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

.

A total of 100 Marks for each theory course are distributed as follows:

	Internal Assessment	**Marks**
	MidSemester Exam (MSE)	20
	ContinuousAssesment	20
	External Assessment	
	End Semester Examination(ESE) by University	60

A total of 100 Marks for each practical course are distributed as follows:

	Internal Assessment	**Marks**
	Continuous Assesment Marks	40
	External Assessment	
	End Semester Examination (ESE) by University	60

Vidarbha Institute of Technology

Sessional Examination Session -20-21

INVIGILATOR REPORT

Room No.:…….

Exam Date:……..……Day:…….…… Shift:……..…

S. No.	COURSE & BRANCH	SEMESTER & SECTION	SUBJECT NAME & SUBJECT CODE	STRENGTH	PRESENT	ABSENT

Invigilator 1

Invigilator Name:
Department :
Signature:

Vidarbha Institute of Technology

Sessional Examination Session -20-21 (PUT)

ATTENDANCE SHEET

ROOM NO:

Course: **Branch:** **Sem:** **Sec:**

S. No.	Student Name	Roll No	Subject 1 (Subject Code)	Subject 2 (Subject Code)	Subject 3 (Subject Code)	Subject 4 (Subject Code)	Subject 5 (Subject Code)	Subject 6 (Subject Code)
			dd/mm/yy	dd/mm/yy	dd/mm/yy	dd/mm/yy	dd/mm/yy	dd/mm/yy
		Present						
		Absent						
		Signature of Invigilator						

Vidarbha Institute of Technology

Instructions for Students to be followed during Sessional Examination (PUT)

- All students are required to be seated 15 minutes before the commencement of the Examination as per the seating plan.
- Students must carry their Identity-Card.
- Do not bring any unauthorized material (e.g. Mobile Phones, Smart Watch / bands, Notes or any kind of paper).
- Listen carefully to instructions given by Invigilator. Students are required to comply with the instructions of invigilators at all times.
- Students are not allowed to leave the Room before the completion of Examination Duration.
- No students will be allowed to appear 15 minutes after the commencement of examination.
- Remember to take all your belongings with you.
- Programmable Calculators are not allowed.
- No Student is allowed to leave examination hall for any purpose within first 30 minutes of the commencement of examination and last 15 minutes before closing time. During the rest of the time students may go out for maximum two times and each time only for 5 minutes.

Vidarbha Institute of Technology

Instructions for the Invigilators to be followed during Sessional Examinations (PUT).

- Invigilators must report to the Exam Control Room 45 minutes before the commencement of examination.
- Invigilators must make repeated announcements in the Examination Hall that Candidates should not be in possession of any unauthorized material like Dictionaries, Notes, Mobile Phones, Smart Watches / bands or any kind of paper.
- Students will not be allowed to enter after 15 min of examination starts
- Invigilator must ensure that every student must carry ID Cards. Invigilators shall issue Answer Sheets only after checking ID cards. Otherwise, students have to submit application dully signed by concerned HOD.
- Invigilators must check all the entries before signing the answer sheets.
- Students will not be allowed to leave the Room before completion of Examination duration.
- Candidates must be reminded not to write/tick on question paper.
- The invigilator must see that no answer sheets remain uncollected and that no spare question papers or spoilt answer sheets are left on the desks and please ensure that the collected Answer sheets to be kept in prescribed envelopes.
- Mobile Phones are strictly prohibited for Invigilators in the Examination Hall.
- Invigilators are advised to remain in examination hall for complete duration of Exam and take rounds continuously. They are not allowed to stand at door-step and chat with fellow Invigilators.
- Details of Absentee must be filled.
- No Student should be allowed to leave examination hall for any purpose within first 30 minutes of the commencement of examination and last 15 minutes before closing time. During the rest of the time students may be allowed go out for maximum two times and each time only for 5 minutes by making proper entry in the available format.

Vidarbha Institute of Technology

General Guidelines for Students to be followed during Online PUT/CT Examinations

Please consider the following points while attempting your Online examination on Google class.

1. All student must fill attendance on time sent by subject teacher through Google forms. If any network problem, then communicate with subject teacher before the examination starts.
2. Sign-in into class only with valid email id.
3. Preferably, make email id as your default email id in Gmail to avoid technical problems. Logout from all other logins.
4. After opening the question paper, fill / attempt questions serially i.e. general Information to sections . Do not go to the next section withoutcompleting the previous section.
5. If you try to go backward into the previous section, your system may log you out from the question paper and submit it automatically. After this, you might not be able to login again.
6. Move to the next section only after confirming completion of the previous section.
7. After completing the entire paper carefully, press the submit button before due time.
8. Students are advised to submit paper after checking each tab.
9. In case of non-submission, auto generated mail by google forwarded to subject teacher mail

Vidarbha Institute of Technology

Guidelines for the Faculty members to be followed during Online PUT/CT Examination

1. Section wise classroom/google form should be created for the respective Year and should be names as per the subject name. All faculty of all subjects will be conducted through this google form .
2. It is mandatory to share the link to the class teacher for necessary cross checks and confidentiality for the question paper. There should not be any sharing of question paper with anyone except HoD, and respective teacher who has created the question paper.
3. All faculty members should invite the students appearing for examination through google invite link.
4. Double click on Quiz and Click on Settings on Top-Right Corner in General Tab do the settings.

Additional Instructions

1. Making one google forms per subjects
2. This attendance will be final for everything ahead.
3. In case if a student is unable to submit attendance, then he/she can call subject incharge for information, and subject in charge will include the student attendance manually.
4. The excel sheet of response must be sent to HOD.
5. A faculty member should not alter any settings.
6. Closing response receiving and auto mail for response summary must be set to auto to avoid non-submissions.

VIDARBHA INSTITUTE OF TECHNOLOGY, NAGPUR.
DEPARTMENT OF MECHANICAL ENGINEERING
Session2022-23

Class Test- I

Subject: Material Science and Metallurgy (BTMES304) Time Duration: 1 Hrs.
Class: B.Tech. III Semester Total Marks: 10 Marks

INSTRUCTION TO CANDIDATES

Notes:
1. All questions carry marks as indicated.
2. Due credit will be given to neatness and adequate figure.
3. Assume suitable data whenever necessary.

Answer any TWO of the following: 10

Q1) State the importance of study of material science and briefly explain engineering requirement of materials. (CO1)

Q2) Explain Gibb's phase rule. (CO2)

Q3) Define hardness and explain the rockwell hardness test with neat sketch. (CO1)

Q4) Explain types of crystal structure. (CO1)

****

VIDARBHA INSTITUTE OF TECHNOLOGY
Uti,Umrer Road-441209, Tel:07116-281155/56 Fax:07116-281154
E-mail id: kdmsociety@gmail.com, Website: www.vitnagpur.com
Approved by A.I.C.T.E., New Delhi, Govt. Of Maharashtra & Affiliated to DBATU, Lonere.

SESSION: 2022-23

DEPARTMENT OF MECHANICAL ENGINEERING

III SEMESTER

Subject: Thermodynamics (BTMC303)

TIME: 2 Hr **MARK: 20**

MID SEM

INSTRUCTION TO CANDIDATES:

1. All question carry marks as indicated.
2. Answer any **FOUR** questions.
3. Assume suitable data wherever necessary.
4. Illustrate your answer wherever necessary with the help of suitable example.

Q.1a) Explain Second Law of Thermodynamics. Prove that violation of Kelvin Plank statement leads to violation of Clausius statement. (CO2)

b) Prove that the violation of Clausius statement leads to violation of Kelvin Plank statement (CO2).

Q.2 a) Write short notes on State, point function and path function. (CO1)

b) Define different types of properties? (CO1)

Q.3 a) Define quasi static process? (CO1)

b) What is its importance in study of thermodynamics? (CO2)

Q.4 a) State & explain Thermodynamics definition of work? (CO1)

b) Distinguish between Heat & work in thermodynamics? (CO2)

Q.5 Explain and derive Steady Flow Energy Equation. (CO2)

Q.6 Define the term 'Entropy'. Derive an expression for change of entropy for following process (CO2)

1 Isochoric process
2 Isobaric processes
3Isothermal process
4 Adiabatic processes

Vidarbha Institute of Technology

ABSENTEE SHEET OF PUT/ CT (SESSION: 2020-21)

EVEN/ODDSEMESTER

Department	Year/Sem	Strength	Present	Absent	Remark if any
ECE	**2nd**				
	3rd				
	4th				
ME	**2nd**				
	3rd				
	4th				
CSE	**2nd**				
	3rd				
	4th				
EE	**2nd**				
	3rd				
	4th				
FY	**2nd**				
	3rd				
	4th				

Project Guidelines

Summary

Guidelines for UG/PG BE/B.Tech/M Tech Project Allocation and Evaluation Process

The targets of the Final Year Project are diverse. On the one hand, since it is the student's last activity at the Institute, it fulfills a purpose of synthesis of all the knowledge they have acquired throughout the different years. Besides, this knowledge must be used in a particular way, in order to solve a specific problem. Thus, students would able to demonstrate their aptitudes by applying this knowledge. On the other hand, it helps the student to mature as an engineer, giving them the chance of finding the solution to a similar problem throughout their future profession.

Projects have a significant role, when students appear in an interview for higher studies or for getting the job. There is a fair chance that student face discussion regarding their projects and if they have complete knowledge of their project, the chance of selection or probability of getting the job becomes high.

In order to bring consensus among all departments VIT, has made a sincere attempt to prepare the guidelines for UG and PG Project Allocation and Evaluation Process for all the courses. These guidelines are based upon major criteria's e.g. composition, qualitative projects, and outcome-based projects.

These guidelines are intended to follow by both students and faculty members at different departments of Engineering. The project allocation should be finalized in all respect in the 4^{th} year of UG and in 2 year of PG

Each project team of students should comprise of 4-5 members where as one member in PG of the same class and department.

These are the set of procedures and expectations that will make the project allocation and evaluation process easier, more efficient, and more successful. These guidelines should also be interpreted as the minimum requirements.

It is to be ensuring that each and every department will submit their project report at the end of semester or before the theory examinations or as per the university schedule.

2: Vision & Mission of the Departments

Note 1: Each department will take their Vision, Mission, Program Educational Outcomes (PEOs), Program Outcomes (POs), Program Specific Outcomes (PSOs) and Course Outcomes (COs) of projects.

Note 2: Following is the case study for Mechanical Engineering department.

Vision: To develop technically competent students through quality educational resources for serving societal, cultural and economical development demands.

Mission: To endow students from rural and urban backgrounds with technical knowledge by providing modern skill sets, social and professional ethics for the benefit of society locally as well as globally

3: PEOs, POs, PSOs, COs of Project

PEOs:

1. To apply the knowledge of mechanical engineering and engineering necessary to formulate, analyze and solve engineering problems and make them employable, capable for higher studies and an able entrepreneur.
2. To automate the real-time applications by designing software and hardware systems using modern tools and techniques with full competencies.
3. To develop good communication skills (verbal and written), conducive interpersonal attitude and able leadership qualities.
4. To provide quality and worthy services towards their profession and to render them with social and ethical values.
5. To inherit the attitude of lifelong learning towards higher studies, research and latest technological advancement.

POs:

1. Apply the knowledge of mathematics, statistics, computer science, and engineering as it applies to the fields of computer hardware and software.
2. Identify, formulate, and solve hardware and software problems using engineering principles.
3. Automate the real-time problems, develop various web applications, desktop applications and design and conduct experiments, implement programs as well as organize, analyze and interpret data.
4. Design hardware and software systems, components, or processes to meet identified needs within economic, environmental and social constraints.
5. Use the techniques, skills, and modern Software and Hardware tools necessary for computer engineering practice.
6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to mechanical engineering& engineering.
7. Understanding the impact of solutions provided by Mechanical engineering& Engineering in the socialand environmental context.
8. Understand the professional and ethical responsibility in engineering practice.

9. Function in multidisciplinary teams, working cooperatively, respectfully, creatively and responsibly as a member of a team.
10. Communicate effectively by oral, written, and graphical means.
11. Demonstrate the knowledge and understanding of engineering and management principles in the area of mechanical engineering and engineering to manage projects in multidisciplinary environments.
12. Recognize the need to engage in life-long learning.

PSOs:

1. Acquiring detailed knowledge of contemporary issues in Mechanical engineering and developing strongskills in learning advance computing Techniques.

2. Ability to analyze, design, develop, test and manage complex software & hybrid applications.

COs:

1. To Analyze and describe the problem domain.
2. To formulate clear work plan and procedure.
3. To describe and evaluate both generic and specific skills.
4. To design and apply modern tools for designing and drafting.
5. To design report and presentation.

Project Guidelines for UG Courses/PG courses

For - BE/B.Tech

The process of allocation, monitoring and evaluation for B.Tech final year projects.

Step-1: Project Committee Formation

Project committee team members will comprise of HOD/Senior Professor / ProjectCoordinators.

Step-2: Student Team Formation

Project committee will communicate instructions to the students regarding student's project team formation. Each student team will be comprised of 4-5 students as per their interest mapped to the provided project allocation list. In order to maintain interdisciplinary project culture in VIT, 30% projects must be interdisciplinary in nature. It is also mandatory to include one 2nd year student in each team from the same department. Every student in a team will get fair chance to act like a team leader on the rotation basis. Once student-team is formed of 4-5 students, a list for the same will be evaluated and finalized by the project committee on FCFS basis. Final student teams list will be announced by project committee through the Notice Board or shared via e-mail.

Step-3: Project Proposals from Students

Project Committee will take the relevant project proposal from all the final year students of the department in the beginning of 7th sem. Faculty members are required to check the high quality project proposals which should be research/free-lancing/product/application based projects. Interdisciplinary and industry-based projects are also highly appreciated. VIT welcomes projects that contribute for the benefit of our society and nation. While submitting the project, faculty members will also confirm whether their submitted project proposals would be publishable orpatentable in the following format:

Format 1: Project Proposals Format from Faculty Members

S.No.	Name of Faculty Member	Broad Area of Project	Title for Project	Project-Outcome(Publication/ Patent)	Duration ofProject	Nature of Project
1.						
2.						
3.						

Step-4: Prepare Project List

Step-5: Display Project List to Students

A project allocation list will be prepared, and finalized by department's project committee. Once finalized, project allocation list will be shared with the students through e-mails/displayed on the notice boards.

Step-6: Supervisor Allocation

As per mapped interest of the student teams with shared project allocation list, respective supervisors will be allocated to each student team.

Step-7: Procedure to allocate project as per Student's Choice

If any student team is willing to pursue with their own projects (with innovative ideas) which are not mentioned in the project allocation list then project committee will evaluate the feasibility of the projects, make the decision accordingly, and allocate relevant supervisors.

Step-8: Invitation of Experts from Other Departments

Project Committee will decide to invite an expert faculty member of another department. Expert faculty member will be the part of project committee for screening and evaluation of projects.

Step-9: Criteria's for Screening of Project Proposals

Project committee along with expert faculty member will screen the project proposals through presentations. Acceptance/Rejection of project proposals will be done by project committee team members on the following criterions:

a. The project proposal should have feasibility and suitability criterion.
b. The project proposal should have significance in its respective field of implementation.
c. The project proposal should have impact on learning or technical skill up-gradation.
d. The project proposal should have professional engineering solutions in societal, application, and environmental context.
e. The project proposal should be according to availability of resources required to carry out the projects in the department.

Step-10: For Rejected Projects

Due to any reason, if any project proposal gets rejected then faculty members/supervisors/students are advised to submit their revised project proposals to project committee.

Step-11: Procedure to Change the Supervisor/Project/Team Members

In any student is willing to change the supervisor, project, and team members, then he/she is allowed to do so by submitting an application to project committee. Project committee will examine the problems through the interaction with the respective supervisor and students, so that an appropriate step can be taken.

Step-13: Project Progress Monitoring

It is the responsibility of the project committee to ensure the smooth execution of project allocation, screening and evaluation process, Four-presentations will be conducted to monitor the progress of project work of students.

Presentation and Evaluation Schedule of BE/B.Tech-Project/M Tech

7th-Semester Presentation Schedule-UG

2nd Year Presentation schedule-PG

Presentation	Goals	Schedule
1st	• Title of Project should be finalized. • Feasibility of Study will be addressed. • Presentation on Synopsis would be given.	
2nd	Design Phase/Literature Review would be presented.	

7th semester UG Evaluation Procedure -50 Marks

2nd Year PG Evaluation Procedure -200 Marks(100CA+100OR)

1st and 2nd presentation will be given by the students in front of Project Committee in 7th semester UG and 2nd year PG addressing short- and long-term goals of the project. Presentation on synopsis followed with literature review would be presented. Project Committee will assess their presentations on the basis of innovative project ideas, feasibility, and demand of the project proposals.

Presentation and Evaluation Schedule ofBE/B.Tech- Project- 8th Sem

8th Semester Presentation Schedule-UG

4th semester Presentation Schedule -PG

Presentation	Goals	Schedule
1st	**To monitor the progress of project work.**	
2nd	**To verify the completion of the project.**	

8th Semester UG Evaluation Procedure (75 CA+75 UA)

4th semester PG Presentation (100CA+100UA)

1st and 2nd presentation will be given by the students in front of Project Committee Members to monitor the progress of project work and to verify the completion of the project respectively.

8th semester UG Evaluation Marks 150 Marks (75CA+75 UA)

4th semester PG Evaluation Marks 200 Marks (100CA+100 UA)

Evaluation Criteria	Modular Presentation Skills	Coordination among students	Project Work	Final Project	Total Marks	External Marks
Marks UG	**15**	**10**	**30**	**20**	**75**	**75**
Marks PG	**30**	**-**	**35**	**35**	**100**	**100**

For – M Tech /PG -Project

Postgraduate research project areas

Projects are available in a range of research areas, including:

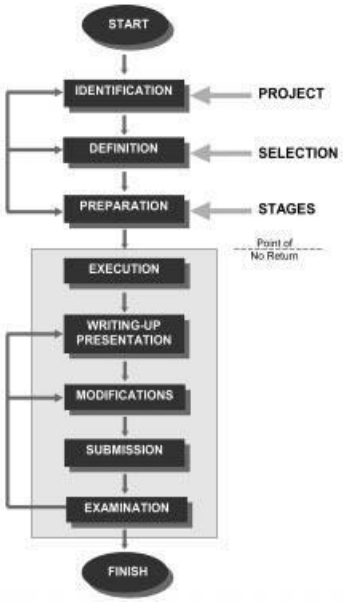
- Acoustics and vibrations
- Biomedical
- Design
- Manufacturing
- Materials science and engineering
- Robotics, control and instrumentation
- Industrial Projects
- Fabrication Project Based on New design/Concept
- CAD/CAM

Supervisors can provide further information about the research that is under way in their areas of interest.

Use of high end software's like (ProE /Catia/Unigraphics/Solid Edge/Nastran /Hypermesh/Ansys) is mandatory in every projects whether it is industrial/Case study projects.

New projects become available frequently, and it is often possible to create a new project to suit your interests. Please discuss research projects with the staff working in your areas of interest.

Project Method:



Step-1: Project Committee Formation

Project committee team members will comprise of HOD/Senior Professor / ProjectCoordinators.

Step-2: Project Proposals from Students

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Step-6: Criteria's for Screening of Project Proposals

Project committee along with expert faculty member will screen the project proposals through presentations. Acceptance/Rejection of project proposals will be done by project committee team members on the following criterions:

f. The project proposal should have feasibility and suitability criterion.
g. The project proposal should have significance in its respective field of implementation.
h. The project proposal should have impact on learning or technical skill up-gradation.
i. The project proposal should have professional engineering solutions in societal, application, and environmental context.
j. The project proposal should be according to availability of resources required to carry out the projects in the department.

Step-7: For Rejected Projects

Due to any reason, if any project proposal gets rejected then faculty members/supervisors/students are advised to submit their revised project proposals to project committee.

Step-8: Procedure to Change the Supervisor/Project/Team Members

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Step-9: Project Progress Monitoring

It is the responsibility of the project committee to ensure the smooth execution of project allocation, screening and evaluation process, Four-presentations will be conducted to monitor the progress of project work of students.

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS TEST-1

Session 2021-22

Semester:2nd sem **Year: 1st Year** **Max. Marks: 10**

Subject: Advance Power system protection.

Note: 1) Each question carries equal marks.

Q1) what are advantages of static relays. (CO1)

Q2) Explain Duality between amplitude and phase comparators? (CO1)

Q3) Basic construction of static relays. **(**CO2)

Q4) Explain techniques to measure the period of coincidence? (CO2)

Q5) Analyse static differential Relays? (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS TEST-2

Session 2021-22

Semester:2nd sem **Year: 1st Year** **Max. Marks: 10**

Subject: Advance Power system protection.

Note: 1) Each question carries equal marks.

Q1) what are block spike phase comparator? (CO2)

Q2) Compare rectifier bridge comparators and direct and Instantaneous comparators (CO2)

Q3) Difference between static over current Relays and Time over current relays. ? (CO2)

Q4) Explain Duo bias transformer differential protection? (CO1)

Q5) what are Harmonic restraint relay**?** (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

MID SEM Examination

Session 2021-22

Semester:2nd sem **Year: 1st Year** **Max. Marks: 20**

Subject: Advance Power system protection.

Note: 1) Each question carries equal mark

Q1) Explain Basic construction of static relays. (CO1)

OR

Q2) Compare rectifier bridge comparators and direct and Instantaneous comparators? (CO2)

Q3) what are definite time and Inverse definite time over-current relays? (CO2)

OR

Q4) Analyze static differential Relays? (CO1)

Q5) Explain Duo bias transformer differential protection? (CO2)

OR

Q 6) what are Harmonic restraint relay? (CO1)

Q7) Write short note on (Solve any TWO)

i) Direct and Instantaneous comparators. (CO1)

ii) Integrating type-Rectifier and Vector product type (CO2)

iii) MHO and angle impedance relay sampling comparator (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY

MID SEMESTER EXAMINATION- 2022

Class: B. Tech. (All) Semester: II

Subject: Energy and Environmental Engineering (EEE)

Time: 1 hour Maximum Marks: 20

Instructions: 1. All questions are compulsory

2. Figures to the right indicate full marks

Q.1 Solve any three of the following questions

1. What is Bio-mass? Write the percentage composition of Bio-gas. What are the environmental and health benefits of Bio-gas utilization? CO2 (6)

2. What are the major indoor pollutants? Where do the following indoor pollutants come from? How can you prevent or control indoor pollutions? CO4 (6)

3. Give a broad classification of water pollutants. What is the significance of BOD and COD? CO4 (6)

4. What is noise pollution? How to control it? What are its effects? CO4 (6)

Q.2. Solve the following (Any One)

1.Define solar energy. What are the applications of solar energy? CO2 (2)

2. What is radioactive pollution? What are its effects? CO4 (2)

VIDARBHA INSTITUTE OF TECHNOLOGY

SESSION 2019-2020

Branch :-All **Marks :- 20**

Subject :-Engineering Physics **Time :- 60 min**

Date :- 04/10/19

Instructions for Students :

1. Each question carries five marks
2. Attempt any two questions of the following.

Q.1) Attempt the following :

a) Derive the differential equation of wave motion CO1 (5)

b) Explain Magnetostriction effect and the principle and production of ultrasonic waves using this effect. CO1 (5)

Q.2) Attempt the following :

a) Explain principle and working of He-Ne Laser with Application. CO2 (5)

b) Explain Principle and Structure of Optical Fiber. CO2

Q.3) Attempt the following

a) i) Explain about Ultrasonic waves. CO1 (3)

ii) Obtain the length of Ni rod needed to produce ultrasonic waves of frequency 40 KHz CO1 (2)

b) i) Describe applications of Ultrasonic. CO1 (3)

ii) Explain the various types of LASER CO2 (2)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS TEST 2 EXAMINATION

Session2021-22

Semester:- 5th sem **Year :- 3rd year**

Subject:-HVDC **Marks:-10**

Note:- Solve any two question , each question carries equal marks.

Que. 1. Explain the applications of HVDC transmission. (Co's 1.1)

Que.2. With neat sketches explain the different kinds of D.C. links available and list out its merits and demerits.

(Co's1.8)

Que.3. Make a comparison between HVAC and HVDC transmission. (Co's1.2)

Que.4. Explain the rectifier and inverter operation of a power converter and also write the equivalent circuit of converter? (Co's 2.1)

Que 5. Derive the expressions for average dc voltage, AC current and reactive power absorbed by the converter? (Co's 2.2)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS TEST 1

Session 2022-23

Semester:-7th sem **Year :-4th Year**

Subject:- High Voltage engineering (HVE) **Marks:- 10**

Note : 1) Each question carries equal marks.
2) Solve any two questions.

Que.1: Explain how the electric stress can be estimated and controlled. (CO1)

Que. 2: Define surge voltages. Explain how they are distributed in the windings of power apparatus. (CO1)

Que. 3 : Explain Townsend's breakdown criterion state the limitations of Townsend's criterion. (CO2)

Que. 4 : Explain streamer theory breakdown in gases. (CO2)

Que. 5: State and explain Paschen's law. How do you account for the minimum voltage for breakdown under a given 'p*d' condition? (CO2)

Managed by K.D.M. Education Society

VIDARBHA INSTITUTE OF TECHNOLOGY

Uti,Umrer Road-441209, Tel:07116-281155/56 Fax:07116-281154

E-mail id:kdmsociety@gmail.com, Website:www.vitnagpur.com

Approved by A.I.C.T.E.,New Delhi,Govt. Of Maharashtra & Affiliated DBATU Lonere, Raigad

Mid Term Examination

Department:- Electronics & Communication

Second Semester

Subject:- Multicarrier Communication

Time : 1 Hr **Marks:- 20**

Note: Solve any 4 questions.

Q.1 Explain the Coding in OFDM (CO-1)

Q.2 Explain FFT implementation (CO-1)

Q.3 Describe concatenated coding (CO-2)

Q.4 Explain the PAPR reduction techniques (CO-2)

Q.5 Explain: i) Application of multi rate systems. (CO-4)

ii) Wireless LAN. (CO-4)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

MID SEMISTER EXAMINATION

Session 2022-23

Semester :- 3rd Sem **Year:- 2nd Year**

Subject ;- Electrical machine I **Mark:- 20**

Note:- Solve Each question carries equal marks **5*4 =20 M**

Q1. A) Explain the ideal and Practical Transformer. (CO1)

OR

B) Explain the auto transformer and pulse Transformer. (CO1)

Q2 A) Explain the construction and working of three phase transformer. (CO2)

OR

B) Explain the parallel operation of three phase transformer. (CO2)

Q3 A) Derive the dynamic equation of electromechanical system. (CO3)

OR

B) Derive the Force and Torque in magnetic field system. (CO3)

Q4 A) Write short note on

a) Auto Transformer. (CO1)

b) On load tap changing of transformer . (CO2)

OR

a) Multiply excited magnetic system. (CO3)

b) Voltages Regulation of Transformer (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS TEST-1

Session 2021-22

Semester:2nd sem **Year: 1st Year** **Max. Marks: 10**

Subject: Advance Power system protection.

Note: 1) Each question carries equal marks.

Q1) what are advantages of static relays. (CO1)

Q2) Explain Duality between amplitude and phase comparators? (CO1)

Q3) Basic construction of static relays. **(**CO2)

Q4) Explain techniques to measure the period of coincidence? (CO2)

Q5) Analyse static differential Relays? (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS TEST-2

Session 2021-22

Semester:2nd sem **Year: 1st Year** **Max. Marks: 10**

Subject: Advance Power system protection.

Note: 1) Each question carries equal marks.

Q1) what are block spike phase comparator? (CO2)

Q2) Compare rectifier bridge comparators and direct and Instantaneous comparators (CO2)

Q3) Difference between static over current Relays and Time over current relays. ? (CO2)

Q4) Explain Duo bias transformer differential protection? (CO1)

Q5) what are Harmonic restraint relay**?** (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING

MID SEM Examination

Session 2021-22

Semester:2nd sem **Year: 1st Year** **Max. Marks: 20**

Subject: Advance Power system protection.

Note: 1) Each question carries equal mark

Q1) Explain Basic construction of static relays. (CO1)

OR

Q2) Compare rectifier bridge comparators and direct and Instantaneous comparators? (CO2)

Q3) what are definite time and Inverse definite time over-current relays? (CO2)

OR

Q4) Analyze static differential Relays? (CO1)

Q5) Explain Duo bias transformer differential protection? (CO2)

OR

Q 6) what are Harmonic restraint relay? (CO1)

Q7) Write short note on (Solve any TWO)

i) Direct and Instantaneous comparators. (CO1)

ii) Integrating type-Rectifier and Vector product type (CO2)

iii) MHO and angle impedance relay sampling comparator (CO1)

VIDARBHA INSTITUTE OF TECHNOLOGY, NAGPUR.
DEPARTMENT OF MECHANICAL ENGINEERING
Session2022-23

Class Test- I

Subject: Material Science and Metallurgy (BTMES304) Time Duration: 1 Hrs.
Class: B.Tech. III Semester Total Marks: 10 Marks

INSTRUCTION TO CANDIDATES

Notes:
1. All questions carry marks as indicated.
2. Due credit will be given to neatness and adequate figure.
3. Assume suitable data whenever necessary.

Answer any TWO of the following: 10

Q1) State the importance of study of material science and briefly explain engineering requirement of materials. (CO1)

Q2) Explain Gibb's phase rule. (CO2)

Q3) Define hardness and explain the rockwell hardness test with neat sketch. (CO1)

Q4) Explain types of crystal structure. (CO1)

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