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Reg. No.....

Name.....

M.A. (H.R.M.)/M.H.R.M. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

CC05—APPLICATIONS OF QUANTITATIVE TECHNIQUES IN BUSINESS

(2024 Admissions—Regular/2023 Admissions—Improvement/Supplementary/2020-2022 Admissions—Supplementary/2019 Admissions—First Mercy Chance/2018 Admissions—Second Mercy Chance)

Time : Three Hours Maximum Marks : 60

Section A

Answer any **five** *questions.*

Each question carries 3 *marks.*

1. What is meant by interval ?
2. Definition of nominal.
3. What is meant by Discrete ?
4. Define the Poisson.
5. What is the Scope of Queuing Theory ?
6. Write short notes on ANOVA Analysis.
7. Write types of Network Models.

(5 × 3 = 15)

Section B

Answer any **three** *questions.*

Each question carries 10 *marks.*

8. Explain the Baye's Theorem.
9. Examine the scales of measurements.
10. Describe the determination of critical path.

Turn over

11. Analysis the M/M/I Model.

12. From the following obtain two regression equations :

Sales (in 000)	:	91	53	45	76	89	95	80	65
Advertisement expenses	:	15	8	7	12	17	25	20	13

Estimate the advertisement expenses for the sale of Rs. 1,20,000 ?

(3 × 10 = 30)

Section C

Answer any **one** *question.*

The question carries 15 *marks.*

13. Explain the application of OR techniques in modern managerial decision-making.

14. (a) A random variable X has the following probability distribution.

X	:	0	1	2	3	4	5	6	7	8
P (x)	:	a	$3a$	$5a$	$7a$	$9a$	$11a$	$13a$	$15a$	$17a$

(i) Determine the value of a.

(ii) Find P ($x < 3$), P ($x > 3$), P ($0 < x < 5$).

(iii) What is the smallest value of x for which P ($X \leq x$) > 0.5 ?

(b) X is a normal variable with mean 30 and standards deviation 5. Find the probabilities for the following.

(i) $26 \leq x \leq 40$.

(ii) $x \geq 45$ and

(iii) $|x - 30| > 5$.

(1 × 15 = 15)