

**MASTER OF LIBRARY & INFORMATION SCIENCE  
EXAMINATION, 2018**

(2nd Semester)

**Quantitative Techniques**

**Paper - ML - 06**

Time : Two hours

Full Marks : 40

Answer *all* questions.

- 1A. (a) Illustrate with an example how do you convert a Normal distribution into a Standard Normal distribution. 4
- (b) Differentiate between Standard deviation and Standard error of mean. 3
- (c) Calculate Inter Quartile Range and Quartile deviation from the following data

Roll No.	1	2	3	4	5	6	7	8	9	10	11
Marks	42	28	33	45	54	48	25	60	37	51	57

8

**OR**

- 1B. (a) Why is statistical testing needed ? 2
- (b) Mention the pre-requisites for applying 1-test, z-test and  $x^2$ -test. 6
- (c) The following data were collected in the course of an investigation among college/university teachers in a certain State, based on a random sample of 200 teachers :

(Turn Over)

( 2 )

( 3 )

Field Attitude to Society	Arts And Social Sciences	Science, Engineering, Medicine etc.	Total
Passive	109	51	160
Responsive	23	17	40
Total	132	68	200

Analyse the data to see if field of interest and attitude to society are associated. Given  $\chi^2$  table at 5% and 1% significance levels for (df=1) are 3.841 and 6.635. 7

3. Write short notes on (any *two*) of the following : 5x2

- (a) Degrees of freedom
- (b) Link structure in Web publications
- (c) Zipf's law
- (d) Sampling techniques

— X —

- 2A. (a) Define Work study 3
- (b) How can it be correlated with Time and Motion study ? 2
- (c) What is the need of doing Work study ? 2
- (d) Discuss the role of Management and Supervisor in successful implementation of Work study. 8

**OR**

- 2B. (a) What is meant by h-index ? Illustrate with an example. 6
- (b) What are its advantages and drawbacks ? 4
- (c) Discuss how g-index can be a better measure in this regard. 5