15U229 (Pages: 3) Name.....

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, JUNE 2016

(CUCBCSS – UG)

(Complementary Course: Statistics)

CC15U PSY2 C02 – Psychological Statistics

(2015 Admission)

Time: Three Hours Maximum: 80 Marks

Part A

Answer all questions (Each question carries 1 mark)

1. An outcome of a random experiment is called

   a) Event b) Sample space c) Sample d) None of these

2. Rank correlation Coefficient was discovered by

   a) Charles Spearman b) Karl Pearson

   c) R.A.Fisher d) Francis Galton

3. When P (AUB) = P (A) + P (B), then A and B are.....

   a) Dependent b) Independent c) Mutually exclusive d) None of these

4. Two events A and B are independent then Probability of A and B are given by

   a) P (A and B) = P (A) +P (B) b) P (A and B) =P (A) P (B)

   c) P (A and B) = P (A) - P (B) d) None of the above

5. Geometric mean of regression coefficients will be.....

   a) Coefficient of correlation b) Coefficient of determination

   c) Coefficient of variation d) None of these

6. The distribution function F(x) lies between .....

7. Coefficient of correlation lies between .....

8. If r =0.9, coefficient of determination is .....

9. Study of correlation between two sets of data only is called.....

10. When a die is thrown, ... is the probability of getting a 5.

(10 ×1 = 10 marks)

Part B

Write short notes on all questions (Each question carries 2 marks)

11. Define scatter diagram

12. What is sample space?

13. What is a random experiment?

14. What is mutually exclusive events?

15. Define correlation?

16. Define Axiomatic definition of probability.

17. Define independent event.

18. State the addition theorem of probability.

19. If P(A) = 0.6, P(B) = 0.3, and P(AnB) = 0.2 then find out P(AuB)?

20. What is multiple correlation?

(10 ×2 = 20 marks)

Part C

Answer any six questions. (Each question carries 5 marks)

21. Assuming that a card is drawn from a well shuffled pack of cards, what is the probability that it is a heart or a king.

22. Prove that mutual independence implies pairwise independence.

23. What is the difference between discrete random variable and continuous random variable.

24. Discuss the uses of correlation.

25. Explain the addition theorem when the events are mutually exclusive.

26. Distinguish between partial correlation and multiple correlation.

27. Examine various types of correlation.

28. If N = 10 and $\Sigma d^2 = 92$ compute the value of the rank correlation coefficient.

(6 ×5 = 30 marks)

Part D

Answer any two questions. (Each question carries 10 marks)

29. The probability that A solve a problem in Mathematics is 3/5 and the probability that B solve the problem is ½. If they try independently find the probability that:

    a) Both solve the problem.
    b) At least one solves the problem.

30. From the following information obtain two regression equations and coefficient of correlation.

X :	5	7	8	9	6
Y :	2	3	6	5	4

31. Find the rank correlation coefficient for the following data:

Individuals :	A	B	C	D	E	F	G	H
Mark in Maths :	30	40	50	20	10	45	22	18
Mark in Statistics:	55	75	60	12	11	38	25	15

32. Give an account of the applications of statistics in Psychology.

(2 ×10 = 20 marks)

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