No. of Printed Pages : 3

BCS-040

05059

BACHELOR OF COMPUTER APPLICATION (BCA-REVISED)

Term-End Examination

June, 2014

BCS-040 : STATISTICAL TECHNIQUES

Time : 2 hours *Maximum Marks : 50*

Note : *(i)* *Attempt both **Sections i.e. Section A** and **Section B.***

(ii) *Attempt **any four** questions from **Section A.***

(iii) *Attempt **any three** questions from **Section B.***

(iv) *Use of **Non-scientific** calculator is **allowed.***

SECTION - A

1. With the help of an suitable example, describe the term "Probability Distribution". How the Binomial Distribution differs from the Poissons Distribution ? 5

2. Suppose A and B are two independent events, associated with an random experiment. If the probability of occurrence of either A or B equals 0.6 ; while probability that only A occurs equals 0.4, then determine the probability of occurrence of event B. 5

3. A sample of size $n = 50$, is drawn from the population of 200 observations. If standard deviation of the data is 22, then find the standard error ? 5

4. Construct Model ANOVA table for one-way classification. 5

5. Write short notes on **(any two)** : 5
   (a) t - test for Mean
   (b) F - test for equality of two variances
   (c) Chi-square - test for independence of Attributes.

SECTION - B

6. Using the regression line $\hat{Y} = 90 + 50\,X$, fill up the values in the table below : **10**

Sample No. (i)	12	21	15	1	24
x_i	0.96	1.28	1.65	1.84	2.35
y_i	138	160	178	190	210
$\hat{y}_i$	138	-	-	-	-
e_i	0	-	-	-	-

After filling the table, compute the parameters R and R^2, finally interpret the correlation between X and Y.

7. What do you understand by the term forecasting ? With the help of a suitable example discuss the relation between forecasting and future planning. Briefly discuss both forecasting model. **10**

8. Differentiate between following **(any two)** : **10**
   (a) Linear and circular systematic sampling
   (b) Z-test and t-test
   (c) Correlation and Regression

9. (a) Compare and contrast Random Sampling with Non-Random Sampling. Briefly discuss the methods involved in the selection of any simple random sample. 5

(b) Calculate an estimate of Median for following data. 5

Class	0-24.9	25-49.9	50-74.9	75-99.9	100-124.9	125-149.9
Frequency	6	11	14	16	13	10