

E 2582

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Reg. No.....

Name.....

B.B.A. DEGREE (C.B.C.S.S.) EXAMINATION, MAY 2016

Second Semester

Complementary Course—STATISTICS FOR RESEARCH

(2013 Admission onwards)

Time : Three Hours

Maximum Marks : 80

Part A

*Answer all questions.
1 mark each.*

1. Random experiment.
2. Equally likely events.
3. Stratified sampling.
4. Contingency table.
5. Simple random sampling.
6. Standard error.
7. Level of significance.
8. ANOVA.
9. Census survey.
10. Secondary data.

(10 × 1 = 10)

Part B

*Answer any eight questions.
2 marks each.*

11. Explain conditional probability.
12. Two coins are tossed once. Find a sample space.
13. What is level of significance ?
14. Explain non-probability sampling.
15. Explain the uses of F-test.
16. Distinguish between population and sample.

Turn over

17. Explain the term critical region.
18. What are the conditions for using t -test ?
19. Differentiate between proportional and disproportional sampling.
20. Explain multi-stage sampling.
21. What do you mean by estimation ?
22. State central limit theorem.

(8 × 2 = 16)

Part C

Answer any **six** questions.
4 marks each.

23. What is the difference between census and sampling methods of data collection ? What are their merits and demerits ?
24. Explain the essential qualities of a good sample.
25. What is probability and what are the different approaches to probability ?
26. Explain briefly the procedure followed in testing a hypothesis.
27. Discuss the advantages of probability sampling over non-probability sampling.
28. What do you mean by estimation ? Explain the properties of an estimation.
29. A bag contains 10 red pens, 20 blue pens and 30 green pens. If 5 pens are drawn from the box, what is probability that.
 - (i) All will be red.
 - (ii) At least one will be green ?
30. What is a significance level ? How does a researcher choose a significance level ?
31. After a bumper crop, a mushroom grower hypothesises that mushrooms will remain at the average wholesale price of Rs. 250 per kg. State null hypothesis and alternative hypothesis.

(6 × 4 = 24)

Part D

*Answer any two questions.
15 marks each.*

32. (a) What is the significance of probability in decision-making ?
- (b) The probability that a husband and wife will be alive 20 years from now are given by 0.8 and 0.9 respectively. Find the probability that in twenty years :
- (i) Both.
 - (ii) Neither and
 - (iii) At least one will be alive.

33. From the following data test whether both gender have equal brand awareness :

	Male	Female
Award	158	42
Unaward	134	64
Total	292	106

34. Explain the meaning of analysis of variance. What are the basic assumptions of the analysis of variance ? State the uses of analysis of variance in business decision-making.
35. Explain the following terms :
- (a) Goodness of fit.
 - (b) Statistical inference.
 - (c) *t*-test.

(2 × 15 = 30)