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Question Paper Code:BCSB31



# **INSTITUTE OF AERONAUTICAL ENGINEERING**

**(Autonomous)**

**Dundigal, Hyderabad - 500 043**

## **MODEL QUESTION PAPER - II**

M.TechIII Semester End Examinations (Regular), November – 2019

**Regulations: R18**

### **RESEARCH METHODOLOGY AND IPR**

(Common to CSE, ECE, ME, CE)

**Time:3hours**

**Max. Marks:70**

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

#### **UNIT – I**

1. a) What is the necessity of defining a research problem, Explain with suitable example [7M]  
b) Explain the techniques of interpretation describing both qualitative and quantitative methods. [7M]
2. a) Research is much concerned with proper fact finding, analysis and evaluation. [7M]  
Do you agree with this statement? Give reasons in support of your answer?  
b) What are the various sources of primary and secondary data?. Discuss data collection [7M]  
and data analysis in the context of research.

#### **UNIT – II**

3. a) List the techniques to prepare literature studies and explain briefly avoiding ethical issues in research. [7M]  
b) List the types of plagiarism and explain ethical standard of research [7M]
4. a) What are the approaches for literature review and why is ethics important in society and discuss in detail. [7M]  
b) What is ethics in research and why is it important? [7M]

#### **UNIT – III**

5. a) Write short notes on following [7M]  
i. Characteristics of good research report  
ii. Bibliography and its importance in context of research  
b) Mention the different types of interpretations particularly pointing out the difference of a report and the interpretation? [7M]
6. a) write the different types of reports, particularly pointing out the difference between a technical report and a popular report [7M]  
b) Write about logical analysis of the subject matter? [7M]

#### **UNIT – IV**

7. a) Write the Fundamental of Copyrights laws was formulated. [7M]  
b) Explain why agencies are responsible for Intellectual Property registration with any two examples. [7M]
8. a) Explain the practical aspects of IP audits and process of conducting audit? [7M]  
b) How monopoly nature of owner is controlled by Patent Trademark Organization? [7M]

#### **UNIT – V**

9. a) What are the new developments in IPR? [7M]  
b) Compare patent rights and IPR. [7M]
10. a) Explain new developments in the copyright protection for following: [7M]  
    a) Computerprograms  
    b) Videogames  
b) Describe the new development in patent law relating for the: [7M]  
    a) Software patents      b) Biotechnology patents.



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

## COURSE OBJECTIVES:

The course should enable the students to:

| The course should enable the students to: |   |
|---|---|
| I   | Identify an appropriate research problem in their interesting domain. |
| II  | Understand ethical issues   |
| III                                       | Understand the Preparation of a research project thesis report.       |
| IV  | Understand the law of patent and copyrights.                          |
| V   | Understand the adequate knowledge on IPR                              |

## COURSE OUTCOMES (COs):

|      |  |
|------|--|
| CO 1 | Understand the research problem and research process.                  |
| CO 2 | Understand research ethics   |
| CO 3 | Prepare a well -structured research paper and scientific presentation. |
| CO 4 | Explore on various IPR components and process of filing                |
| CO 5 | Understand the adequate knowledge on patents and rights                |

## COURSE LEARNING OUTCOMES (CLOs):

|           |  |
|-----------|--|
| BCSB31.01 | Understand the characteristics, objects of a good research problem.                |
| BCSB31.02 | Understand the selection, approaches of research problem..                         |
| BCSB31.03 | Understand concepts of data collection, analysis.                                  |
| BCSB31.04 | Understand the principles of ethics and ethical issues in science and engineering. |
| BCSB31.05 | Understand the analysis Plagiarism.  |
| BCSB31.06 | Understand research ethic concepts.  |
| BCSB31.07 | Understand significance, effective technical writing and report.                   |
| BCSB31.08 | Paper developing a research proposal and report.                                   |
| BCSB31.09 | Understand writing a research report as per format.                                |
| BCSB31.10 | Report presentation and assessment by a review committee..                         |
| BCSB31.11 | Understand the techniques of interpretation, and making scientific presentation. . |
| BCSB31.12 | Understand the patent laws, patent and searching process.                          |
| BCSB31.13 | Understand International cooperation on intellectual property                      |
| BCSB31.14 | Understand the patent laws, patent and searching process, patent data base.        |

|           |  |
|-----------|--|
| BCSB31.15 | Understand the patent rights and transfer of technology. |
| BCSB31.16 | Study of new developments in IPR.                        |

### MAPPING OF SEMESTER END EXAMINATION TO COURSE LEARNING OUTCOMES:

| SEE Question Number |   | Course Learning Outcomes |   | Course Outcomes | Blooms Taxonomy Level |
|---------------------|---|--------------------------|---|-----------------|-----------------------|
| 1                   | a | BCSB31.01                | What is the necessity of defining a research problem, Explain with suitable example   | CO 1            | Understand            |
|                     | b | BCSB31.02                | Explain the techniques of interpretation describing both qualitative and quantitative methods.  | CO1             | Understand            |
| 2                   | a | BCSB31.03                | Research is much concerned with proper fact finding, analysis and evaluation. Do you agree with this statement? Give reasons in support of your answer? | CO1             | Analyse               |
|                     | b | BCSB31.04                | What are the various sources of primary and secondary data?. Discuss data collection and data analysis in the context of research.                      | CO1             | Understand            |
| 3                   | a | BCSB31.05                | List the techniques to prepare literature studies and explain briefly avoiding ethical issues in research.  | C02             | Understand            |
|                     | b | BCSB31.06                | List the types of plagiarism and explain ethical standard of research   | CO2             | Remember              |
| 4                   | a | BCSB31.07                | What are the approaches for literature review and why is ethics important in society and discuss in detail.   | CO2             | Understand            |
|                     | b | BCSB31.08                | What is ethics in research and why is it important?   | CO2             | Understand            |
| 5                   | a | BCSB31.09                | Write short notes on following<br>i. Characteristics of good research report<br>ii. Bibliography and its importance in context of research              | C03             | Understand            |
|                     | b | BCSB31.10                | Mention the different types of interpretations particular pointing out the difference of a report and the interpretation?                               | CO3             | Understand            |
| 6                   | a | BCSB31.01                | write the different types of reports, particularly pointing out the difference between a technical report and a popular report                          | CO3             | Remember              |
|                     | b | BCSB31.02                | Write about logical analysis of the subject matter?   | CO3             | Analyze               |
| 7                   | a | BCSB31.03                | Write the Fundamental of Copyrights laws was formulated.  | CO4             | Understand            |
|                     | b | BCSB31.04                | Explain why agencies are responsible for Intellectual Property registration with any two examples.  | CO4             | Understand            |
| 8                   | a | BCSB31.05                | Explain the practical aspects of IP audits and process of conducting audit?   | CO4             | Understand            |
|                     | b | BCSB31.06                | How monopoly nature of owner is controlled by Patent Trademark Organization?  | CO4             | Understand            |
| 9                   | a | BCSB31.07                | What are the new developments in IPR?   | CO5             | Understand            |

|    |   |           |  |     |            |
|----|---|-----------|--|-----|------------|
|    | b | BCSB31.08 | Compare patent rights and IPR.   | CO5 | Understand |
| 10 | a | BCSB31.09 | Explain new developments in the copyright protection for following:<br>a) Computerprograms<br>b) Videogames      | CO5 | Understand |
|    | b | BCSB31.10 | Describe the new development in patent law relating for the:<br>a) Software patents<br>b) Biotechnology patents. | CO5 | Understand |

**Signature of Course Coordinator**

**HOD, CE**