

Question Paper Code : 90254

M.C.A. DEGREE EXAMINATIONS, APRIL/MAY 2022.

First Semester

RM 4151 – RESEARCH METHODOLOGY AND IPR

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. List the steps involved in Data mining process.
2. Bring out the difference between Quantitative and Qualitative research in data handling.
3. What is the nature of measurements in research?
4. List the phases to instrumental designing of questionnaire for data collections.
5. Define null hypothesis.
6. Differentiate between parametric and non-parametric tests.
7. Name any two areas covered by intellectual property.
8. What does PCT stand for? What are their roles?
9. List the different types of patent application.
10. Give some of the reasons why a patent might be revoked.

PART B — ($5 \times 13 = 65$ marks)

11. (a) With a neat diagram outline the steps in research process and design.

Or

- (b) With a neat diagram, explain how secondary data is integrated into the research process.

12. (a) Explain in detail the characteristics of a good measurement.

Or

- (b) Discuss in detail the working of Exploratory Data Analysis (EDA).

13. (a) Differentiate between Type I and Type II errors in hypothesis testing.

Or

- (b) Explain with diagrams the different types of graphs for graphical presentation of written reports.

14. (a) Explain the role of World Intellectual Property Organization (WIPO).

Or

- (b) What are Trademarks? How do they help in protecting intellectual property?

15. (a) Elaborate on the process involved in e-filing patent.

Or

- (b) Explain in detail the salient features of Patent Act 1970.

PART C — ($1 \times 15 = 15$ marks)

16. (a) XXX is a hotel with tourist as their predominant customers. The hotel plans to conduct a self-administered survey to its customers to develop their business.

Device a survey questionnaire and discuss the characteristics to be covered in the survey for covering all aspects of business.

Or

- (b) Assume a survey of student interest in the Metro University Dining Club is taken. We have interviewed 200 students and learned of their intentions to join the club. We would like to analyze the results by living arrangement (type and location of student housing and eating arrangements). The 200 responses are classified into the four categories shown in the accompanying table. Do these variations indicate there is a significant difference among these students, or are they sampling variations only? Analyse! (Critical values of $\chi^2 = 7.82$ for $\alpha = 0.05$ and degrees of freedom(d.f) is 3).

Living Arrangement	O Intend to join	Number Interviewed	Percent (no.interviewed/200)	E Expected Frequencies (percent \times 60)
Dorm/fraternity	16	90	45	27
Apartment/rooming House,nearby	13	40	20	12
Apartment/rooming house,distant	16	40	20	12
Live at home	15	30	15	9
Total	60	200	100	60