

**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 main purpose of research in education is to _____
(a) help in the personal growth of an individual
(b) help the candidate become an eminent educationist
(c) increase job prospects of an individual
(d) increase social status of an individual
- (ii) A research paper is a brief report of research work based on
(a) primary data only
(b) secondary data only
(c) both primary and secondary data
(d) none of the above.
- (iii) _____ is a preferred sampling method for a population with finite size.
(a) Systematic sampling
(b) Purposive sampling
(c) Cluster sampling
(d) Area sampling.
- (iv) In which sample, population is divided into different strata and sample is taken from different strata?
(a) Quota Sampling
(b) Snow ball sampling
(c) Stratified sampling
(d) Purposive Sampling.
- (v) A Research Report is a formal statement of _____
(a) research process
(b) research problem
(c) data collection
(d) data editing.
- (vi) The term 'Intellectual Property Rights' covers
(a) Copyrights
(b) Design
(c) Trademark
(d) All of the above.
- (vii) Which of the following cannot be protected by copyrights?
(a) A book
(b) A sound recording
(c) A sculpture
(d) An invention.

- (viii) Musical work is protected by
(a) industrial design (b) trademark
(c) copyrights (d) patent.
- (ix) Which of these is a geographical indication?
(a) World wide web (b) BMW
(c) Play station (d) Darjeeling tea.
- (x) ISO 9000 is an example of
(a) Copyright (b) Patent
(c) Certification mark (d) Design.

Group - B

2. (a) What are the motivations of research?
(b) Describe significance of Research.
(c) Describe importance of knowing how research is done.
 $4 + 4 + 4 = 12$
3. (a) What are the different ways of data collection in a research problem?
(b) What does a measure of central tendency indicate? Describe the important measures of central tendency pointing out the situation when one measure is considered relatively appropriate in comparison to other measures.
 $6 + (2 + 4) = 12$

Group - C

4. (a) Explain the meaning of Student's t distribution.
(b) Distinguish between confidence level and significance level.
(c) From a random sample of 36 New Delhi civil service personnel, the mean age and the sample standard deviation were found to be 40 years and 4.5 years respectively. Construct a 95 per cent confidence interval for the mean age of civil servants in New Delhi.
 $4 + 3 + 5 = 12$
5. (a) Describe layout of the research report.
(b) What are the different types of report? Explain in brief.
 $6 + 6 = 12$

Group - D

6. (a) What do you mean by intellectual property (IP)?
(b) Define intellectual property right (IPR). What is the importance of IPR?

(c) What are the different forms of IPR?

3 + (3 + 2) + 4 = 12

7. Write short notes on (*any two*)

(6 × 2) = 12

(i) Trademark

(ii) Industrial Designs

(iii) Semiconductor integrated circuit layout design.

Group - E

8. (a) What do you mean by patent? Briefly describe the process of filling patent application.

(b) Why patent is important for industrial product?

(4 + 4) + 4 = 12

9. (a) Describe PCT application procedure.

(b) With suitable example describe geographical indication?

6 + 6 = 12

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