

E 1877

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Reg. No.....

Name.....

B.A. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2021

Sixth Semester

Economics (Model I)

Core Course—QUANTITATIVE ECONOMICS

(2013—2016 Admissions)

Time : Three Hours

Maximum Marks : 80

Part A

*Answer **all** questions.*

Each question carries 1 mark.

1. Harmonic Mean.
2. Random experiment.
3. Range.
4. Correlation.
5. Skewness.
6. Probability.
7. Derivative.
8. Quartile Deviation.
9. Sample Space.
10. Mean Deviation.

(10 × 1 = 10)

Part B

*Answer any **eight** questions.*

Each question carries 2 marks.

11. What are the merits of Arithmetic Mean ?
12. What is Mode ?
13. What is Quartile Deviation ?

Turn over

14. What is a Lorenz Curve ?
15. Given total cost, $TC = 4Q^2 + 10Q + 17$, find out the marginal cost.
16. What are the different types of skewness ?
17. Find marginal revenue if total revenue is $123Q - 17Q^2$.
18. What are the limitations of Median ?
19. What are the desirable properties of a statistical average ?
20. What is an Event ?
21. What is a Weighted Mean ?

(8 × 2 = 16)

Part C

*Answer any **six** questions.*

Each question carries 4 marks.

22. When a coin is tossed twice, what is the probability of getting two consecutive tails ?
23. What is a scatter diagram ? What are its uses ?
24. What are the merits of Harmonic Mean ?
25. Differentiate the function, $t = \frac{10x^4}{17x^2 + 7x - 3}$.
26. A bag contains 20 Red and 24 Pink balls. One ball is drawn. What is the probability that it is Red ?
27. Differentiate using chain rule, $y = (118x - 10)^3$.
28. Distinguish between Correlation and Regression.
29. Maximise the total profit, given total revenue, $TR = 2100Q - 8Q^2$ and total cost, $TC = 1400 + 70Q$
30. If a random variable X with binomial distribution has $n = 17$ and p (success) = 0.6, find the mean of X.

31. Five students obtained following marks in statistics :

17 30 22 33 16

Find out range and co-efficient of variation.

(6 × 4 = 24)

Part D

*Answer any **two** questions.*

Each question carries 15 marks.

32. Compare and contrast Binomial and Normal distributions.
33. Calculate Karl Pearson's co-efficient of correlation between hours of training and score :

Hours of Training	:	10	15	20	25	30	35	40	45	50
Score	:	24	36	45	58	66	60	57	70	75

34. Discuss the uses of derivatives in Economics.
35. A pack contains 4 blue, 2 red and 3 black pens. If 3 pens are drawn at random from the pack, without replacing, What is the probability of drawing 2 blue pens and 1 black pen ?

(2 × 15 = 30)