05	07/06	10	10	4	24	/

## CERTIFICATE

This is certify that Mr. / M<sup>rs</sup>. / M<sup>rs</sup>.....Gundeti...Arun...Ambadas..... of  
Class ...T.Y..... Division ...B..... Roll No ...29..... Semester ...V.I..... has completed satisfactorily  
Assignments/Tutorials in ..... I & C ..... during the academic year ...21-22

Date :

Subject Teacher

Head of Dept.

Principal

*B-Rongle*





**Shri Vithal Education & Research Institute's  
College of Engineering, Pandharpur**

# **Internal Continuous Assessment (ICA) Tools**

**Journal**

## INDEX (Laboratory Book Assessment)

Sr. No.	Title of Experiment	Page No.	CO	Date of Expt.		Marks (25)					Total (25)	Sign.
				Performed	Submitted	Attendance (5)	Performance (5)	Submission (5)	Presentation (5)	Oral (5)		
1.	Assignment No. 01	1	28/3	28/3	11/4	5	5	5	5	4	24	
2.	Assignment No. -02	11		21/4	21/5	5	5	5	5	9	24	
Practicals												
calibration of Vernier												
1.	caliper micrometer Practical No.-01	15	1	28/3	11/4	5	5	5	5	4	24	
dial indicator using slip gauge												
2.	measurement of gear Practical No. -02	18	2	11/4	21/4	5	5	5	5	4	24	
tooth thickness using gear tooth vernier caliper												
3.	Practical No. -03	21	3	21/4	21/5	5	5	5	5	4	24	
screw thread by using profile projector												
4.	To measure surface roughness Practical No. -04	22	4	21/5	13/5	5	5	5	5	4	24	
of given sample using taylor wobsofs tolysurf												
5.	Practical No.-05											
5.	visit to metrology lab.	24	5	13/5	27/5	5	5	5	5	4	24	

### CERTIFICATE

This is certify that Mr. / Miss. / Mrs. Kadam Diphi Junhosh of  
 Class T.Y. Division B Roll No 04 Semester V<sup>th</sup> has completed satisfactorily  
 Experiments in metrology during the academic year 2021-22

Date:   
 Subject Teacher

Head of Dept.

B-Rangal  
 Principal