

**RESEARCH METHODOLOGY AND IPR
(AEIE 5103)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

Candidates are required to give answer in their own words as far as practicable.

**Group - A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) The method that consists of collection of data through observation and experimentation, formulation and testing of hypothesis is called
 - (a) Empirical method
 - (b) Scientific method
 - (c) Scientific information
 - (d) Practical knowledge
 - (ii) Research through experiment and observation is called
 - (a) Clinical research
 - (b) Experimental research
 - (c) Laboratory research
 - (d) Empirical research
 - (iii) The method by which a sample is chosen
 - (a) Unit
 - (b) Design
 - (c) Random
 - (d) Census
 - (iv) The first purpose of a survey is to
 - (a) Description
 - (b) Evaluation
 - (c) Propagation
 - (d) Provide information - (v) A short summary of Technical Report is called
 - (a) Article
 - (b) Research Abstract
 - (c) Publication
 - (d) Guide
 - (vi) The first page of the research report is
 - (a) Appendix
 - (b) Bibliography
 - (c) Index
 - (d) Title Page
 - (vii) The patent owner shall own patent right for a maximum period of
 - (a) 10 years and renewed
 - (b) 15 years from the date of filing of application
 - (c) 20 years plus life of the patentee
 - (d) 20 years from the date of filing of application

- (viii) In India, the literary work is protected until
(a) Lifetime of author
(b) 25 years after the death of author
(c) 40 years after the death of author
(d) 60 years after the death of author
- (ix) Ethical norms in research do not involve guidelines for:
(a) Copyright (b) Thesis format
(c) Patenting policy (d) Data sharing policies
- (x) Which one of the following cannot be protected by Intellectual Property Rights?
(a) A composition of a song (b) A programme codes
(c) A book (d) A piece of land

Group- B

2. (a) Why tabulation is considered essential in a research study?
[(CO1) (Remember/LOCQ)]
(b) What are the differences between questionnaire and schedule?
[(CO1) (Understand/LOCQ)]
(c) Define median, skewness and kurtosis. [(CO2)(Understand/LOCQ)]
2 + 4 + 6 = 12
3. (a) Distinguish between Research methods and Research methodology.
[(CO1) (Remember/LOCQ)]
(b) What is a hypothesis? [(CO2) (Remember/LOCQ)]
(c) What are null hypothesis and alternative hypothesis?
[(CO2) (Remember/LOCQ)]
(d) A sample of 500 male students is found to have a mean height 67.27 inches. Can it be reasonably regarded as a sample from a large population with mean height 67.18 inches and standard deviation 1.24 inches? Test at 5% level of significance.
[(CO2) (Evaluate/HOCQ)]
2 + 2 + 4 + 4 = 12

Group - C

4. (a) The research work to be completed needs to be recorded appropriately so that it can be presented to the readers in an effective manner. Discuss various aspects considered in writing a research report. [(CO3) (Analyze/IOCQ)]
(b) What is plagiarism? [(CO3) (Remember/LOCQ)]
(c) What could be the consequences if a researcher is caught for plagiarism?
[(CO3)(Understand/LOCQ)]
6 + 2 + 4 = 12
5. (a) Define the term 'Review of literature'. Enumerate the objectives of review of literature. [(CO3) (Understand/LOCQ)]

- (b) Mention some means of ethical misconduct. List the precautions that can be taken to avoid plagiarism in research. [(CO3) (Understand/LOCQ)]

6 + 6 = 12

Group - D

6. (a) What is intellectual property? [(CO4) (Remember/LOCQ)]
(b) Explain the importance of patent. [(CO4) (Understand/LOCQ)]
(c) What are points, one should consider while adopting a Trademark? [(CO4)(Analyze/IOCQ)]

4 + 4 + 4 = 12

7. (a) Distinguish between Trade mark and property mark. [(CO4) (Understand/LOCQ)]
(b) What is infringement? [(CO4) (Understand/LOCQ)]
(c) What remedies are available to the owner of the mark in the case of infringement of his trademark? [(CO4)(Analyze/IOCQ)]
(d) What is well-known trademark? Explain. [(CO4)(Analyze/IOCQ)]

3 + 2 + 3 + 4 = 12

Group - E

8. (a) What are the exclusive rights of a performer under the Copyright Act? [(CO4) (Understand/LOCQ)]
(b) What is copyright infringement and what are its consequences? [(CO4)(Understand/LOCQ)]
(c) Discuss the conditions that must be met in order for an invention to be patented. [(CO4) (Understand/LOCQ)]
(d) Mention few grounds for revocation of a patent. [(CO4) (Understand/LOCQ)]

3 + 3 + 3 + 3 = 12

9. (a) Write a short note on Foreign filing of patent application? [(CO4) (Understand/LOCQ)]
(b) Explain the role of intellectual property in boosting competitiveness? [(CO4) (Analyze/IOCQ)]
(c) *“Over the past two decades around, intellectual property rights have grown to a stature from where it plays a major role in the development of global economy.”* In the light of this statement, write down a brief note on the recent development taken place in the regulatory regime of Intellectual Property in India. [(CO4)(Evaluate/HOCQ)]

4 + 4 + 4 = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	69.79%	21.88%	8.33%

Course Outcome (CO):

After the completion of the course students will be able to

1. Understand research problem formulation and its solution approaches.
2. Analyze research related information.
3. Learn how to write report and research proposal following research ethics.
4. Judge importance of intellectual property and patent rights and learn the process of obtaining them

*LOCQ: Lower Order Cognitive Question; IOCQ: Intermediate Order Cognitive Question;
HOCQ: Higher Order Cognitive Question

Department & Section	Submission Link
AEIE	https://classroom.google.com/u/1/w/NDA1NjU5MzUxNzM4/tc/NDc1MDA5NjI4NTY2