Research Methodology and IPR (GR22D5011)

I-M.Tech (Structural Engineering) – I Semester (2022-23)

Dr. MOHD.HUSSAIN

Professor

Department of Civil Engineering

Gokaraju Rangaraju Institute of Engineering and Technology,

Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

Gokaraju Rangaraju Institute of Engineering andTechnology

Department of Civil Engineering

RESEARCH METHODOLOGY AND IPR (GR 22D5011)

COURSE FILE CHECK LIS

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GR 22 Regulations **M.Tech I Year I semester**

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY(AUTONOMOUS)

RESEARCH METHODOLOGY AND IPR

Course Code**:GR22D5011** L: 2 T:0 P:0 C:2

Unit I:

Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

Unit II:

Effective literature studies approaches, analysis Plagiarism, Research ethics.

Unit III:

Effective technical writing, how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee

Unit IV:

Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

Unit V:

Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.

New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies,IPR and IITs.

Reference Books:

- Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students'"
- Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"
- Ranjit Kumar, 2 nd Edition , "Research Methodology: A Step by Step Guide for beginners"
- Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007.
- Mayall , "Industrial Design", McGraw Hill, 1992.
- Niebel , "Product Design", McGraw Hill, 1974.
- Asimov , "Introduction to Design", Prentice Hall, 1962
- Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016.

T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

DEPARTMENT OF CIVIL ENGINEERING (STRUCTURAL ENGINEERING)

I M. Tech (GR-22) - I Semester **AY: 2022-23** **wef 26-10-2022**

Day/Hour	09:00-10:00	10:00-11:00	11:00-12:00	12:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	Room No.	
MONDAY	ACT	ACT	ASM	LUNCH	ACT LAB			Theory/ Tutorial	4203
TUESDAY	ACT	ERPW	ERPW		ANMSE	ANMSE	MMSA	Lab	4205 (SD Lab) / 4108&4110(ACT Lab)
WEDNESDAY	ASM	ACT	MMSA		SD LAB			M.Tech Co-ordinator	
THURSDAY	ASM	ANMSE	ANMSE		ACT LAB				
FRIDAY	MMSA	MMSA	ANMSE		SD LAB				
SATURDAY	RM&IPR	RM&IPR	ACT		ASM	ASM	MMSA	Dr. V Srinivasa Reddy (1117)	

Sub. Code	Subjects	Faculty Name	Almanac	
GR20D5001	Matrix methods in structural analysis	Dr. G V V Satyanarayana (842)	1st Spell of Instruction	26-10-2022 to 22-12-2022
GR20D5002	Advanced Solid Mechanics	Dr.V.Srinivas Reddy (Dr.VSR-1117)	1st Mid-term Examinations	23-12-2022 to 29-12-2022
GR20D5004	Advanced Concrete Technology	Dr.V.Mallikarjun Reddy (Dr.VMR-807)	2nd Spell of Instruction	30-12-2022 to 28-02-2023
GR20D5006	Analytical and Numerical methods for Structural Engine	Mr.V.Naresh Kumar Varma (1359)	2nd Mid-term Examinations	01-03-2023 to 07-03-2023
GR20D5009	Structural Design Lab	Mr.C.Vanadeep (Mr.CV-1645)/Mr.C.Vivek Kumar(1500)/Mrs.P.Sirisha(Mrs.PS-1524)	Preparation	08-03-2023 to 14-03-2023
GR20D5010	Advanced Concrete Technology Lab	Mr.Kusuma Veera Babu (Mr.KVB-1650)/ Mr.V.Ramesh(1646)/Mr.PVVSSR Krishna	End Semester Examinations/ (Theory/ Practicals) Regular/ Supplementary	15-03-2023 to 01-04-2023
GR20D5011	Research Methodology and IPR	Dr. Mohammed Hussain(Dr.Mohd.H-861)		
GR20D5152	English for Research Paper Writing	Dr.R.Lakshmi Kanthi (Dr.LRK-718)		

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Name of the Program: M.Tech (Structural Engineering) **Year: I**

Course/Subject: **Research Methodology and IPR**

Course Code:GR22D5011

Program Educational Objectives

PEO 1:

Graduates of the program will equip with professional expertise on the theories, process, methods and techniques for building high-quality structures in a cost-effective manner**.**

PEO 2:

Graduates of the program will be able to design structural components using contempory software and professional tools with quality practices of international standards.

PEO 3:

Graduates of the program will be effective as both an individual contributor and a member of a development team with professional, ethical and social responsibilities.

PEO 4:

Graduates of the program will grow professionally through continuing education, training, research, and adapting to the rapidly changing technological trends globally in structural engineering.

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Name of the Program: M.Tech (Structural Engineering) **Year: I**

Course/Subject: **Research Methodology and IPR**

Course Code:GR22D5011

Program Outcomes(PO's):

PO 1: An ability to independently carry out research /investigation and development to solve practical problems.

PO 2: An ability to write and present a substantial technical report/document.

PO 3: Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelors.

PO 4: Possess critical thinking skills and solve core, complex and multidisciplinary structural engineering problems.

PO 5: Assess the impact of professional engineering solutions in an environmental context along with societal, health, safety, legal, ethical and cultural issues and the need for sustainable development.

PO 6: Recognize the need for life-long learning to improve knowledge and competence.

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COURSE OBJECTIVES

Academic **Y**ear : 2022-23

Semester: I

Name of the Program: M.Tech (Structural Engineering) Year: I

Course/Subject: Research Methodology and IPR Code: **GR22D5011**

Name of the Faculty: Dr. MOHD.HUSSAIN Dept.:Civil Engineering

Designation: PROFESSOR

On completion of this Subject/Course the student shall be able to:

S.No	Objectives
1	To familiarize students with the different aspects of research.
2.	To provide an idea of good scientific writing and proper presentation skills.
3	To provide an understanding of philosophical questions behind scientific research.
4	To provide a brief background on the historical legacy of science.
5	To provide an insight of nature of Intellectual Property and new developments in IPR.

Signature of HOD Signature of faculty

Date:

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COURSE OUTCOMES

Academic **Y**ear : 2022-23

Semester: I

Name of the Program: M.Tech(Structural Engineering) Year: I

Course/Subject: Research Methodology and IPR Code:**GR22D5011**

Name of the Faculty: Dr. MOHD.HUSSAIN Dept.:Civil Engineering

Designation: PROFESSOR.

The expected outcomes of the Course/Subject are:

S.No	Outcomes
1	Understand research problem formulation
2	Analyse Research related information and follow research ethics
3	Understand that today's world is controlled by computer , information technology but Tomorrow's world will be ruled by ideas, concepts and creativity
4	Understand that IPR would take such important place in growth of individuals and nation , it is needless to emphasize the need of information about Intellectual Property Right to be promoted among students in general and Engineering
5	Understand the nature of Intellectual Property and IPR in International Scenario

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GokarajuRangaraju Institute of Engineering and Technology
I Year I Semester
(Autonomous)

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Academic Year 2022-23

S.No	Student Name Sarvasree	Roll No
1	A.Mahesh Kumar	22241D2001
2	A. Abdul Azeem	22241D2002
3	B.Bharat	22241D2003
4	B. Sankeertana	22241D2004
5	C. Sowmya	22241D2005
6	C.Naresh	22241D2006
7	D. Harideep Kumar	22241D2007
8	D. Anish	22241D2008
9	D. Nagender	22241D2009
10	G. Sushanth Reddy	22241D2010
11	J. Ravalika	22241D2011
12	K. Saipavan	22241D2012
13	K. Bharat Kumar	22241D2013
14	M. Srinivas	22241D2014
15	M. Sreenivasulu	22241D2015
16	Shaik Abdul Muqeed	22241D2016
17	Shaik Zabiullah	22241D2017
18	S. Sahil Shivaji Rao	22241D2018
19	L.Lakshmi Narayana	22241D2019

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GUIDELINES TO STUDY THE COURSE/SUBJECT

Academic **Y**ear : 2022-23
Semester : I
Name of the Program: M.Tech(Structural Engineering) Year: I
Course/Subject: Research Methodology and IPR Course Code: **GR22D5011**

Name of the Faculty: Dr. MOHD.HUSSAIN Dept.: Civil Engineering

Designation: PROFESSOR
Guidelines to study the Course/ Subject: Research Methodology &IPR

Course Design and Delivery System (CDD):

- The Course syllabus is written into number of learning objectives and outcomes.
- These learning objectives and outcomes will be achieved through lectures, assessments, assignments, , projects, seminars, presentations, etc.
- Every student will be given an assessment plan, criteria for assessment, scheme of evaluation and grading method.
- The Learning Process will be carried out through assessments of Knowledge, Skills and Attitude by various methods and the students will be given guidance to refer to the text books, reference books, journals, etc.

The faculty are be able to –

- Understand the principles of Learning
- Understand the psychology of students
- Develop instructional objectives for a given topic
- Prepare course, unit and lesson plans
- Understand different methods of teaching and learning
- Use appropriate teaching and learning aids
- Plan and deliver lectures effectively
- Provide feedback to students using various methods of Assessments and tools of Evaluation
- Act as a guide, advisor, counselor, facilitator, motivator and not just as a teacher alone

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COURSE SCHEDULE

Academic **Y**ear : 202122

Semester : I

Name of the Program: M.Tech (Structural Engineering) Year: I

Course/Subject:Research Methodology and IPR Course Code: **GR22D5011**

Name of the Faculty: Dr. MOHD.HUSSAIN Dept.: Civil Engineering

Designation: PROFESSOR

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. Of Periods
		From	To	
1.	Unit – I Introduction to Research Methodology	14-11-22	26-11-22	7
2.	Unit- II Literature Survey	02-12-22	8-12-22	6
3.	Unit-III Research Publications	17-12-22	31-12-22	7
4.	Unit-IV IPR	5-01-23	28-01-23	7
5.	Unit-V Patent Rights	4-02-23	16-02-23	10

Total No. of Instructional periods available for the course: 37 Hours

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SCHEDULE OF INSTRUCTIONS
COURSEPLAN

Academic **Y**ear : 2022-23

Semester : I UNIT NO.: I TO V

Name of the Program : M.Tech Year: I

Course/Subject: **Research Methodology and IPR** Course Code: **GR22D5011**

Name of the Faculty: Dr.Mohd.Hussain Dept.: Civil Engineering

Designation: PROFESSOR

UNIT - I

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives & Outcomes Nos.	References (Text Book, Journal…) Page Nos.:____to
1.	1.	14/11	1	Meaning of Research Problem, Sources of Research Problem	1 & 1	Research Methodology books: 1.Ranjit Kumar (6 Edition) 2.Kothari & Garg 3.Wayne Goddard and Stuart Melville 4. Pradeep Kumar Sahu – Springer 5.Diparkar Deb et.al

						6. NPTEL notes 7. egyankosh notes
	2.	14/11	1	Criteria and Characteristics of a good research problem	1 & 1	
	3.	19/11	1	Errors in selecting a research problem, Scope and Objectives of Research Problem	1 & 1	
	4.	19/11	1	Approaches of Investigation of solutions for research problem	1 & 1	
	5.	26/11	1	Data Collections , Analysis	1 & 1	
	6.	26/11	1	Data Interpretation	1 & 1	
	7.	26/11	1	Necessary Instrumentations	1 & 1	

UNIT - II

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives & Outcomes Nos.	References (Text Book, Journal…)
2.	1.	2/12	1	Effective Literature Studies : Approaches	2 & 2	Research Methodology books: 1.Ranjit Kumar (6 Edition) 2.Kothari & Garg 3.Wayne Goddard and Stuart Melville 4. Pradeep Kumar Sahu – Springer 5.Diparkar Deb et.al 6. NPTEL notes 7. egyankosh notes
	2.	2/12	1	Effective Literature Studies : Approaches	2 & 2	
	3.	3/12	1	Analysis	2 & 2	
	4.	3/12	1	Plagiarism	2 & 2	
		8/12	1	Research Ethics	2 & 2	

	5.					
	6.	8/12	1	Research Ethics	2 & 2	

UNIT - III

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives & Outcomes Nos.	References (Text Book, Journal…)
3.	1.	17/12	1	Effective Technical Writing	3 & 3	Research Methodology books: 1.Ranjit Kumar (6 Edition) 2.Kothari & Garg 3.Wayne Goddard and Stuart Melville 4. Pradeep Kumar Sahu – Springer 5.Diparkar Deb et.al 6. NPTEL notes 7. egyankosh notes
	2.	17/12	1	How to write report	3 & 3	
	3.	21/12	1	How to write report	3 & 3	
	4.	21/12	1	Developing a Research Proposal	3 & 3	
	5.	31/12	1	Format of Research Proposal	3 & 3	
	6.	31/12	1	Format of Research Proposal	3 & 3	
	7.	31/12	1	Presentation and assessment by a Review Committee	3 & 3	

UNIT - IV

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives & Outcomes	References (Text Book, Journal…)

					Nos.	
4.	1.	5/1	1	Nature of Intellectual Property : Patents and Designs	4 & 4	Intellectual Property in New Technological Age 2016 by Lemley, Menell and Merges et al . Intellectual Property by Debrah E. Bouchoux NPTEL Notes e gyankosh Notes
	2.	5/1	1	Nature of Intellectual Property : Patents and Designs	4 & 4	
	3.	5/1	1	Trade and Copyright	4 & 4	
	4.	21/1	1	Process of Patenting and Development	4 & 4	
	5.	21/1	1	Innovation	4 & 4	
	6.	21/1	1	Patenting	4 & 4	
	7.	28/1	1	Development	4 & 4	
	8.	28/1	1	International Scenario	4 & 4	
	9.	28/1	1	International Cooperation on Intellectual Property	4 & 4	
	10.	28/1	1	Procedure for grants of Patents , Patenting under PCT	4 & 4	

UNIT - V

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives & Outcomes Nos.	References (Text Book, Journal…)
5.	1.	4/2	1	Patent Rights : Scope of Patent Rights	5 & 5	NPTEL Notes & egyankosh Notes
	2.	4/2	1	Licensing and Transfer of Technology	5 & 5	
	3.	4/2	1	Licensing and Transfer of Technology	5 & 5	

	4.	11/2	1	Patent Information and databases	5 & 5	
	5.	11/2	1	Geographical Indications	5 & 5	
	6	11/2	1	New Developments in IPR	5 & 5	
	7	16/2	1	Administration of Patent Systems	5 & 5	
	8	16/2	1	New Developments in IPR	5 & 5	
	9	16/2	1	IPR of Biological Systems , Computer Software etc.	5 & 5	
	10	16/2	1	Traditional Knowledge : Case Studies . IPR and IITs	5&5	

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LESSON PLAN

Academic Year : 2022-23 Semester : I Semester

Name of the Program: M.Tech (Structural Engineering) Year: I Year Section: A / B

Course/Subject: Research Methodology and IPR Course Code: GR22D 5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor
Lesson No: Unit 1 - 1& 2 Duration of Lesson: 2 hr
Lesson Title: Meaning and source of Research Problem

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to explain the Meaning of research problem.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS

Research Methodology basics and Problem Identification

Assignment / Questions:

Question	Objective/ Outcome
Explain the research process?	Obj:1
How problems are identifies and defined in a research work?	Out:1

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LESSON PLAN

Academic Year : 2022-23 Semester : I Semester

Name of the Program: M.Tech (Structural Engineering) Year: I Year Section: A / B

Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor

Lesson No: Unit 1 - 3 & 4 Duration of Lesson: 2 hr

Lesson Title: Errors in selecting a research problem, characteristics of a good research

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to identify Errors in selecting a research problem.

Teaching Aids: Class room teaching with power point presentation.

TEACHING POINTS :

Research problem characteristics and Errors in the research problem

Assignment / Questions:

Question	Objective/ Outcome
Explain in brief about objectives of research problem?	Obj:1 Out:1

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor
Lesson No: Unit 1 - 5& 6
Duration of Lesson: 2 hr
Lesson Title: scope and objectives, Approaches of investigation of solutions for research problem

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to identify the various Approaches of investigation of solutions for research problem.

Teaching Aids: Class room teaching with power point presentation.

TEACHING POINTS :

solutions for research problem, objectives of research

Assignment / Questions:

Question	Objective/ Outcome
State the objectives of research problem. State the scope of research problem.	Obj:1 Out:1

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor
Lesson No: Unit 1 - 7 & 8
Duration of Lesson: 2 hr
Lesson Title: Data collection and analysis

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to collect data and do analysis on the collected data.

TEACHING AIDS: class room teaching with power point presentation.

TEACHING POINTS :

Methods of data collection and analysis of data

Assignment / Questions:

Question	Objective/ Outcome
How data's are collected for a research work?	Obj:1 Out:1

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor

Lesson No: Unit 1 - 9 & 10
Duration of Lesson: 2 hr

Lesson Title: Data Interpretation and necessary instruments
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to data interpretation.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Data interpretation and necessary instruments

Assignment / Questions:

Question	Objective/ Outcome
How data's are interpreted? What are the various instruments used to interpret data?	Obj:2 Out:2

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B

Course/Subject: Research Methodology and IPR Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor
Lesson No: Unit 2 - 1 & 2
Duration of Lesson: 2 hr

Lesson Title: Literarture studies approaches
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to literature studies.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Effective Literarture studies approaches - journals, magazines, old reports

Assignment / Questions:

Question	Objective/ Outcome
How literature studies are done? State the importance of literature studies.	Obj:2 Out:2

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor
Lesson No: Unit 2 - 3 & 4
Duration of Lesson: 2 hr
Lesson Title: plagiarism analysis & Research ethics
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to maintain the similarity index and standard research ethics.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

plagiarism analysis & Research ethics

Assignment / Questions:

Question	Objective/ Outcome
Give the difference between plagiarism and cheating? How plagiarism can be minimized?	Obj:2 Out:2

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B

Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor
Lesson No: Unit 3 - 1 & 2
Duration of Lesson: 2 hr
Lesson Title: Report writing technically
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to write a technical report.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Ways to write technical report, contents to be included.

Assignment / Questions:

Question	Objective/ Outcome
How reports can be written technically? What are the contents to be included in a technical report?	Obj:3 Out:3

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B

Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor

Lesson No: Unit 3 - 3 & 4
Duration of Lesson: 2 hr
Lesson Title: paper developing a research proposal and method of writing

INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to write a technical paper.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

paper developing a research proposal

Assignment / Questions:

Question	Objective/ Outcome
How research paper can be written technically? What are the contents to be included in a research paper?	Obj:3 Out:3

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LESSON PLAN

Academic Year : 2022-23

Semester : I Semester

Name of the Program: M.Tech (Structural Engineering) Year: I Year

Section: A / B

Course/Subject: Research Methodology and IPR CourseCode: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: CivilEngineering

Designation: Professor

Lesson No: Unit 3 - 5 & 6

Duration of Lesson: 2 hr

Lesson Title: format of research proposal and method of writing research proposal

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to write a research proposal for claiming funds from government.

Teaching Aids: Class room teaching with power point presentation.

TEACHING POINTS :

Writing a research proposal.

Assignment / Questions:

Question	Objective/ Outcome
State the objectives of research proposal. What are the benefits of research proposal?	Obj:3 Out:3

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: CivilEngineering
Designation: Professor
Lesson No: Unit 3 - 7 & 8
Duration of Lesson: 2 hr
Lesson Title: presentation and assessment by review committee
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to attend the review committee meetings and explain about their research work.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Assessment method and presentation contents

Assignment / Questions:

Question	Objective/ Outcome
What are the activities carried out by assessment committee in a research work? What are the contents to be included in a research presentation?	Obj:3 Out:3

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor

Lesson No: Unit 4 - 1 & 2
Duration of Lesson: 2 hr
Lesson Title: intellectual property, patents
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to know about IPR
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Intellectual property rights and its importance

Assignment / Questions:

Question	Objective/ Outcome
How to file a patent? What is IPR? Give examples.	Obj:4 Out:4

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: CivilEngineering

Designation: Professor

Lesson No: Unit 4 - 3 & 4
Duration of Lesson: 2 hr
Lesson Title: designs trade and copyright
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to know about deigns, trade and copyright.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Design, trade and copyright and its importance

Assignment / Questions:

Question	Objective/ Outcome
Give the difference between patents, designs, trade and copyright?	Obj:4 Out:4

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor
Lesson No: Unit 4 - 5 & 6
Duration of Lesson: 2 hr
Lesson Title: patent processing, technical research development
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to develop a research work and file patent.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Development of research work and patenting it.

Assignment / Questions:

Question	Objective/ Outcome
How to file a patent?	Obj:4 Out:4

Signature of faculty

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor

Lesson No: Unit 4 - 7 & 8
Duration of Lesson: 2 hr

Lesson Title: innovation and patent development/ International cooperation

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to innovate a product.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Innovation of research work and patenting it. File patent internationally.

Assignment / Questions:

Question	Objective/ Outcome
Elaborate the concepts of creativity and innovation. How to file an international patent?	Obj:4 Out:4

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B

Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor
Lesson No: Unit 4 - 9 & 10
Duration of Lesson: 2 hr
Lesson Title: grants of patents, patenting under PCT
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to patent under PCT.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Patent grants and Patenting under PCT

Assignment / Questions:

Question	Objective/ Outcome
Explain how patents are filed under PCT? Explain about patent grants in detail wit suitable example.	Obj:4 Out:4

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: CivilEngineering
Designation: Professor
Lesson No: Unit 5 - 1 & 2
Duration of Lesson: 2 hr
Lesson Title: patent rights and its scope
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to explain about patent rights.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Patent rights.

Assignment / Questions:

Question	Objective/ Outcome
Explain the scope of patent rights. Explain about one's own patent right in detail.	Obj:5 Out:5

Signature of faculty

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor
Lesson No: Unit 5 - 3 & 4
Duration of Lesson: 2 hr
Lesson Title: licensing and transfer of technology
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to explain about patent licensing and technology transfer.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Patent rights.

Assignment / Questions:

Question	Objective/ Outcome
Explain patent licensing in detail. Explain patent technology transfer in detail.	Obj:5 Out:5

Signature of faculty

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011
Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor
Lesson No: Unit 5 - 5 & 6
Duration of Lesson: 2 hr
Lesson Title: patent information and database
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to explain about patent information and database.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Database and information about patents

Assignment / Questions:

Question	Objective/ Outcome
What are the information that can be gathered from patent database?	Obj:5 Out:5

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B

Course/Subject: Research Methodology and IPR Course Code:GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: CivilEngineering

Designation: Professor
Lesson No: Unit 5 - 7 & 8
Duration of Lesson: 2 hr
Lesson Title: developments in IPR and patent administration system
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to explain about IPR developments.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Patent administration system.

Assignment / Questions:

Question	Objective/ Outcome
How patent informations are protected? Explain IPR developments in detail.	Obj:5 Out:5

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IP Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: CivilEngineering
Designation: Professor
Lesson No: Unit 5 - 9 & 10
Duration of Lesson: 2 hr
Lesson Title: new developments in IPR and biological systems IPR
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to explain about IPR developments in biological systems.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Developments of IPR in biological systems

Assignment / Questions:

Question	Objective/ Outcome
How IPR are developed in biological departments? Explain with a case study.	Obj:5 Out:5

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LESSON PLAN

Academic Year : 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B
Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering

Designation: Professor

Lesson No: Unit 5 - 11 & 12
Duration of Lesson: 2 hr
Lesson Title: new developments in IPR and computer software IPR
INSTRUCTIONAL/LESSON OBJECTIVES:
On completion of this lesson the student shall be able to explain about IPR developments in software systems.
Teaching Aids: Class room teaching with power point presentation.
TEACHING POINTS :

Developments of IPR in software systems

Assignment / Questions:

Question	Objective/ Outcome
How IPR are developed in computer softwares? Explain with a case study.	Obj:5 Out:5

EVALUATION STRATEGY

Academic **Y**ear : 2022-23

Semester : I

Name of the Program: M.Tech (Structural Engineering) Year: I

Course/Subject: **Research Methodology and IPR** Subject Code **GR22D5011**

Name of the Faculty: Dr.Mohd.Hussain Dept.: Civil Engineering

Designation : PROFESSOR

1. TARGET:

A) Percentage for pass: 98%

b) Percentage of class: 1st class with distinction - 60%
1st class - 40%

2. COURSE PLAN& CONTENT DELIVERY

(Please write how you intend to cover the contents: i.e., coverage of Units/Lessons by lectures, design, exercises, solvingnumericalproblems, demonstrationofmodels,modelpreparation, experiments in the Lab., orbyassignments,etc.)

3. METHOD OF EVALUATION

3.1 ☐ Continuous Assessment Examinations (CAE-I, CAE-II)

3.2 ☐ Assignments/Seminars

3.3 ☐ Project Review/ Comprehensive viva-voce

3.4 ☐ Quiz

3.5 ☐ Semester/End Examination

3.6 ☐ Others

4. List out any new topic(s) or any innovation you would like to introduce in teaching the subjects in this Semester.

……
……..

Signature of HOD Signature of faculty

M.Tech Structural Engg. I yr-I Sem- GR22 2022-23			
Research Methodology &IPR GR22D5011 (MID-I)			
S.No	**Roll No**	**Name of Student** **Sarvasree**	**Maximum Marks (30 M)**
1	22241D2001	A.Mahesh Kumar	18
2	22241D2002	Abdul Azeem	21
3	22241D2003	B.Bharat	11
4	22241D2004	Sankeertana	21
5	22241D2005	Sowmya	18
6	22241D2006	C.Naresh	22
7	22241D2007	Harideep Kumar	20
8	22241D2008	Anish	19
9	22241D2009	Nagender	21
10	22241D2010	G. Sushanth Reddy	23
11	22241D2011	J. Ravalika	18
12	22241D2012	K. Saipavan	20
13	22241D2013	K. Bharat Kumar	22
14	22241D2014	M. Srinivas	13
15	22241D2015	M. Sreenivasulu	21
16	22241D2016	Shaik Abdul Muqeed	20
17	22241D2017	Shaik Zabiullah	17
18	22241D2018	S. Sahil Shivaji Rao	22
19	22241D2019	L.Lakshmi Narayana	10

Research Methodology & IPR GR22D5011 (MID-II)			
S.No	**Roll No**	**Name of Student** **Sarvasree**	**Maximum Marks (30 M)**
1	22241D2001	A.Mahesh Kumar	22
2	22241D2002	Abdul Azeem	22
3	22241D2003	B.Bharat	18
4	22241D2004	Sankeertana	24
5	22241D2005	Sowmya	24
6	22241D2006	C.Naresh	23
7	22241D2007	Harideep Kumar	26
8	22241D2008	Anish	25
9	22241D2009	Nagender	26
10	22241D2010	G. Sushanth Reddy	24
11	22241D2011	J. Ravalika	22
12	22241D2012	K. Saipavan	23
13	22241D2013	K. Bharat Kumar	27
14	22241D2014	M. Srinivas	24
15	22241D2015	M. Sreenivasulu	25
16	22241D2016	Shaik Abdul Muqeed	25
17	22241D2017	Shaik Zabiullah	23
18	22241D2018	S. Sahil Shivaji Rao	28
19	22241D2019	L.Lakshmi Narayana	21

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ASSIGNMENT SHEETS

Research Methodology and Intellectual Property Rights

Instructor : Dr. Mohd.Hussain, Professor of Civil Engineering

ASSIGNMENT I - Descriptive Questions

(Answer these questions from the prescribed e-text books available : Research Methodology : A step by step Guide for Beginners by RanjitKumar & Research Methodology : Methods and Techniques by C.R. Kothari and Gaurav Garg & Notes kept in Newton)

UNIT I &II & III (Half Portion)

1(a) A prospective student is asked to formulate a research problem as a part of project work. Explain the various steps of Research Process the student has to follow ?

(b) Explain the sources of research problem and errors in selecting a research problem ?

(c) Define Research ? Explain the criteria and characteristics of a good research problem ?

(d) Explain the scope and objectives of research problem ?

2(a) How do you conduct Literature Survey ? Explain some sources of journals and digital libraries in structural engineering ?

(b) Describe the approaches of investigation of solutions for research problem ?

(c) Explain the data collection, analysis , interpretation and necessary instrumentation in Research ?
(d) What is plagiarism ? Explain various types of plagiarism and Research Ethics ?
3 (a) Explain the criteria to be considered in writing an effective technical research report ?
(b) Explain the steps of writing a research report ?

ASSIGNMENT I - TWENTY OBJECTIVE QUESTIONS

1. The first step of seven step research process (as given in Kothari and Garg) is

(a) Define research problem (b) Collect data (c) Analyse the data (d) Formulate hypothesis

2. The research approaches are

(a) Quantitative approach (b) Qualitative approach (c) Both (a) and (b) (d) None of the above

3. Research is a way of thinking and research is an integral part of our daily practice for

(a) Engineers (b) Doctors (c) Business People and Social workers (d) all the above

4. Research is away to gather evidence for our Evidence Based

Practice (EBP)

(a) True (b) False (c) Can not say (d) None of the above

5. The types of research are

(a) Application Perspective (b) Objectives Perspective (c) Mode of Enquiry Perspective (d) All the above

6. The perspectives of application of research are as below

(a) the Service Provider (b) the Service Administrator , Manager and/or Planner (c) the service consumer & the professional (d) all the above

7. The research process must have certain Characteristics

(a) Controlled,Rigorous and Systematic (b) Valid and Verifiable (c) Empirical and Critical (d) All the above

8. The research approaches of enquiry perspective is

(a) Structured approach (Quantitative research) (b) Unstructured approach (Qualitative research) (c) both (a) and (b) (d) None of the above

9. The research approaches from application perspective is

(a) pure research (b) applied research (c) both (a) and (b) (d) None of the above

10. The sources of research problem in humanities are

(a) People (b) Problems (c) Programmes (d) Phenomenon (e) all the above

11. The Research Objectives are classified as

(a) Main Objectives (b) Subobjectives (c) Both (a) and (b) (d) None of the above

12. A hypothesis serves the following functions

(a) Study with focus (b) What data to collect and what not to collect (c) enhances objectivity in a study (d) enables one to conclude what is true or what is false (e) all the above

13. The Categories of Hypothesis are

(a) Research Hypothesis (b) Alternate hypothesis (Null Hypothesis)

(c) both (a) and (b) (d) None of the above

14. In testing Hypothesis , the types of error are

(a) Type I Error (Rejection of Null Hypothesis when it is true) (b) Type II Error (Acceptance of a null Hypothesis when it is false) (c) Both (a) and (b) (d) None of the above

15. SQ4R Method of Study is

(a) Survey, Question , Read , Respond , Record and Review

(b) Survey , Question, Read , Relate, Recite and Record

(c) Both (a) and (b) (d) None of the above

16. Mindmapping Notes

(a) Linear Notes (b) Nonlinear Notes (c) both (a) and (b) (d) None of the above

17. Equivalent Opensource software to MATLAB is

(a) Scilab (b) Python (c) R Studio (d) None of the above

18. What is ANOVA

(a) Analysis of Variance (b) Alternative Variance (c) Both (a) and (b) (d) None of the above

19. In the Equation Y= mx + C , Y and X are called respectively

(a) Dependent and Independent Variables (b) Independent and Dependent (c) Both (a) and (b) (d) None of the above

20. In Regression Analysis, R Square is Coefficient of Determination.

It is used
(a) to evaluate correlation coefficient (b)To evaluate the goodness of the fitted model (c) Both (a) and (b) (d) None of the above

Research Methodology and Intellectual Property Rights

Instructor : Dr. Mohd.Hussain, Professor of Civil Engineering

ASSIGNMENT II - Descriptive Questions

(Answer these questions from the prescribed e-text books available : Research Methodology : A step by step Guide for Beginners by Ranjit Kumar & Research Methodology : Methods and Techniques by C.R. Kothari and Gaurav Garg & UnitWise Notes kept in Newton& eGyankosh which is the Study material of Indira Gandhi National Open University & NPTEL Web Notes &Videos)

Unit III (Half portion)

(a) Discuss about the format of Research Proposal

(b) How will Research be assessed by Review Committee?

(c) Explain various sections of a Research Paper in detail ?

(d) What are the necessary guidelines to be followed in writing a Research Proposal ?

Unit IV

(a) State the importance of intellectual property rights and explain various types of intellectual property rights

(b) Explain the process of patenting

(c) Describe how can technical designs be protected ?

(d) Discuss the issues of copyright ownership ? List the items which can be copyright protected ?

(e) Explain the procedure for grant of patents ?

(f) Explain the patenting under PCT(Patent Cooperation Treaty) in detail?

(g) Describe the role of World Intellectual Property Organization (WIPO) in granting patents at international level & Indian Patent Office of Intellectual Property of India at national level

(h) What is the role of Rajiv Gandhi National Institute of Intellectual Property Management at Nagpur ?

UNIT V

(a) Explain the scope of patent rights ?

(b) Explain Licencing and Transfer of Technology in IITs, IISc , MIT, Florida State University and Utah State University

(c) Describe the information and databases in WIPO, USPTO,CIPO, EPO and Indian Patent Advanced Search System

(d) Explain Geographical Indications ?

(e) Explain the Emerging issues in IPR?

(f) Describe the administration of Patent system ?

(g) Explain IPR of Biological systems, Computer software etc.

ASSIGNMENT II - TWENTY FIVE OBJECTIVE QUESTIONS

Research Methodology and IPR- II Mid Portion Objective Questions

1. What protects the intellectual property created by artists?
(a) copyright
(b)geographical indications
(c)patents
(d)registered designs

2. What protects the intellectual property created by designers?
(a)copyright
(b) geographical indications
(c) patents
(d) registered designs

3. What protects the intellectual property created by inventors?
(a)copyright
(b)geographical indications
(c)patents
(d) registered designs

4. Which of these is a geographical indication?
(a) BMW
(b)Champagne
(c)Hogwarts
(d)Playstation
. * * Champagne is a place in France .
5. What does a trademark protect?
(a)an invention
(b) a work of art
(c) logos, names and brands
(d) the look, shape and feel of a product
6. In most countries, how long does copyright last for?
(a)10 years after the creation of the work
(b)50 years after the creation of the work
(c)10 years after the death of the person who created that work
(d)50 years after the death of the person who created that work
7. How long do patents usually last for?
(a)10 years
(b)20 years
(c) 40 years
(d)60 years
8. If you write an original story, what type of intellectual property gives you the right to decide who can make and sell copies of your work?
(a) copyright
(b) geographical indications
(c) patents
(d)registered designs
.
9. Imagine a footballer sets up his own company to sell his own range of clothes. What type of intellectual property can he use to show that the clothes are made by his company?
(a)copyright
(b)patents
(c)registered designs
(d)trademarks
10. If a company develops a new technology that improves its main product, what type of intellectual property can they use to stop others from copying their invention?
(a) copyright
(b)geographical indications
(c)patents
(d)registered designs
11. A company XYZ filed a patent application in the year 2000. The patent was granted in 2002. The company can enjoy the patent rights till:
(a)2020 (b)2021 (c)2022 (d)2023
12. If a company develops a new technology that improves its main product, what type of intellectual property can they use to stop others from copying their invention?
(a)Copyright
(b) Geographical indications
(c) Patents
(d) Trademarks
13. The term WIPO stands for
(a)World Investment Policy Organization
(b)World Intellectual Property Organization
(c)Wildlife Investigation and Policing Organization

(d)World Institute for Prevention of Organized Crime

14. PCT stands for:

(a) Patent Cooperation Treaty

(b) Patent Cooperation Territory

(c) Patent Completion Term

(d) Patent Convention Treaty

15. Why an invention should be patented?

(a) It gives opportunity to license the invention in future

(b) It gives legal ownership on the invention

(c)It gives exclusive rights to stop others from practicing the invention

(d)All of the above

16. The rights of a patentee are to stop the third parties from

(a)Selling or distributing patented product without consent of patentee

(b)Licensing without consent of patentee

(c)Assigning the patent to others without consent of patentee

(d)All of the above

17. A person qualified/entitled to receive a patent on a new invention is-

(a)The one who invents first

(b) The one who applies for patent on the invention first

(c) The one who commercialized the invention first

(d)The one who first conceived the invention

18. Patent is granted for

(a)A Discovery

(b)Mathematical formulas

(c)New invention

(d)Both (a) and (b)

19. Confidential information is an important intellectual asset because-

(a)It has unlimited lifetime of protection unlike patents 20 years protection

(b)It contains organization's Important critical data

(c) It is available exclusively to the organization

(d) All of the above

20. Patent right is

(a)Limited period right

(b)Territorial right

(c)Absolute right

(d)Both (a) and (b)

21. Prior art search includes

(a)Search of Patent literatures

(b)Search of Non-patent literature

(c)Both (a) and (b)

(d) None of the above

22. Which is not a best practice to protect intellectual property/ asset of any organization?

(a)Having Non-Disclosure Agreement in place while discussing business and sharing confidential information with 3rd party

(b)Safeguarding critical manufacturing and business know-how as trade secret

(c)Getting due approvals before external publications and presentations

(d) Publishing all the R&D and business-critical information for easy access ofthe public

23. A patent comes into existence:

(a)On the evolution of an idea

(b)On the first publication in an article

(c) On the acceptance of an application by the Patent Office

(d) After the first successful use of the article

24. Which of these a geographical indication ?
(a) BMW
(b) Hotel Taj
(c) Play Station
(d) Assam Tea

25. +Which country possesses maximum number of Patents in the

world?(a)USA
(b)Japan
(c) South Korea
(d)China
(source : **wipo & iserdindia**)

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERINGAND TECHNOLOGY

(Autonomous)

Department of CE

I M. Tech I-Sem (Structural Engg.) AY:2022-23 I-Mid Marks: 10M

Time: 20 Minutes Date of Exam: 28-12-2022

Subject: **RESEARCH METHODOLOGY AND IPR (GR22D5011)**

Name: **Roll Number:**

(Answer All Questions) **(10 X 1 = 10 Marks)**

.	Research is				CO1	BL2	2.1.1	[ ]
	A. Searching again and again	B. Finding solution to any problem	C. Working in a scientific way to search for truth of any problem	D. None of the above				
2.	A statement of the quantitative research question should				CO1	BL4	3.1.6	[ ]
	A. Extend the statement of purpose by specifying exactly the question (s the researcher will address	B. Help the research in selecting appropriate participants, research methods, measures, and materials	C. Specify the variables of interest	D. All the above				
3.	Which of the following is not the method of Research				CO1	BL3	3.1.1	[ ]
	A. Survey	B. Historical	C. Observation	D. Philosophical				
4.	Concepts are ..... of Research				CO1	BL4	3.1.4	[ ]
	A. Guide	B. Tools	C. Methods	D. Variables				
5.	Why do you need to review the existing literature				CO2	BL3	3.1.1	[ ]
	A. To make sure you have a long list of references	B. Because without it, you could never reach the required word-count	C. To find out what is already known about your area of interest	D. To help in your general studying				
6.	What do you mean by Unit of Analysis				CO2	BL3	3.1.1	[ ]
	A. Main parameter	B. Variables	C. Sample	D. Constructs				
7.	The first purpose of a survey is to ……..				CO2	BL4	3.1.6	[ ]
	A. Description	B. Evaluation	C. Pration	D. Provide Information				
8.	Second step in problem formulation is				CO2	BL4	3.1.4	[ ]
	A. Statement of the problem	B. Understanding the nature of the problem	C. Survey	C. Survey				
9.	A comprehensive full Report of the research process is called				CO3	BL4	3.1.1	[ ]
	A. Thesis	B. Summary Report	C. Abstract	D. Article				
10.	Final stage in the Research Process is				CO3	BL4	3.1.4	[ ]
	A. Problem formulation	B. Data collection	C. Data Analysis	D. Report Writing				

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institute under JNTUH)

Department of CE

I M. Tech I-Sem (Structural Engg) AY:2022-23 I-Mid Marks: 20M

Time: 100 Minutes Date of Exam: 28-12-2022

Subject: **RESEARCH METHODOLOGY AND IPR (GR22D5011)**

(Answer Any FOUR Questions) **(4 X 5 = 20 Marks)**

Q.No.		CO	BL	PI	Marks
1.	Give the clear analysis on different types of research problems	**CO1**	BL4	3.1.4	5 M
2.	Elaborate on scope and objectives of a research problem	**CO1**	BL4	3.1.1	5 M
3.	Describe the diferent approaches of investigation of solutions for research problem	**CO2**	BL4	3.1.6	5 M
4.	Analyze on different types of plagiarism	**CO2**	BL4	3.1.1	5 M
5.	Give the clear analysis on effective technical writing	**CO3**	BL4	3.1.6	5 M
6.	Analyze on the basic criteria of a good research	**CO1**	BL4	3.1.4	5 M

Name_____ Reg.No

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institute under JNTUH)

I M.Tech - I Semester - Mid - II Examinations March 2023

Common to all PG Branches

Subject: GR22D5011 - Research Methodology and IPR Date of Exam: 6.3.2023

AY: 2022-23 Time: 20 Minutes Marks: 10 M

Answer All the Questions (10 X 1 = 10 Marks)

Q.No	Questions	Option	CO	BL	PI
1	_____establishes the technical report. a. Logical Conclusion b. Illogical Conclusion c. Personal prejudice d. Misplaced learning	[ ]	3	1	10.1
2	Which is not basis for a technical report?_____ a. Facts b. Tests c. Personal prejudices d. Experiments	[ ]	3	2	10.3.1
3	Intellectual Property Rights (IPR) protect the use of information and ideas that are of _____ a. Ethical value b.Moral value c.Social value d.Commercial value	[ ]	4	1	6.2
4	The following cannot be exploited by assigning or by licensing the rights to others_____ a.Patents b.Designs c.Trademark d.All of the above	[ ]	4	1	6.2
5	The following can be patented_____ a.Machine b.Process c.Composition of matter d. All of the above	[ ]	4	2	6.2.1
6	Which country possesses maximum number of patents in the world ? a.USA b.Japan c.South Korea d.China	[ ]	4	1	9.3
7	Which of the following is not a part of patent document? a. Abstract b. Prologue c. Claims d.Title	[ ]	5	2	8.1
8	IPR Complete specification gives _____ (a) Full description of claim only (b) Full description of royalty (c) Full description of invention (d) Full description of application	[ ]	5	1	8.2
9	Patent in India valid for how many_____years a. 30 b. 20 c. 10 d.5	[ ]	5	1	8.1.1
10	The_____protects literary works, dramatic works, musical works, artistic works, cinematograph films and sound recordings. a. International Law b. Indian copyright law c. Global Trade laws d. International Labour Laws	[ ]	5	2	8.2

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institute under JNTUH)
I M.Tech - I Semester - Mid - II Examinations March 2023
Common to all PG Branches

Subject: GR22D5011 - Research Methodology and IPR Date of Exam: 6.3.2023

AY: 2022-23 Time: 100 Minutes Marks: 20

Answer Any FOUR Questions - 4 X 5 = 20 Marks

Q.No.	Questions	CO	BL	PI	Marks
1.	Elaborate the Format of writing a technical report with suitable examples	**CO3**	BL2	10.1	5 M
2.	Brief out the contents to be presented to the assessment committee with suitable examples.	**CO3**	BL4	10.2.2	5 M
3.	Compare Patents, Designs, Trade and Copyright with suitable examples.	**CO4**	BL2	8.1	5 M
4.	Enumerate the role of World Intellectual Property Organisation (WIPO) in granting patents with suitable examples.	**CO4**	BL5	8.2.2	5 M
5.	Summarize the new developments in IPR with suitable examples.	**CO5**	BL4	9.2	5 M
6.	Illustrate with a case study on IPR Development in biological systems with suitable examples.	**CO5**	BL6	9.3	5 M

(1)

CODE: GR22D5011 | GR 22 | SET - 4

I M.Tech I Semester Regular Examinations, March/April 2023

RESEARCH METHODOLOGY AND IPR

(Common to All Programs)

Time: 3 hours **Max Marks: 60**

Instructions:

1. Question paper comprises of **Part-A** and **Part-B**
2. **Part-A** (for 10 marks) must be answered at one place in the answer book.
3. **Part-B** (for 50 marks) consists of **five questions with internal choice,** answer all questions.
4. **CO** means Course Outcomes. **BL** means Blooms Taxonomy Levels.

PART – A

(Answer ALL questions. All questions carry equal marks)

10 * 1 = 10 Marks

1.	a)	Describe the importance of Necessary instrumentations.	**1M**	CO1	BL2
	b)	Explain the objectives of Research Problem.	**1M**	CO1	BL2
	c)	Discuss the importance of plagiarism in research process.	**1M**	CO2	BL2
	d)	Discuss sources of literature survey.	**1M**	CO2	BL2
	e)	Write short notes on characteristics of a good research report.	**1M**	CO3	BL2
	f)	Write short notes on the techniques of writing report.	**1M**	CO3	BL2
	g)	How do we apply innovation in research work?	**1M**	CO4	BL1
	h)	Explain briefly patenting under PCT.	**1M**	CO4	BL2
	i)	What are the developments in IPR in IIT?	**1M**	CO5	BL1
	j)	Explain the process of patent searching.	**1M**	CO5	BL2

PART – B

(Answer ALL questions. All questions carry equal marks)

5 * 10 = 50 Marks

2.	a)	Explain Research Process and draw its flow diagram.	**5M**	CO1	BL2
	b)	Explain important concepts relating to research design.	**5M**	CO1	BL2

OR

3.	a)	Write a note on Preparing the research design.	**5M**	CO1	BL1
	b)	Distinguish Qualitative and Quantitative Research.	**5M**	CO1	BL4
4.	a)	Difference between Primary & Secondary Data.	**5M**	CO2	BL2
	b)	Elaborate on the process of literature survey? Explain in detail.	**5M**	CO2	BL3

OR

5.	a)	Explain about Research Ethics.	5M	CO2	Bl
	b)	Give a note on Observation Studies.	5M	CO2	Bl
6.	a)	What are the Precautions for writing research reports.	5M	CO3	Bl
	b)	How do we write a research proposal, and what is the format. Explain each step of Research Problem.	5M	CO3	Bl

OR

7.	a)	Explain the significance of a research report and narrate the various steps involved in writing such a report.	5M	CO3	Bl
	b)	Write notes on Bibliography and its importance in context of research report.	5M	CO3	Bl
8.	a)	Compare patents, design, trade and copyrights in detail with suitable examples.	5M	CO4	Bl
	b)	Discuss in detail the process of patenting and development.	5M	CO4	Bl

OR

9.	a)	Analyze the patenting under PCT in detail with a neat block diagram.	5M	CO4	Bl
	b)	Explain in detail the procedure for grants of patents.	5M	CO4	Bl
10.	a)	Explain in detail 'Administration of patent System'.	5M	CO5	Bl
	b)	Give the detailed analysis on new developments in IPR with a suitable case study.	5M	CO5	Bl

OR

11.	a)	Discuss the new developments in IPR.	5M	CO5	Bl
	b)	Articulate the IPR of biological systems with case studies.	5M	CO5	Bl

*****

M.Tech I Year I Semester Regular Examinations, March/April 2022

RESEARCH METHODOLOGY AND IPR

(Common to all M.Tech Programmes)

Time: 3 hours **Max Marks: 70**

Instructions:

1. Question paper comprises of **Part-A** and **Part-B**
2. **Part-A** (for 20 marks) must be answered at one place in the answer book.
3. **Part-B** (for 50 marks) consists of **five questions with internal choice,** answer all questions.

PART – A
(Answer ALL questions. All questions carry equal marks)
10 * 2 = 20 Marks

1. a.	Mention the Components of Research Problem.	**[2]**
b.	Outline the importance of Research for Government Agencies with Examples.	**[2]**
c.	Differentiate between Quantitative Research and Qualitative Research.	**[2]**
d.	Mention the importance of interpretation in the preparation of Research report.	**[2]**
e.	Outline the importance of Bibliography in Research Report.	**[2]**
f.	What role does a Review Committee play in Research Proposal Assessment?	**[2]**
g.	Mention the various types of Intellectual Property that can be protected.	**[2]**
h.	List what can be protected under Copyrights Act.	**[2]**
i.	Who holds the ownership in case of inventions developed in universities?	**[2]**
j.	What are the instances of Bio-Piracy that impacted India's Traditional Knowledge?	**[2]**

PART – B
(Answer ALL questions. All questions carry equal marks)
5 * 10 = 50 Marks

2. **(a)** What do you understand by Research Problem? What are the characteristics of Good Research problem? **[10]**

(b) "Research is seeing what everybody else has seen and thinking what nobody else has thought." In the light of the statement, Explain the scope of research Problem.

OR

3. **(a)** Elaborate commonly committed errors in identifying a Research Problem and precautions to be taken to overcome them. **[10]**

(b) What are the objectives and constraints faced be a researcher in providing solution to a research problem?

Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)

Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

RUBRICS

Academic Year: 2022-23
Semester : I Semester
Name of the Program: M.Tech (Structural Engineering) Year: I Year
Section: A / B

Course/Subject: Research Methodology and IPR Course Code: GR22D5011

Name of the Faculty: Dr.Mohd.Hussain Dept: Civil Engineering
Designation: Professor

These Rubrics are organized around three domains covering all aspects of GR22D5011 - RM & IPR course.

1. Able to identify a research problem and sort out with optimized solution.
2. Ability to analyze literature surveys and follow research ethics.
3. Create a research document with effective technical writing.
4. Impart knowledge on IPR, patent procedure and availing of research grants.
5. Able to get patent rights and have knowledge on licensing/ transfer of technology.

The rubrics use a four-level rating scale with the following labels:

4 - Excellent

3 - Good

2 – Satisfactory

1 - Unsatisfactory

Objective 1: Able to identify a research problem and sort out with optimized solution.

Student Outcome: Able to formulate research problem and identify relevant solution

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the basic concepts of Research Methodology	**22241D2004**	Does not concentrate on basics of research methodology	A little grasping of basics on research concepts	Understands the basics of research process	Has a great deal of information—regarding the basics of research methodology	4
Identify and define a problem		Does not know how to identify a research problem	An average understanding of defining a problem	Has the sufficient knowledge in defining a research problem	An excellent understanding of research work in finding out a feasible solution	3
Data collection and interpretation		Not impressive	Somewhat impressive	impressive	Commendably impressive	3
					Average score	3.33

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the basic concepts of Research Methodology	22241D2012	Does not concentrate on basics of research methodology	A little grasping of basics on research concepts	Understands the basics of research process	Has a great deal of information—regarding the basics of research methodology	3
Identify and define a problem		Does not know how to identify a research problem	An average understanding of defining a problem	Has the sufficient knowledge in defining a research problem	An excellent understanding of research work in finding out a feasible solution	3
Data collection and interpretation		Not impressive	Somewhat impressive	impressive	Commendably impressive	3
					Average score	3

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the basic concepts of Research Methodology	**22241D2015**	Does not concentrate on basics of research methodology	A little grasping of basics on research concepts	Understands the basics of research process	Has a great deal of information—regarding the basics of research methodology	3

Identify and define a problem		Does not know how to identify a research problem	An average understanding of defining a problem	Has the sufficient knowledge in defining a research problem	An excellent understanding of research work in finding out a feasible solution	3
Data collection and interpretation		Not impressive	Somewhat impressive	impressive	Commendably impressive	4
					Average score	3.3

Objective 2: Ability to analyze literature surveys and follow research ethics.

Student Outcome: Able to follow research ethics.

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the concepts of literature survey	**22241D2004**	Poor understanding of literature survey concepts	Has a moderate knowledge about gathering literature survey	Understanding the various approaches to literature survey.	An excellent grip on various literature survey methods	4
Establishing relation between plagiarism and cheating		Poor	Average	Best	Extraordinary	4
Understanding the value of research ethics		Not efficient	Average	impressive	Commendably impressive	4
					Average score	4

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the concepts of literature survey	**22241D2012**	Poor understanding of literature survey concepts	Has a moderate knowledge about gathering literature survey	Understanding the various approaches to literature survey.	An excellent grip on various literature survey methods	3
Establishing relation between plagiarism		Poor	Average	Best	Extraordinary	3

and cheating						
Understanding the value of research ethics		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3
Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the concepts of literature survey	**22241D2015**	Poor understanding of literature survey concepts	Has a moderate knowledge about gathering literature survey	Understanding the various approaches to literature survey.	An excellent grip on various literature survey methods	3
Establishing relation between plagiarism and cheating		Poor	Average	Best	Extraordinary	3
Understanding the value of research ethics		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Objective 3: Create a research document with effective technical writing.

Student Outcome: Able to analyze research related information.

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the concept on technical writing	**22241D2004**	Poor understanding of concepts on technical writing	Has a moderate knowledge on technical writing	Understands the various method of technical writing	An excellent grip on effective technical writing	3
Knowledge on research proposal and research paper writing		Poor	Average	Best	Extraordinary	3
Presentation of research work to assessment comittee		Not efficient	Average	impressive	Commendably impressive	3

					Average score	3

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the concept on technical writing	**22241D2012**	Poor understanding of concepts on technical writing	Has a moderate knowledge on technical writing	Understands the various method of technical writing	An excellent grip on effective technical writing	3
Knowledge on research proposal and research paper writing		Poor	Average	Best	Extraordinary	3
Presentation of research work to assessment comittee		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding the concept on technical writing	**22241D2015**	Poor understanding of concepts on technical writing	Has a moderate knowledge on technical writing	Understands the various method of technical writing	An excellent grip on effective technical writing	3
Knowledge on research proposal and research paper writing		Poor	Average	Best	Extraordinary	3
Presentation of research work to assessment comittee		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Objective 4: Impart knowledge on IPR, patent procedure and availing of research grants.

Student Outcome: Able to understand the Importance of IPR and produce a product for an individual growth and nation.

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	

Understanding of IPR Concepts	**22241D2004**	Poor understanding of concepts in IPR	Has a moderate knowledge on IPR	Understanding IPR in a better way.	An excellent grip on various IPR Concepts	3
Establishing relation between patents, designs, trade and copyright		Poor	Average	Best	Extraordinary	3
Patenting a project		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding of IPR Concepts	**22241D2012**	Poor understanding of concepts in IPR	Has a moderate knowledge on IPR	Understanding IPR in a better way.	An excellent grip on various IPR Concepts	3
Establishing relation between patents, designs, trade and copyright		Poor	Average	Best	Extraordinary	2
Patenting a project		Not efficient	Average	impressive	Commendably impressive	3
					Average score	2.66

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Understanding of IPR Concepts	**22241D2015**	Poor understanding of concepts in IPR	Has a moderate knowledge on IPR	Understanding IPR in a better way.	An excellent grip on various IPR Concepts	3
Establishing relation between patents, designs, trade and copyright		Poor	Average	Best	Extraordinary	3
Patenting a project		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Objective 5: Able to get patent rights and have knowledge on licensing/ transfer of technology.

Student Outcome: Able to implement innovative research work and patent it.

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Awareness on getting patent rights	**22241D2004**	Don't know about patent rights	Has a moderate knowledge on patent rights	Efficient knowledge	Excellent understanding of the needed issues	3
Patent Licensing and transfer of technology		Poor	Average	Best	Extraordinary	3
IPR Case studies in biological and software sectors		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Awareness on getting patent rights	**21241D2012**	Don't know about patent rights	Has a moderate knowledge on patent rights	Efficient knowledge	Excellent understanding of the needed issues	3
Patent Licensing and transfer of technology		Poor	Average	Best	Extraordinary	3
IPR Case studies in biological and software sectors		Not efficient	Average	impressive	Commendably impressive	3
					Average score	3

Performance Criteria	Student Roll No	Unsatisfactory	Satisfactory	Good	Excellent	Score
		1	2	3	4	
Awareness on getting patent rights	**22241D2015**	Don't know about patent rights	Has a moderate knowledge on patent rights	Efficient knowledge	Excellent understanding of the needed issues	2
Patent Licensing and transfer of technology		Poor	Average	Best	Extraordinary	2
IPR Case		Not efficient	Average	impressive	Commendably	3

studies in biological and software sectors					impressive	
					Average score	2.66

Signature of HOD
Signature of faculty

Date: Date:

MAPPING

GR22D5011 Research Methodology and IPR	**Course Outcomes**				
Course Objectives	1	2	3	4	5
1	X				
2		X			
3			X		
4				X	
5					X

Assessments

1. Assignment 2. Internal Examination 3. External Examination

4. Practical Projects 5. Viva

GR22D5011 Research Methodology and IPR	**Course Objectives**				
Assessments	1	2	3	4	5
1	X	X	X	X	X
2	X	X	X	X	X
3	X	X	X	X	X

4					
5					

GR22D5011 Research Methodology and IPR	**Course Outcomes**				
Assessments	1	2	3	4	5
1	X	X	X	X	X
2	X	X	X	X	X
3	X	X	X	X	X
4					
5					

Course	**Program Outcomes**					
	1	**2**	**3**	**4**	**5**	**6**
GR22D5011 Research Methodology and IPR	X	X	X	X	X	X

GR22D5011 Research Methodology and IPR	**Program Outcomes**					
Course Outcomes	**1**	**2**	**3**	**4**	**5**	**6**
Understand research problem formulation.	M		M	M	H	M
Analyze research related information and follow research ethics	M		M	M	M	M

Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.	M		H	M	M	M
Understanding that when IPR would take such important place in growth of individuals & nation,it is needless to emphasise the need of information about Intellectual Property Right to be promoted among students in general & engineering.	M	M	H	M	H	M
Understand the nature of Intellectual Property and IPR in International scenario.	M	M	M	M	M	M

GokarajuRangaraju Institute of Engineering and Technology (Autonomous)

Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

COURSE COMPLETION STATUS

-**A**cademic **Y**ear : 2022-23

Semester : I

Name of the Program: M.Tech (Structural Engineering) Year: I

Course/Subject: **Research Methodology and IPR** Course Code:**GR22D5011**

Name of the Faculty: Dr. MOHD.HUSSAIN Dept.:Civil Engineering

Designation: PROFESSOR

Actual Date of Completion & Remarks, if any : 25/2/2023

Units	**Remarks**	**No. of Objectives Achieved**	**No. of Outcomes Achieved**
Unit 1	Introduction to Research Methodology	1	1
Unit 2	Literature Survey	2	2
Unit 3	Research Publication	3	3
Unit 4	IPR	4	4
Unit 5	Patent Rights	5	5

Signature of HOD Signature of faculty

Date: Date:

Note: After the completion of each unit mention the number of Objectives & Outcomes Achieved.

Name C. Soumya
Reg.No 2 2 2 4 1 D 2 0 0 5

Soumya

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institute under JNTUH)

I M.Tech - I Semester - Mid - II Examinations March 2023

Common to all PG Branches

Subject: GR22D5011 - Research Methodology and IPR — Date of Exam: 6.3.2023

AY: 2022-23 — Time: 15 Minutes — Marks: 10 M

08
10

Answer All the Questions (10 X 1 = 10 Marks)

Q.No	Questions	Option	CO	BL	PI
1	_____ establishes the technical report. a. Logical Conclusion b. Illogical Conclusion c. Personal prejudice d. Misplaced learning	[a]	3	1	10.1
2	Which is not basis for a technical report? _____ a. Facts b. Tests c. Personal prejudices d. Experiments	[c]	3	2	10.3.1
3	Intellectual Property Rights (IPR) protect the use of information and ideas that are of _____ a. Ethical value b.Moral value c.Social value d.Commercial value	[d]	4	1	6.2
4	The following cannot be exploited by assigning or by licensing the rights to others _____ a.Patents b.Designs c.Trademark d.All of the above	[a]	4	1	6.2
5	The following can be patented _____ a.Machine b.Process c.Composition of matter d. All of the above	[d]	4	2	6.2.1
6	Which country possesses maximum number of patents in the world ? a.USA b.Japan c.South Korea d.China	[d]	4	1	9.3
7	Which of the following is not a part of patent document? a. Abstract b. Prologue c. Claims d.Title	[b]	5	2	8.1
8	IPR Complete specification gives _____ (a) Full description of claim only (b) Full description of royalty (c) Full description of invention (d) Full description of application	[a]	5	1	8.2
9	Patent in India valid for how many _____ years a. 30 b. 20 c. 10 d.5	[b]	5	1	8.1.1
10	The _____ protects literary works, dramatic works, musical works, artistic works, cinematograph films and sound recordings. a. International Law b. Indian copyright law c. Global Trade laws d. International Labour Laws	[b]	5	2	8.2

Name K. Bharath Kumar
Reg.No 2 2 2 4 1 D 2 0 1 3

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institute under JNTUH)

I M.Tech - I Semester - Mid - II Examinations March 2023

Common to all PG Branches

Subject: GR22D5011 - Research Methodology and IPR — Date of Exam: 6.3.2023

AY: 2022-23 — Time: 15 Minutes — Marks: 10 M

10
10

Answer All the Questions (10 X 1 = 10 Marks)

Q.No	Questions	Option	CO	BL	PI
1	_____ establishes the technical report. a. Logical Conclusion b. Illogical Conclusion c. Personal prejudice d. Misplaced learning	[A]	3	1	10.1
2	Which is not basis for a technical report? _____ a. Facts b. Tests c. Personal prejudices d. Experiments	[C]	3	2	10.3.1
3	Intellectual Property Rights (IPR) protect the use of information and ideas that are of _____ a. Ethical value b.Moral value c.Social value d.Commercial value	[D]	4	1	6.2
4	The following cannot be exploited by assigning or by licensing the rights to others _____ a.Patents b.Designs c.Trademark d.All of the above	[C]	4	1	6.2
5	The following can be patented _____ a.Machine b.Process c.Composition of matter d. All of the above	[D]	4	2	6.2.1
6	Which country possesses maximum number of patents in the world ? a.USA b.Japan c.South Korea d.China	[D]	4	1	9.3
7	Which of the following is not a part of patent document? a. Abstract b. Prologue c. Claims d.Title	[B]	5	2	8.1
8	IPR Complete specification gives _____ (a) Full description of claim only (b) Full description of royalty (c) Full description of invention (d) Full description of application	[C]	5	1	8.2
9	Patent in India valid for how many _____ years a. 30 b. 20 c. 10 d.5	[B]	5	1	8.1.1
10	The _____ protects literary works, dramatic works, musical works, artistic works, cinematograph films and sound recordings. a. International Law b. Indian copyright law c. Global Trade laws d. International Labour Laws	[B]	5	2	8.2

B. Sahil

Gokaraju Rangaraju Institute of Engineering & Technology

(Autonomous College Affiliated to JNTUH) (12 Pages)

Bachupally, Kukatpally, Hyderabad - 500090

I | II **MID TERM EXAMINATION**

No. 516959 H.T. No. 2 2 2 4 1 D 2 0 1 8

Name of the Examination II MID

Course MTECH (RM AND IPR) Branch STRUCTURAL Date 06/03/2023

Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	4	-	4½	-	4½	-	4½	-	-	-	-	-	17½

18 20

START WRITING FROM HERE

1. Format of writing Research proposal

The format of writing research proposal must be planned effectively in view of brief explaination of goal, objective, result of research. following is format of research proposal.

Title

Title must provide a clear concept and clear idea of research topic in brief.

Abstract

Abstract refers to brief summary of whole research topic in about 200-350 word. Abstract must be short as possible with possibility of summarizing whole topic.

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Department of CE

I M. Tech I-Sem (Structural Engineering) AY:2022-23 I-Mid Marks: 10M

Time: 20 Minutes Date of Exam: 28-12-2022

Subject: RESEARCH METHODOLOGY AND IPR (GR22D5011)

Name: L. Lakshmi Narayana Roll Number: 22241D2019

(Answer All Questions) (10 X 1 = 10 Marks) 01/10

1.	Research is				CO1	BL2	2.1.1 [C]
	A. Searching again and again	B. Finding solution to any problem	C. Working in a scientific way to search for truth of any problem	D. None of the above			
2.	A statement of the quantitative research question should				CO1	BL2	3.1.6 [b]
	A. Extend the statement of purpose by specifying exactly the question (s the researcher will address	B. Help the research in selecting appropriate participants, research methods, measures, and materials	C. Specify the variables of interest	D. All the above			
3.	Which of the following is not the method of Research				CO1	BL3	3.1.1 [D]
	A. Survey	B. Historical	C. Observation	D. Philosophical			
4.	Concepts are ..... of Research				CO1	BL4	3.1.1 [C]
	A. Guide	B. Tools	C. Methods	D. Variables			
5.	Why do you need to review the existing literature				CO2	BL3	3.1.1 [a]
	A. To make sure you have a long list of references	B. Because without it, you could never reach the required word-count	C. To find out what is already known about your area of interest	D. To help in your general studying			
6.	What do you mean by Unit of Analysis				CO2	BL3	3.1.1 [b]
	A. Main parameter	B. Variables	C. Sample	D. Constructs			
7.	The first purpose of a survey is to				CO2	BL4	3.1.6 [b]
	A. Description	B. Evaluation	C. Pration	D. Provide Information			
8.	Second step in problem formulation is				CO2	BL2	3.1.1 [C]
	A. Statement of the problem	B. Understanding the nature of the problem	C. Survey	C. Survey			
9.	A comprehensive full Report of the research process is called				CO3	BL4	3.1.1 [b]
	A. Thesis	B. Summary Report	C. Abstract	D. Article			
10.	Final stage in the Research Process is				CO3	BL4	3.1.1 [D]
	A. Problem formulation	B. Data collection	C. Data Analysis	D. Report Writing			

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
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1.	Research is				CO1	BL2	2.1.1	[C]
	A. Searching again and again	B. Finding solution to any problem	C. Working in a scientific way to search for truth of any problem	D. None of the above				
2.	A statement of the quantitative research question should				CO1	BL2	3.1.6	[D]
	A. Extend the statement of purpose by specifying exactly the question (s the researcher will address	B. Help the research in selecting appropriate participants, research methods, measures, and materials	C. Specify the variables of interest	D. All the above				
3.	Which of the following is not the method of Research				CO1	BL3	3.1.1	[D]
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4.	Concepts are ..... of Research				CO1	BL4	3.1.3	[C]
	A. Guide	B. Tools	C. Methods	D. Variables				
5.	Why do you need to review the existing literature				CO2	BL3	3.1.1	[A]
	A. To make sure you have a long list of references	B. Because without it, you could never reach the required word-count	C. To find out what is already known about your area of interest	D. To help in your general studying				
6.	What do you mean by Unit of Analysis				CO2	BL3	3.1.1	[B]
	A. Main parameter	B. Variables	C. Sample	D. Constructs				
7.	The first purpose of a survey is to				CO2	BL4	3.1.6	[B]
	A. Description	B. Evaluation	C. Pration	D. Provide Information				
8.	Secon I step in problem formulation is				CO2	BL2	3.1.4	[C]
	A. Statement of the problem	B. Understanding the nature of the problem	C. Survey					
9.	A comprehensive full Report of the research process is called				CO3	BL4	3.1.1	[B]
	A. Thesis	B. Summary Report	C. Abstract	D. Article				
10.	Final stage in the Research Process is				CO3	BL4	3.1.4	[B]
	A. Problem formulation	B. Data collection	C. Data Analysis	D. Report Writing				