

**M.C.A. SEM - III (CHOICE BASED CREDIT SYSTEM 2011 &
2012 COURSE) : SUMMER - 2018**
SUBJECT : EMPIRICAL METHODS FOR RESEARCHING INFORMATION SYSTEMS

Day : **Saturday** **S-2018-1795**
Date : **05/05/2018**

Time : **02.00 PM TO 05.00 PM**
Max. Marks : 100

N.B.

- 1) Attempt any **FOUR** questions out of **SIX** in Section – I and any **TWO** questions out of **THREE** in Section – II .
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Use of non-programmable **CALCULATOR** is allowed.

SECTION – I

- Q.1** What are the different computing disciplines where we can carry research? Explain the nature of each discipline. **(15)**
- Q.2** Explain design and creation of research strategy for researching information systems. **(15)**
- Q.3** What are the different data gathering methods? Explain one of the methods in detail. **(15)**
- Q.4** What is a statistical hypothesis? Explain different types of hypothesis with one example each. **(15)**
- Q.5** Differentiate between quantitative and qualitative data with respect to their analysis. **(15)**
- Q.6** Write short notes on **ANY THREE:** **(15)**
- a) Ethnography
 - b) Bivariate and multivariate frequency distribution
 - c) Type I and Type II errors
 - d) Research process model

SECTION – II

- Q.7 a)** Find mean deviation and standard deviation from the following data: **(10)**

No. of viruses found	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
No. of PCS	2	14	27	13	8	6	4	2

- b)** In a software development competition, two judges A and B were invited to find the rankers on the basis of the performance and the marks obtained thereon. The two judges have evaluated 8 groups and gave the following marks. **(10)**

Group No.	1	2	3	4	5	6	7	8
Marks given by Judge A	78	42	39	46	76	82	32	48
Marks given by Judge B	69	49	48	49	62	64	64	39

Check whether the participants were fairly judged or not on the basis of rank correlation coefficient.

P.T.O.

- Q.8 A)** Find the mean, median and modal turnover from the following data (10)
related with sales achieved by 60 software companies.

Turnover in Rs Lacs	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No. of Software Companies	7	13	5	15	12	6	3	1

- b)** Following equations are associated with the software projects to be developed (X) and software projects actually developed(Y) (10)
 $3X + 4Y = 550$
 $2X - Y = 110$
Estimate :
- i)** mean number of projects to be developed.
 - ii)** mean number of projects actually developed.
 - iii)** coefficient of correlation between the mean number of projects to be developed and mean number of projects actually developed.
- Q.9 a)** What do you mean by ANOVA? Explain it in detail. (10)
- b)** Prepare a questionnaire for collecting data on performance of Android based smart phones by considering various performance parameters that you consider while buying a Smart Phone. (10)

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