



SU-7623

Seat No. _____

M. C. A. (Sem. II) Examination

May / June - 2006

204 : Computer Oriented Numerical and Statistical Method

Time : 3 Hours]

[Total Marks : 75

- 1 Attempt any four of the following: [20]
- (1) Write a C program to find out the value of y at given point x using Lagrange's interpolation formula
 - (2) Write a C program to find out the value of y for the given ordinary differential equation correct upto 3 decimal places using Euler's Modified method.
 - (3) Write a C program to find and print the value of the given integration using Trapezoidal and Simpson's 1/3 rule.
 - (4) Write a C program to find and print the in place transpose of the given square matrix.
 - (5) Write a C program to find the root of the given transcendental equation using false position method correct up to 3 decimal places.

[20]

- 2 Attempt any four of the following:
- (1) Explain Gauss Elimination method and solve the following example using the same method
 $6x-y=3; -x+6y-z=4; -y+6z=3$
 - (2) What is interpolation? Explain the forward difference and forward difference table.
 - (3) What is non linear equation? Find the formula for Newton Raphson method.
 - (4) Find the value of y at given point x=1 using Euler's method for the following: take h=0.2 and y(0)=4
 $y' = 3x^2+y$
 - (5) Find the value of y at given point x=1925 using the Newton's backward difference interpolation formula

X	1891	1901	1911	1921	1931
Y	46	66	81	93	101

[5]

- 3 Write a program for the Horner method.

[20]

- 4 Attempt any four of the following:
- (1) Write a programmed to find the arithmetic mean for the simple series.
 - (2) Explain the property of correlation of coefficient.
 - (3) Find the rank of Karl Person formula from the following data

X	15	20	28	12	40	60	20	80
Y	40	30	50	30	20	10	30	60

- (4) The odds that a book on statistic will be favorable received by 3 independent critics are 3 to 2 ,4 to 3 and 2 to 3 respectively what is the probability the of 3 received
- (i) all will favorable
 - (ii) Exactly one review will favorable
- (5) Obtain correlation coefficient between the x and y .

X	38	42	34	46	30	22	14	18	26	10
Y	64	66	62	68	60	56	52	54	58	50

[10]

- 5 Obtain mean deviation and quartile deviations following distribution and Write C program to find the Mean deviations

X	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Y	8	14	18	25	15	14	6

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