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Register Number :

7121

Name of the Candidate :

M.B.A. (GLOBAL) DEGREE EXAMINATION MAY 2014.

(FIRST YEAR)

150 — QUANTITATIVE TECHNIQUES

Time : Three hours

Maximum : 75 marks

SECTION A

Answer any FIVE questions.

(5 × 3 = 15)

1. Define statistics.
2. What is primary data?
3. State bayes theorem.
4. What is zero correlation?
5. What is sampling error?
6. What is a hypothesis?
7. What is operations research?
8. What is a travelling salesman problem?
9. What is nominal scale?
10. What is probability?

SECTION B

Answer any THREE questions.

(3 × 10 = 30)

11. Discuss the scope of operations research.
12. Explain the applications of statistics.
13. (a) The mean and variance of a binomial variate X with parameter n and p are 32 and 16. Find
 - (i) $p(x = 0)$
 - (ii) $p(x = 2)$
 - (iii) $p(x \geq 2)$
- (b) For a binomial distribution the mean is f and standard deviation is $\sqrt{3}$. Write out all the terms of the distribution.

14. Calculate the rank correlation for the data given below.

Rank for X	1	2	3	4	5	6	7	8	9	10
Rank for Y	3	1	4	2	6	9	8	10	5	7

15. The following grades were given to a class of 100 students.

Grade	A	B	C	D	E
Frequency	18	14	32	16	20

Test the hypothesis at 0.05 level, that the distribution of grades is uniform.

SECTION C

Answer any TWO questions.

(2 × 15 = 30)

16. Solve the L.P.P by using simplex method.

Maximize $Z = 3x + 4y$

Subject to $2x + 3y \leq 6$

$6x + 4y \leq 24$

$x, y, \geq 0$.

17. Find the initial transportation cost using northwest corner rule, VAM and least cost method for the data given below.

	Destination				
Source	A	B	C	D	Supply
1	4	2	3	5	50
2	3	4	6	8	30
3	8	5	4	2	40
Demand	35	25	30	30	

18. Solve the assignment problem

		Machine			
		I	II	III	IV
Operators	A	4	5	7	8
	B	3	2	4	5
	C	1	2	4	7
	D	6	4	2	3