

G. S. Mandal's
 Maharashtra Institute of Technology, Aurangabad
 (An Autonomous Institute)
 MAKE-UP EXAMINATION
First Year M.Tech(ALL) -April/May 2022

Course Code : MTM101

Course Name : Research Method. & IPR

Duration : 2 Hrs

Max. Marks : 50

Date : 05/05/2022

Instructions :

- i) All questions are compulsory
- ii) Assume suitable data wherever necessary and clearly state it
- iii) Figures to the right indicate full marks

Q. 1	Solve/Answer any five (Marks: 10)			
	Questions	Marks	CO	BL
a)	State the objectives of research?	2	CO1	1
b)	Enumerate the four advantages of sampling technique.	2	CO1	1
c)	Enlist the types of research.	2	CO1	1
d)	Define the terms: Correlation analysis and multivariate analysis.	2	CO1	1
e)	Write the conditions for applications of chi square test.	2	CO1	1
f)	Why is an intellectual property right important?	2	CO1	1
OR				
Q. 2	Describe the technique involved in defining a research problem.	8	CO2	2
Q. 3	Explain the steps involved in sample design.	8	CO3	2
Q. 4	Analyze the concept in the context of testing of research hypothesis.	8	CO5	4
Q. 5	Illustrate the procedure for Patent Registration in India.	8	CO4	3
OR				
Q. 5 a)	Discuss the steps required for preparing research report.	5	CO4	3
Q. 5 b)	For a distribution Karl Pearson's coefficient of	3	CO4	3

	skewness is 0.64, standard deviation is 13 and mean is 59.2 Calculate modes, median.			
Q. 6 a)	A population is divided into three strata so that $N_1 = 5000$, $N_2 = 2000$ and $N_3 = 3000$. Respective standard deviations are: $\sigma_1 = 15$, $\sigma_2 = 18$ and $\sigma_3 = 5$. How should a sample of size $n = 84$ be allocated to the three strata, if we want optimum allocation Using disproportionate sampling design?	4	CO4	3
Q. 6 b)	Research is much concerned with proper fact finding, analysis and evaluation.” Do you agree with this statement? Justify the reasons in support of your answer.	4	CO6	5
OR				
Q. 6 a)	Illustrate the different tools associated with the Intellectual Property Rights.	4	CO4	3
Q. 6 b)	A sample of 400 male students is found to have a mean height 67.47 inches. Can it be reasonably regarded as a sample from a large population with mean height 67.39 inches and standard deviation 1.30 inches? Test at 5% level of significance.	4	CO6	5