

## University of Sargodha

## M.A/M.Sc Part- II/Composite, 2<sup>nd</sup>-A/2011

Math: IV-VI-(II)/IX-XI(II)

**Computer Applications** 

Maximum Marks: 60

Time Allowed: 2:15 Hours

## Subjective Part

Note:

Attempt any three questions. All questions carry equal marks.

	questions. An questions carry equal marks.	
	Q No 3: (a) Draw a flow short to 5	
, val	Q No 3: (a) Draw a flow chart to find a factorial of a number	(05)
	to find area of a triangle of sides a h c	
( )	write a computer program to solve a system of equations using Jacob	ni'e mothed
	-7 124	y s memod
	3x + 2y - z = 8	
	-X + 3y + 5z = 0	(10)
_	Q No.4: (a) Write a program in FORTRAN 90 to evaluate $\int_{-1}^{-1} \frac{1}{(1+x^2)} dx$ ,	by using
	Simpson's rule. $(1+x^2)$	
1.	(b) Write a FORTRAN programme to find a	(10)
	(b) Write a FORTRAN programme to find the determinant of a matrix?	(05)
	(c) Write a flow chart to se if a number 'n' is negative, positive or zero	(05)
$\left\langle \left\langle \epsilon \right\rangle \right\rangle$	Q No.5: (a) Write a program in FORTRAN 90 to find the real roots of $f(x) = 2x^3$ .	(00)
$+\nabla$	$\int (\lambda) - 2x + x - 3$	
	By using method of false position.	•
	(b) Write a programme in FORTRAN to find the inverse of a matrix.	(10)
	Q No.6: (a) Write a program in 'FORTRAN OO.	(10)
	Q No.6: (a) Write a program in 'FORTRAN 90' to find the positive real room.	ots of the
(101)	equation $e^{3x} + \frac{x}{3} - 5 = 0$ , By using Newton Raphson method, correct up t decimal places.	o 2
		(10)
4	(b) Write a FORTRAN programme to find the Area and Circumference of C Q No.7: (a) Write a computer program in FORTRAN	ircle (10)
	FURTRAN 90' to galve ODE	McIe. (10)
	$y' = (1 + y^2)x$ , $y(0) = 1$ by taking $h = 0.2$ using R K method of order four.	:
	(b) Write a programme to arrange an Array in descending order.	(10)
	(c) Construct an algorithm to G. L.	(05)
	(c) Construct an algorithm to find the root of the Quadratic equation.	(05)
	$\cdot$	(00)
	Available at	
	www.mathcity.org	