Enrollment No: Exam Seat No:									
		C.U.SHAH	UNIVERSITY						
		Summer Ex	xamination-2018						
Subject	t Name : (Computer Oriented Numeric	al Methods						
Subject Code: 4CS02BCO2			Branch: B.C.A.						
Semest	er : 2	Date: 25/04/2018	Time: 10:30 To 01:30	Marks: 70					
(2) (3)	Use of Pr Instructio Draw nea	_	ny other electronic instrument is p book are strictly to be obeyed. ecessary) at right places.	rohibited.					
	Attemp	ot the following questions:							
a) b) c) d)	Enlist Iterative Methods. Newton backward Interpolation Formula is used mainly to interpolate the values of function f(X) near the middle of tabular value. State True or False Putting n=1 in the Newton -Cote's quadrature formula following rule is Obtained (a) Simpson's rule (b) Trapezoidal rule (c) Simpson's 3/8rule (d) none of these								
e) f)	A graph is a collection of (a) Row and columns (b) Vertices and edges (c) Equations (d) none of these A tree with n vertices has edges. (a) n (b) n + 1 (c) n -2 (d) n -1								
	g) What is liner equation?								
n) i)	 h) What is non-linear equation? i) The order of convergence in Bisection method is (a) linear (b) quadratic (c) zero (d) none of these 								
j)	The ord	ler of convergence in Newto) 3 (c) 0 (d) none of these							
k)	A partia	al order relation itive, reflexive and	(c) antireflexive (d) asymmetric						
	(a) anti	symmetric (b) bisymmetric	(e) undirection ve (a) asymmetric						
l) m	Write th	he formula for Netwons' Fo	rward Interpolation Method. ckward Interpolation Method.						

Attempt any four questions from Q-2 to Q-8

Attempt all questions Q-2 **(14)** 7 **(A)**

Use Lagrange's Interpolation Formula to find the value of y when x = 10, if the following values of x and y are given:



(B) Find the po	Find the positive root of $x^3+2^{x^2}+10X-20=0$ by Newton-Raphson method.							
Q-3	Attempt a	Attempt all questions							
(A		Solve the following system of equations by Gauss Seidel Method:							
		= 105, 4x + 8y +			2 2				
(B)		Use the fourth – order Runge Kutta method to solve $dy/dx=x^2+y^2$, $y(0)=1$,							
	Evaluate th	ne value of Y wh	nen X=0.1						
)-4	Attempt a	ll questions							
(A	_	Draw the graph where $V=\{1, 2, 3, 4\}$ and $E=\{e1,e2,e3,e4,e5\},e1=e5=(1,2)$							
(D)		e4=(2,4) and e3=		2 (0) 1 E 1					
(B) Use the Eu when X=0.	Use the Euler method to solve $dy/dx=x^2+y^2$, $y(0)=1$, Evaluate the value of Y							
	when A=0.	, 1							
Q-5	Attempt a	ll questions							
(A	-	Draw all non-isomorphic graph on 2 and 3 vertices							
(B	,	Find out the value of Y when X=18 Using Netwon's Forward interpolation							
	method.								
	X	5	10	15	20				
	Y	10	12	14	16				
	A 44	II 4•							
(A)	_	Attempt all questions Solve							
	,	the following system of equations by Gauss Elimination Method:							
		the following system of equations by Gauss Emilination Method: $5x-2y+3z=18$,							
		3x - 2y + 3z = 18, X + 7y - 3z = -22							
	•	2x - y + 6z = 22							
(B	•	Explain Isomorphism with diagram							
)-7	-	Attempt all questions							
(A	-	What is Graph? Explain Vertices and Edges with Diagram							
(A	7 1 1 C	apri. Dapium V		o willi Diagram	N. 1. 20)				

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13

11

16

9

14

X

Y

(B)

(A)

(B)

X1,X2,X3.....

Q-8

5

12



Find Complement of each element of Lattice (S30,GCD,LCM,1,30)

Attempt all questionsFind all the mint terms of a Boolean Algebra with three variables

Derive the Formula for Simpson's 1/3 rule.

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(14)

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