Bachelor of Computer Application (BCA)

Part - I SEM-II, Examination: Apr.-2018.

Day and Date	Part	Subject Name	Time	Code	Marks
Friday 24/04/2019	11	Introduction to Logic Circuits and Digital Design	11.00 AM TO 1.30 PM	2101	75

Instructions: All questions are compulsory.

	Incarrons mic co.	Praisor.j.			
9.5	1	Section - I			
Q.1 A) Fill in the		Dection 1		05	
	as	stable states	#5		
2) Binary numb	er system has dig	its an	d		
3) A	is an als	gebraic form of	f Boolean expression nary 1 for HIGH and binary	y 0 for	
5) circuits.	is used t	o analyze and	simplify the digital(logic)		
Q.1 B) State True	or False			05	
아트 이 교육에 취임하는데 보기 때문에 다 아이를 했다.	e Output is 0 if a	ny input is 1			
	algebra, $A + 1 = 1$	/ T			
	for sum-of-power				
그러워 7차시에 한번 전에 전혀 먹었어요? 인터넷이다.	of 303 is 00110				
하는데 가장 아이들이 얼마나 하는데 되었다.	l Value of 11 is C				
Q.2 A) Choose co	rrect answers fr	om ontions (S	ingle)		05
			nt of time depends only on	the	
	it but also on the			1000000	
	mbinational circu		equential circuits		
c) Late		0.000	lip-flops		
2) In SR flip-flo	p, input labeled '				
	ematic b)Sta				
	tions are more fa				
	nbinational circu		Sequential circuits		
c) Late			Flip-flops		
4) DeMorgan's			A + B)' = A ' * B		
a) (AE	B)' = A' + B' + B' = A'B'		None of the Mentioned		
	rcuits requires tv		done of the Mentioned		
a) Inputs	b) Outputs	c) Digits	d) Both a and b		

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Bachelor of Computer Application (BCA)

Part - I SEM-II, Examination: Apr.-2018. .

Day and Date	Part	Subject Name	Time	Code	Marks
Friday 25/04/2019	п	Discrete Structures & Graph Theory	11.00 AM TO 1.30 PM	2102	75

25/04/2019		Graph The	eory	1.30 PM			
Instructions: All	question	s are compulsory	<i>.</i>				_
7.0		Sec	tion – I				05
Q.1 A) Fill in	the blan	ks:					0.5
 The Cart 	esian pr	oduct of two se	tA&B	lenoted by		•	
If there a known	re more	than one edge b	etween t	wo nodes	then they	are	
3. A graph		edges is not sp	ecified w	ith direction	on /arrows	is known	
The diffe	rent sel	ection possible	from coll	ection of i	tems are		
5. A	is a	in ordered colle	ction of o	bjects.			
Q.1 B) State 7	rue or	False				05	
		tain only one el	ement is	called sing	gle tone.		
2. {a} € {							
Graph ca	n be rep	resented as G=	< V,E>.		na mana and an ana and an		
 The related implies > 		set A is called	ant symr	netric relat	tion. If x R	y&yRx	
5. ØG{1,2	V/ 1/2						
		t answers from				05	
		with the set of e following ca				the world	
		in the world.					
		le in the world	THE SECTION ASSESSMENT AND ADMINISTRATION AND ADMIN		ll Indians	in the world	
		owing is Subs					
		(1,2,3) c){1}	d)	All of ab	ove.		
3. The com					00.		
a) A	-B	b) A-U ifference of A= b) {1,2,4,5}	· (1.2.21	U-A d D (2	d) B-A		
4. The sym	metric d	b) (1.2.4.5)	- {1,2,3}	and B= {5	,4,5} IS	(2 5 1 4 2)	
5. Pictorial	represer	ntation of sets r	epresente	d by clos	sed figures	are called	
a) Se	t b) \	enn diagram	c) Fund	tion	d)Transit	ive	
Q.2 B) Choose	correc	t any two ansv	vers from	n options.	•	10	

If $A=\{1,2,3,4,5\}$ and $B=\{2,4,5\}$ then which of the following holds?

2. A set White b) BCA	c) A=B	a) 11-	
which contain only	is called.		
Digram - I - I - I	4 1 1 1 1 1 1 1 1		
relation is an equivalence relat	ion if it is	Reflexive.	lone of these
a) Italisitive b) Symmetric a)	Anti-symme	etric u)	
set can be classified into many type	3		
b) Infinite c) Graph	d) single	tone	
 A set which does not contain any ele 	ement is call	ed as	·
a) Empty Set b) null set c)		d) Sing	gle tone
2.3 Write a short note on following (a	T:		20
1. Restore & set builder form	ny Five)		
2. Directed & Undirected Graph			
3. Transitive relation & Symmetric	relation		
4. Inverse of function	ciation		
5. Methods of GCD			
6. Symmetric graph & Sub graph			
7. Venn Diagram.			
Sectio	TOTAL PROPERTY OF THE PARTY OF		
Instructions: 1) Answer any six	questions f	rom the fo	llowing.
2) Each question			30
4 Anguan			
 Answer any six questions from th A) Consider S= {1, 2, 3, 4, 5} 	e following		
	(1.0) (0.1) (0	2) (2 2) (1	2) (2 1))
$R = \{(1,1),(2,2),(3,3),(4,4), (5,5),(5,5)$	(1,2),(2,1),(2	,3),(3,2),(1,	,3),(3,1)}
Find [1],[2],[3],[4],[5]			
B) Write De'morgans low with exam	•		
C) A box contain two white ball, three			
many ways can 3 balls be drawn f	rom the box.	If at least	l black balls is
to be included in the draw?			
D) What is the method of LCM			
E) Let $f(x) = x+5 \& g(x)=3x+2$ find (fog)(x) &(go	of)(x)	
F) In how many different ways can t	he letters of	the word	
'CORPORATION' be arranged so),		
that vowels always come together			
G) Explain isomorphic graph& com	plement of g	raph with	example.
H) Explain handshaking thermo.	_		
Shows $1 + 2 + \dots + n = n$ (n+1)/2 by	using prin	cipal of
mathematical Induction.	11.1), 2 by	using prine	cipai oi
		•	
Define following terms with sui	경기에 가장되었습니다 그리는 때 때 다양하다		19 <u>04</u> 9420000 0000
 Subset 2)Equal set 3) Univer 	rsal set 4) Graph	Relation
***************************All The	Best****	*****	*****

SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

SHAHID VIRPATNI LAXMI MAHAVIDYALAY, TITAVE

Bachelor of Computer Application (BCA)

Part - I SEM-II, Examination: Apr.-2018.

Day and Date	Part	Subject Name	Time	Code	Marks
Friday 26/04/2019	п	Introduction to Programming and Problem Solving using	11.00 AM TO 1.30 PM	2103	75

Instructions: All questions are compulsory.

Section - I

Q.1 A) Fill in the blanks:

- 1) A file can be a text file or binary file depending upon its contents
- The Process of allocating memory during program execution is called dynamic allocation
- 3) A Structure is a group of data elements that may have different data types.
- 4) A Pointer is a variable that can hold the memory address of another variable
- 5) Each string is terminated with a character Null/'0'.

Q.1 B) State True or False

1) Arrays allow random access.

True

05

2) Expression *ptr++ and ++*ptr are same

False

3) Structure and Union are same

False

4) In memory allocation functions pointers are not used

False

5) All files must be explicitly closed

True

Q.2 A) Choose correct answers from options (Single)

1) "&" is called as

in pointer concept.

a) Conditional Operator

b) Logical Operator

b) Address Operator

d) None of these

Ans : b) Address Operator

- 2) In C, if you pass an array as an argument to a function, what actually gets passed?
 - a) Value of elements in array
- b) First element of the array
- c) Base address of the array
- d) Address of the last element of

array

05

05

Ans : c) Base address of the array

Presence of co	ode like "s.t.b =	10" indicates		
a) Syntax		t & Clauserstraters	Lla pame	
c) double	data type	d) An ordinary vari	able name	
Ans : b) Structur	e			
4) A line drawn i	in the backgroun	nd color is		
a) Visible		b) Invisible	1	
c) Visible	or Invisible	d) None of the	neses	
Ans : b) Invisible				
	entre transporter de la capació Maria.	c		10
Q.2 B) Choose correct	any two answe	rs from options.	deny triangle	
1) Using	and	function ,we can	d) init()	
	b) rectangle	() c)polygon()	۵, ۱۱۱۰۰	
Ans : a) line()	c)polygon()			
2) A is a group of	data elements t	that may have differ	ent data types are	
	b) structure		d) Union	
Ans : b) structure				
3)These are functi	on related to th	e FILE Concept		
a)clrscr()			d) fclose()	
Ans : c) fopen()	d) fclose()			
4) Which functions	s are used to a		22 2	
a) free()	b) int	c) calloc()	d)malloc()	
Ans : c) calloc()	d)malloc()			
5) which are follow	ving Syntax of	code same		
a) arr[i]	b)i[arr]	c) arr[arr]	d)i[i]	
Ans : a) arr[i]	b)i[arr]			
	2.547			

Q.3 Write a short note on following (any Five)

20

1) What is Array? Explain with example

Arrays a kind of data structure that can store a fixed-size sequential collection of elements of the same type. An array is used to store a collection of data, but it is often more useful to think of an array as a collection of variables of the same type.

Bachelor of Computer Application (BCA)
Part - II SEM-II, Examination: April.-2019.

Day and Date	Daniel	To the second second	. April2019	*	
Day and Date	Part	Subject Name	Time	Code	Marks
Wednesday 27/04/2019	11	Environment Science & RTI	11.00 AM TO 1.30 PM	. 2104	75

Instructions: All questions are compulsory.

		Sect	ion – I		
Q.1 (A) Selec	t correct answ	er from giv	en alternativ	ves.	(10)
 The blanke 	et of gases and v	apours arou	and the earth	is known a	s.
a) Tropos	sphere b) S	tratosphere	c) Atm	osphere	d) Ionosphere
Example o	f an omnivore i	s			
a) Grassl	hopper b)	Vulture		de d)	Cockroaches
The best so	ource of energy	in the envir	onment is		
a) Soil	b) Water	c) Ponds	d) Tree	s	
	tion in the ozon	ne layer is ca			5.
a) Nitrous			188 DECOM	rbon dioxid	ie
그리지 아내는 경향 - 아이라 엄마하다.	fluro carbon		d) me	thane	
	l meter is a dev	ice for mea	The state of the s	(a) (a)	
a) The no				ensity of n	
c) Effect				one of thes	e
	vention and cor				
a) 1981	b) 1972	c) 1986	d) 1974		
7) A biotic is	a			100765	
 a) Living cor 	nponent		0.000		component
c) Both a and	lЬ		d) N	one of the	above
8) Coal is com	posed of				
I) Carbon	II) Hydroge	en III)	O2 and N2	IV) S	ulphur
a) Only I	b) I and II	c) All th	ie above	d) None	of these
9) Which one	of the followin	g is not and	i agent of er	osion.	
a) Weather	ring b) W	ater c) ICE	l) Wind	
10) Biodiversit	y not spots are	recognize	d on the bas	is of	
a) The no. of	f endemic spec	ies the con	itain		
	ximity to natio				
	e to which the			nreatened	with extinction
					Tree

B) Match of the following. (05)Group A Group B a) Fertile soil is lost 1) Land slide b) Low atmosphere pressure 2) Earthquake c) Measured at Richter Scale 3) Flood d) Movement of Rock Waste Volcanoes e) Molten material enjected out from 5)Cyclones C) Select correct answer from given True and False. (05) Red data book has a record of all animal. Inversion that occurs near earth surface is called radiation inversion. Super phosphate is a complex in organic fertilizer. 4) The wildlife (protection) act was passed by Indian Parliament on June 1972 (Sept.) Liquefied Natural Gas is the full from of LNG. Q.2 Answer any two of the following. (20)1) Define Biodiversity and Discuss methods that can be used to conserve the biodiversity. 2) Define water pollution? Discuss different causes of water pollution, what are the effects of water pollution on man? Give salient features of wildlife protection Act of India.

Q.3 Answer any four of the following.

(20)

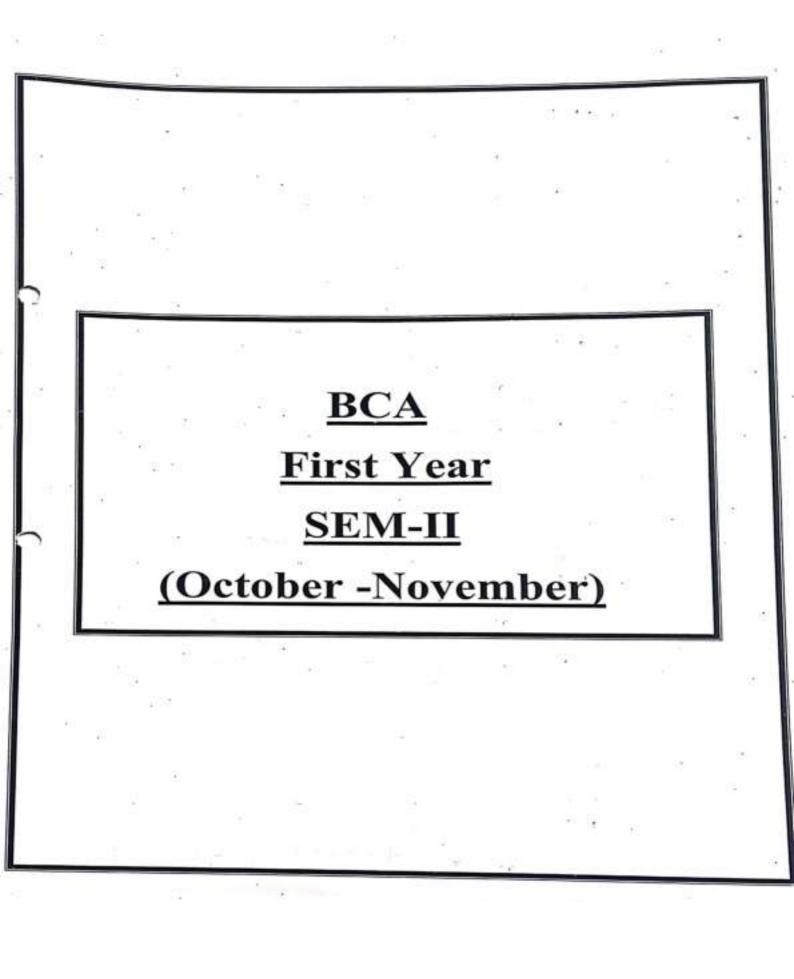
Define environment and what is the scope of environment science?

- What is a solid waste? Discuss the method used solid waste management.
- 3) What is the role of an Individual in Conservation of Resources?
- 4) Write the short note on environmental protection Act.1986.
- 5) Define noise pollution. Give an account of Different sources of noise pollution.

Q.4 Write Short notes any five.

(15)

- 1) Earthquake
- Hot spots of biodiversity
- Ozone deplection
- Human population and the environment
- Genetic diversity
- 6) Desertification



Bachelor of Computer Application (BCA)

Part - I	SEM-II.	Examination:	Apr2018	
1 - 1 - 1			PRO 1	1

Day and Date	Dont	Subject Name	Time	Code	Mark
Day and Date	Part	Subject Name	11.00 AM		
Friday 25/04/2019	п	Discrete Structures & Graph Theory	TO 1.30 PM	2102	75

Instructions: All questions are compulsory.

Section - I	
	05
Q.1 A) Fill in the blanks: 1) Ais an ordered collection of objects.	
2) A set which contain only one element is called	a (a R a).
In a graph their is an edge from a node to itself, its in the second of items are the different ways in which a collection of items	can be
arrange.	05
Q.1 B) State True or False	2.00
 Every element in the co domain is the image of at least one element domain. 	nent in the
Finite set is also called equal set.	
	can be
 Graph is a non-linear data structure. Permutation are the different ways in which collection of item arrange. 	
5) Ø € (1,2,3).	
(Single Ans.)	05
Q.2 A) Choose correct answers from options (Single Ans.)	
1) If $A = (1.3.9)$ then which of the following power set of the	
i){ {1,3},{3,9},{3,1},{9,3},{1,9}}	
II) { {},{1},{3},{9},{1,3},{1,9},{3,9},{1,3,9}}	
iii) {{Ø},{1,4},{1,9},{3,7},{A}}	
iv) $B = \{\{1,3\}, \{3,9\}\}$	
2) A is an ordered collection of objects.	
a) Relation b) Function c) Set d) Proposition.	nge?
a) Relation b) Function c) Set all LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the letter of the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how many ways can the word 'LEADER' be arranged in how ways can the word 'LEADER' be arranged in how ways can the word 'LEADER' be arranged in how ways can the word 'LEADER' be arranged in how ways can the word 'LEADER' be arranged in how ways can be also with the word 'LEADER' be arranged in how ways can be also with the word 'L	
a) 72 b) 144 c) 360 d) Three.	
	no edges is
5) A digraph in which each pair of vertices have either on edge of	no eages is
known as	
a) Directed graph b) Undirected graph	
c) Asymmetric diagraph d) simple graph	

10 Q.2 B) Choose correct any two answers from options. Pictorial representation of Sets represented by closed figures are called—
 Set by the set of the set d) Set diagrams. a) Set b) Venn diagram c) Function A relation is an equivalence relation if it is Reflexive d) none of these a) Transitive c) antisymmetric b) symmetric Which are the following is the well defined set. b)All the honest members in the family. a) All the colors in the rainbow. c)All the prime no's less than 100. d)None of these. 4) The set of all x values is called ----- and the set of all y values is called---- a) Set b) Domain c) Relation d) Range. Set can be classified as ----a) Finite b) Graph c) Infinite d) Range Q.3 Write a short note on following (any Five) 20 Inverse of Function Directed & Undirected Graph. Types of Sets. Explain GCD & LCM with example. 5) Roster & Set Builder form. Complement of graph. 7) Reflexive relation & Antisymmetric relation Section - II Instructions: 1) Answer any six questions from the following. Each question carries five marks. 30 Q. 4 A) Let f(x) = x + 2 & g(x) = 2x + 1 find (fog) (x) & (gof) (x).B) Consider $S = \{1,2,3,4,5\}$ $R = \{ (1,1),(2,2),(3,3),(4,4),(5,5),]$ (1,2),(2,1),(2,3),(3,2),(1,3),(3,1)Find [1], [2], [3], [4],[5]. C) How many different word can be formed with the letter of the word 'SUPER' such that the vowels always come together? D) Shows 1+2+----+n=n(n+1)/2 by using principal of Mathematical induction E) Explain complement of graph & sub graph with example. F) Consider the set $A = \{a,b,3,d\}$ compute P(A) the Power set of A. G) Solve the recurrence relation fn = 5fn - 1 - 6fn - 2 where f0 = 1 & f1 = 4. H) In how many ways can a committee of 1 Men & 3 Women can be formed from a group of 3 Men & 4 Women? I) Define following terms with suitable example. i) Subset ii) Equal set iii) Singleton set / Unit set iv)Universal set v) Infinite set.

Bachelor of Computer Application (BCA)

Bachelol of Co.		4 2018
Part - I SEM-II,	Examination:	Apr2010.
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D		t - I SEM-II, Examination Subject Name	Time	Code	
Day and Date	Part				1
Friday 26/04/2019	11	Introduction to Programming and Problem Solving using C	11.00 AM TO 1.30 PM	2103	75

Instructions: All questions are compulsory.

Section	-1	05
Q.1 A) Fill in the blanks: 1) A file can be a text file or	elements that may have different in hold the memory address of an	t data types.
5) Each string is terminated with a char	racter	05
Q.1 B) State True or False		
1) Arrays allow random access.		
2) Expression *ptr++ and ++*ptr are sa	ame	
3) Structure and Union are same	*	
 In memory allocation functions poir 	nters are not used	
All files must be explicitly closed		05
O 2 A) Choose correct answers from option	ns (Single)	
1) "&" is called as in po a) Conditional Operator b) Address Operator 2) In C, if you pass an array as an arguent passed? a) Value of elements in array c) Base address of the array	d) None of these iment to a function, what actual	
3) Presence of code like "s.t.b = 10" in	ndicates	
a) Syntax Error b) S	tructure	
c) double data type d) A	n ordinary variable name	
4) A line drawn in the background col	or is	
	Invisible	
a) visioie	d) None of theses	
c) Visible or Invisible		10
2 B) Choose correct any two answers fro	om options.	
1) Using and fi	unction ,we can draw triangle	^
a) line() b) rectangle()	c)polygon() d) init(J

	2) A is a group of	data alaments th	at may have diff	erent data types are	
	collecte	data elements in	and	0.00	
	a) pointer	b) structure	c) array	d) Union	
	3)These are function	on related to the	FILE Concept		
	a)clrscr()	b)printf()	c) fopen()	d) fclose()	
	4) Which functions	s are used to all	ocate memory	0000 000000000000000000000000000000000	
	a) free()	b) int	c) calloc()	d)malloc()	
	5) which are follow	ving Syntax of c	ode same		
	a) arr[i]		c) arr[arr]	d)i[i]	
Q.3 V	Vrite a short note o	n following (an	y Five)		20
	1) what is Array? I	explain with exa	mple		
	2) what is Pointer?	Explain with ex	ample		
	3) Give difference 1	between Structur	re and Union		
	4) Write a C Progra	am of using Rec	alloc() function		
	5)Explain fopen() if	function, and de	scribe different t	ypes of mode used	in
	6)Write important	applications of o	computer graphic	:s	
3.2			ion – II		
	Instructions: 1			m the following.	
		2) Each quest	ion carries five	marks.	30
044)	Evalaia audidia.				
dimens	Explain multidime ional array as	nsional array an matrix and pri	id write a progra nt it on screen.	m to accept two	
	Explain array and	string and write	a c program to	ake your name as a	input
	Write a C program		n of two matrix		
0.4 D)	Write a C program	to show working	of calloc() and	free() function	
0.4 E)	Explain Raster met	hod with diagra	m.	rice() function.	
	What is file? Expla				
	Explain gets() and				
	Explain different d			ics as Input and Ou	trut
	. (Each two device		162	and Ob	reput
	explain graphics fur	하셔트 전 보고 있는데 보다 되는데 보고 있는데 보고 있는데 되었다.	nple as line() an	d rectangle()	
	What is Structure?			3-0	
******	************	******All The Re	st***********	******	*******
			700		

Bachelor of Computer Application (BCA)

Day and Date	Part	Subject Name	Time	Code	Marks
Wednesday 27/04/2019	п	Environment Science & RTI	11.00 AM TO	2104	75
nstructions: All	m	are compulsory.	1.30 PM		

Section - I Q.1 (A) Select correct answer from given alternatives. (10)1) Acid rain is formed due to contribution from the following pair of gases. A) Methane & Ozone B) Oxygen and Nitrous oxide C) Methane and Sulpur dioxides D) Carban dioxide and Sulpur dioxide The concentration of which gas is highest in our environment. A) 02 B) H C) N D) CO2 3) Which of the following are the example of municipal and Industrial discharged pipe. B) Agricultural runoff A) Non point source of polluting D) Irrigation C) Point source of pollution 4) Which of the following is not as consequence of global warming. B) Increased agricultural productivity worldwide A) Rising sea level D) Increased storm frequency and intensity C) Worsening health effect Which of following is a logical sequence. A) Producer – Decomposer – Consumer B) Decomposed – Consumer – Producer C) Producer – Consumer – Decomposer D) Decomposer – Consumer – Producer Green computing or Green IT is the study and practice of Designing, II) Manufacturing, III) Disposing of computer associated subsystem using A) Only I B) I and II C) All of the above D) None of these Which method use the dispose e waste A) Land filing B) Compositing C) Recycler D) Incineration 8) The law RTI is passed by parliament in which year. A) 2001 B) 2005 D) 2016 C) 2013

Which of the following is the smalles: soil particle.

A) Clay

A) Reduce, reuse and recycle

B) Fine sand C) Gravel

10) The three R's of waste management hierarchy is / are

B) Reduce, redox and reoxidation

C) reuse, reimburse and regain D) None of the above appeal to the heart it draws upon the audiences feelings is called as -----B) Match of the following. (05)Group A Group B A) Biomagnificating 1) BOD B) Thermal Polluting Leakage from oil tank C) Oil spills 3) DO D) Biological oxygen demand 4) DDT E) Dissolved oxygen 5) Hot industrial effluent C) Select correct answer from given True and False. (05) Alkaline and Saline soil also known as saline alluvial soils. Nuclear power is the cleanest source of energy. Tropical grassland with scattered tress are also known as savannas. 4) Destructive power of tsunami result mainy from it's momentum and long wavelength. The atmosphere pressure is measured by manometer. Q.2 Answer any two of the following. (20) Discuss the concept of green - IT? Approaches of green - IT such as virtualization and power management. 2) Define Soil Pollution? Discuss sources, effect and control measure of soil 3) What are natural resources? Give the types of natural resources. Discuss forest as a resources. Q.3 Answer any four of the following. (20) What adverse effect can e-waste? How can the solid waste be managed. Discuss the State Information Commission and their duties. 3) What are food chain and food web? Give example and discuss their significance. 4) Define Radioactive Pollution? Enumerate source of exposure to radiation? Give disaster management of earthquake. Q.4 Write Short notes any five. (15)1) Telecommunication 2) Benefit of Green IT 3) Soil erosion 4) Ecological pyramid Landslides.

Human rights

Bachelor of Computer Application (BCA)

Part - I SEM-II, Examination: Apr.-2018.

Day and Date	Part	Subject Name	Time	Code	Marks
Friday 25/04/2019	11	Discrete Structures & Graph Theory	11.00 AM TO 1.30 PM	2102	75

Instructions: All questions are compulsory.

Section - I

Q.1 A) Fill in the blanks:	05
1) Ais an ordered	collection of objects.
A set which contain only one eleme	ent is called
3) A Relation R on set A is called	If a E A is related to a (a R a).
5) In a graph their is an edge from a no	ode to itself, it is known as
 are the different ways arrange. 	in which a collection of items can be
Q.1 B) State True or False	05
 Every element in the co domain is domain. 	the image of at least one element in the
Finite set is also called equal set.	
Graph is a non-linear data structur	e.
 Permutation are the different ways arrange. 	s in which collection of item can be
5) Ø € (1,2,3).	
1957 SE 1979 EA	
Q.2 A) Choose correct answers from o	ptions (Single Ans.)
1) If $A = (1,3,9)$ then which of the follow	ving power set of the A?
1){ {1,3},{3,9},{3,1},{9,3},{1,9}}	
II) $\{\{\},\{1\},\{3\},\{9\},\{1,3\},\{1,9\},\{3$	9},{1,3,9}}
iii) {{Ø},{1,4},{1,9},{3,7},{A}}	
iv) $B = \{\{1,3\},\{3,9\}\}$	
2) A is an ordered collection	n of objects.
a) Relation b) Function c)	Set d) Proposition
3) In how many ways can the letter of the	he word 'LEADER' be arrange?
a) 12 b) 144 c) 360 d	None of these
1) Power set of empty set has exactly	Subset
a) One b) Two c) Zero	d) Three
5) A digraph in which each pair of ver	tices have either on edge or no edges is
known as	nees have either on edge or no edges is
a) Directed graph	b) Undirected
c) Asymmetric diagraph	b) Undirected graph
-,, diagraph	d) simple graph

1) Pictorial research any two answers from options.	10
1) I letorial representation of Sets represented by closed figures are	called
b) Venn diagram a) Function d) Set diag	rains.
2) A relation is an equivalence relation if it is Reflexive	- &
a) Transitive b) symmetric c) antisymmetric d) n	one of these
which are the following is the well defined set	
b) All the honest member	s in the family.
d)None of these.	
The set of all X values is called and the set of all y	values is
called	
a) Set b) Domain c) Relation d) Range.	
bet can be classified as	
a) Finite b) Graph c) Infinite d) Range	
O 3 Write a shout water of v	20
Q.3 Write a short note on following (any Five) 1) Inverse of Function	20
2) Directed P. H. H.	
2) Directed & Undirected Graph.	
3) Types of Sets.	
4) Explain GCD & LCM with example.	
5) Roster & Set Builder form.	
6) Complement of graph.	
7) Reflexive relation & Antisymmetric relation	
Section – II	
Instructions: 1) Answer any six questions from the fol	lowing.
2) Each question carries five marks.	30
Q. 4 A) Let $f(x) = x + 2 & g(x) = 2x + 1 \text{ find (fog) (x) & (gof) (x)}$	
B) Consider $S = \{1,2,3,4,5\}$,,
$R = \{ (1,1),(2,2),(3,3),(4,4),(5,5), \}$	
(1,2),(2,1),(2,3),(3,2),(1,3),(3,1)	
Find [1], [2], [3], [4],[5].	
 C) How many different word can be formed with the letter of 	the word
'SUPER' such that the vowels always come together?	
D) Shows $1+2++n = n(n+1)/2$ by using principal of	of Mathematical
induction	
E) Explain complement of graph & sub graph with example.	
F) Consider the set $A = \{a,b,3,d\}$ compute $P(A)$ the Power set	of A.
G) Solve the recurrence relation $fn = 5fn - 1 - 6fn - 2$ where	
H) In how many ways can a committee of 1 Men & 3 Women	
에 보고 가득 된다면 있었다면 있다면 하는데 이번에 있다면 되는 전투를 되는 것이라면 되었다면 있다면 없다면 하는데 보고 있다면 되었다면 있다면 하는데 이번에 보고 하는데 이번에 바다를 보고 있다면 하는데 하는데	i can be formed
from a group of 3 Men & 4 Women?	
 Define following terms with suitable example. 	
i) Subset	
ii) Equal set	
iii) Singleton set / Unit set	
iv)Universal set	
v) Infinite set.	

Bachelor of Computer Application (BCA) Part - I SEM-II, Examination: Apr.-2018.

Subject Name

Day and Date

Part

		- Samples	. 444444				1
Friday 26/04/2019	п	Introduc Programm Problem Sol	ing and	11.00 AM TO 1.30 PM	2103	75	
Instructions:	All question	ns are compulso	ry.				
			STATE OF THE PARTY				
O.I A) Fill to		s	ection — I				05
Q.1 A) Fill in	•			der	ending up	on its cont	ents
2) 71	D		disprinc	nrogram exe	Cution 19 ce	AAAMIN STREET	
21.4			C date alasy	vents that thay	THE A CHAPTER	A WELL	# #
4) A		is a variable t	hat can hole	the memory	audicoo e.	another v	ariable
5) Each	string is t	erminated with	a characte	r	•		05
Q.1 B) State	True or F	alse					
1) Arra	ys allow ra	andom access.					
2) Expi	ession *pt	r++ and ++*pt	r are same				
3) Struc	ture and U	Jnion are same		are not used			
4) In m	emory allo	cation function	ns pointers	are not used			
5) All f	iles must t	e explicitly clo	osed	ingle)			05
Q.2 A) Choos	e correct	answers from	options (S	concept			1)255
1) "&"	s called as	sonal Operator	in pointer	ogical Operat	or		17
: 1) Address	Operator			1880		
2) In C, passe	if you pas	ss an array as a	n argumen	t to a functio	n, what ac	tually get	S
а) Value of	f elements in a	rray b)) First elemer	nt of the ar	ray	
		dress of the arr		Address of		ement of a	urray
Prese	nce of coo	de like "s.t.b =	10" indica	ites			
а) Syntax E	Error	b) Struc	ture			
c	double d	ata type	d) An or	dinary variab	le name		
4) A line	drawn in	the backgrou	nd color is				
a	Visible		b) Inv	risible			
. c	Visible o	or Invisible	d)	None of the	ses		
Q.2 B) Choose							10
		and			draw trian	ole	(2.50)
	line()		train of the second sec	polygon()		nit()	
	44				-, .		

Marks

Code

Time

2) A is a group of	data element	s that may have diffe	erent data types are	
collect	ed together in	and		
a) pointer	b) structur	e c) array	d) Union	
3)These are funct	ion related to	the FILE Concept		
a)cirscr()	h)printf()	c) fonen()	d) fclose()	
4) Which function	as are used to	allocate memory	W.V.C. 325	
a) Iree()	b) int	c) calloc()	d)malloc()	
5) which are follo	wing Syntax	of code same		
a) arr[i]	b)i[arr]	c) arr[arr]	d)i[i]	
Q.3 Write a short note	on following	(ann Titue)		20
1)What is Array? E	volain with a	(any Five)		0.000,40
2) What is Pointer?	Evplain with	cample		
3)Give difference b	etween Stare	example		
4) Write a C Program	m of wine D	ure and Union		
5)Explain foren 6	m of using Ke	calloc() function	e	
5)Explain fopen() fi function	inction, and o	lescribe different typ	ses of mode used in	i.
6)Write important ap	onlications of			
,portant aj	optications of	computer graphics		
17	The state of the s	Section – II		
Instructions:	1) Answer a	ny six questions fr	om the following.	
		uestion carries five		30
 B) Explain array and 	as matrix and string and w	d print it on screen.		a input
and write it on se				
C) Write a C program	n to write ad	dition of two matrix	S.	
D) Write a C program	n to show wo	orking of calloc() ar	nd free() function.	
E) Explain Raster me	ethod with di	agram.		
F) What is file? Expl	ain different	operation of file.		
G) Explain gets() and	puts() functi	ion.		
H) Explain different of			ics as Input and O	historist
devices(Each tw		companie Grapi	aes as input and O	acpac
I) Explain graphics fi		evample as line()	nd rectangle()	
J) What is Structure			and rectangle()	
o) what is structure	Explain it v	vitii example.		
****************	******* A II TL	- D********		

Bachelor of Computer Application (BCA)

Part - II SEM-II. Examination: April.-2019

Day and Date	Part	- II SEM-II, Examination Subject Name	Time	Code	75
Wednesday 27/04/2019	11	Environment Science &	11.00 AM TO 1.30 PM	2104	/5

	27/04/2019	11	RTI	1.30 PM	,
Ins	tructions: All	questions	are compulsory.		
			Section -		(10)
	(1) Mathena	and Sulp	til til	our environme	pair of gases. ous oxide d Sulpur dioxide ent. Industrial discharged Agricultural runoff
3)	pipe.			В)) Irrigation
		t source	of polluting	D) irrigation
5) A B C D 6) C	() Rising sea () Worsening Which of fol () Producer – () Decompos () Producer – () Decompos () Decompos () Designing	health lowing in Decom- ed – Consur- er – Con- ating or	effect D) Increase is a logical sequence. iposer – Consumer insumer – Producer iner – Decomposer insumer – Producer insumer – Producer Green IT is the study	and practice	of
I	A) Only I	g of cor B) I		bsystem using f the above	D) None of these
7) W	hich metho	P	ne dispose e waste) Compositing ed by parliament in v	C) Recycler which year.	D) Incineration
	1 2001	B) 200	05 () 2015	10,2010	
Δ	Clav	B) Fine	ng is the smallest so e sand C) Grav	el D) Si	
10) T	he three R'	s of wa	ste management his	erarchy is / ar	e
A)	Reduce, ret	ise and	recycle B) F	Reduce, redox	and reoxidation

D) None of the above C) reuse, reimburse and regain appeal to the heart it draws upon the audiences feelings is called as -----(05)B) Match of the following. Group B Group A 1) BOD A) Biomagnificating Leakage from oil tank B) Thermal Polluting 3) DO C) Oil spills 4) DDT D) Biological oxygen demand 5) Hot industrial effluent E) Dissolved oxygen (05)C) Select correct answer from given True and False. Alkaline and Saline soil also known as saline alluvial soils. 2) Nuclear power is the cleanest source of energy. Tropical grassland with scattered tress are also known as savannas. 4) Destructive power of tsunami result mainy from it's momentum and long wavelength. The atmosphere pressure is measured by manometer. Q.2 Answer any two of the following. (20)1) Discuss the concept of green - IT? Approaches of green - IT such as virtualization and power management. 2) Define Soil Pollution? Discuss sources, effect and control measure of soil pollution? 3) What are natural resources? Give the types of natural resources. Discuss forest as a resources. Q.3 Answer any four of the following. (20)1) What adverse effect can e-waste? How can the solid waste be managed. Discuss the State Information Commission and their duties. 3) What are food chain and food web? Give example and discuss their significance. 4) Define Radioactive Pollution? Enumerate source of exposure to radiation? Give disaster management of earthquake. Q.4 Write Short notes any five. (15)1) Telecommunication Benefit of Green IT 3) Soil erosion 4) Ecological pyramid 5) Landslides.

6) Human rights

Bachelor of Computer Application (BCA)

Part - 1	SEM	II, Ex	aminat	ion: A	Dr.	2018	
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Day and Date	Part	Subject Name	Time	Code	Marks
Friday 25/04/2019	u	Discrete Structures & Graph Theory	11.00 AM TO 1.30 PM	2102	75

Instructions: All questions are compulsory.

a) Directed graph

c) Asymmetric diagraph

Section - 1

Q.1 A) Fill in the blanks: 05 A-----is an ordered collection of objects. A set which contain only one element is called-----. 3) A Relation R on set A is called--------------------------If a € A is related to a (a R a). 4) In a graph their is an edge from a node to itself, it is known as -----5) ----- are the different ways in which a collection of items can be arrange. Q.1 B) State True or False 05 Every element in the co domain is the image of at least one element in the * domain. Finite set is also called equal set. 3) Graph is a non-linear data structure. 4) Permutation are the different ways in which collection of item can be arrange. 5) Ø € (1,2,3). Q.2 A) Choose correct answers from options (Single Ans.) 05 1) If A = (1,3,9) then which of the following power set of the A? i){ {1,3},{3,9},{3,1},{9,3},{1,9}} AI) { {},{1},{3},{9},{1,3},{1,9},{3,9},{1,3,9}} iii) {{Ø},{1,4},{1,9},{3,7},{A}} iv) $B = \{\{1,3\},\{3,9\}\}$ A----- is an ordered collection of objects. a) Relation b) Function c) Set d) Proposition. 3) In how many ways can the letter of the word 'LEADER' be arrange? b) 144 c) 360 a) 72 d) None of these. Power set of empty set has exactly-----. Subset. a) One b) Two c) Zero d) Three. 5) A digraph in which each pair of vertices have either on edge or no edges is known as-----

b) Undirected graph

d) simple graph

Q.2 B) Choose correct any two answers from options. 1) Pictorial representation of Sets represented by closed figures are called---d) Set diagrams. a) Set b) Venn diagram c) Function 2) A relation is an equivalence relation if it is Reflexive----- & ----------a) Transitive d) none of these c) antisymmetric b) symmetric Which are the following is the well defined set. a) All the colors in the rainbow. b)All the honest members in the family. c)All the prime no's less than 100. d)None of these. 4) The set of all x values is called ----- and the set of all y values is called----.... a) Set b) Domain c) Relation d) Range. Set can be classified as ----a) Finite b) Graph c) Infinite d) Range Q.3 Write a short note on following (any Five) 20 1) Inverse of Function Directed & Undirected Graph. Types of Sets. 4) Explain GCD & LCM with example. Roster & Set Builder form. Complement of graph. 7) Reflexive relation & Antisymmetric relation Section - II Instructions: 1) Answer any six questions from the following. 2) Each question carries five marks. 30 Q. 4 A) Let f(x) = x + 2 & g(x) = 2x + 1 find (fog) (x) & (gof) (x).B) Consider $S = \{1,2,3,4,5\}$ $R = \{ (1,1),(2,2),(3,3),(4,4),(5,5),]$ (1,2),(2,1),(2,3),(3,2),(1,3),(3,1)Find [1], [2], [3], [4],[5]. C) How many different word can be formed with the letter of the word 'SUPER' such that the vowels always come together? D) Shows 1+2+----+n=n(n+1)/2 by using principal of Mathematical induction E) Explain complement of graph & sub graph with example. F) Consider the set $A = \{a,b,3,d\}$ compute P(A) the Power set of A. G) Solve the recurrence relation $f_1 = 5f_1 - 1 - 6f_1 - 2$ where $f_0 = 1 & f_1 = 4$. H) In how many ways can a committee of 1 Men & 3 Women can be formed from a group of 3 Men & 4 Women? Define following terms with suitable example. i) Subset ii) Equal set iii) Singleton set / Unit set iv)Universal set v) Infinite set.

Bachelor of Computer Application (BCA)

Davis	A 444	- I SEM-II, Examination	Time	Code	Mark
Day and Date	Part	Subject Name	Ame		
Friday 26/04/2019	11	Introduction to Programming and Problem Solving using	11.00 AM TO 1.30 PM	2103	75

Instructions: All questions are compulsory.

Section - I 05 A file can be a text file or depending upon its contents Q.1 A) Fill in the blanks: 2) The Process of allocating memory during program execution is called A...... is a group of data elements that may have different data types. 4) A..... ... is a variable that can hold the memory address of another variable 5) Each string is terminated with a character..... 05 Q.1 B) State True or False Arrays allow random access. Expression *ptr++ and ++*ptr are same 3) Structure and Union are same In memory allocation functions pointers are not used All files must be explicitly closed 05 Q.2 A) Choose correct answers from options (Single) in pointer concept. 1) "&" is called as b) Logical Operator a) Conditional Operator d) None of these b) Address Operator 2) In C, if you pass an array as an argument to a function, what actually gets passed? b) First element of the array a) Value of elements in array d) Address of the last element of array c) Base address of the array Presence of code like "s.t.b = 10" indicates b) Structure a) Syntax Error d) An ordinary variable name c) double data type 4) A line drawn in the background color is b) Invisible a) Visible c) Visible or Invisible d) None of theses Q.2 B) Choose correct any two answers from options. 10 1) Using and function ,we can draw triangle c)polygon() d) init() b) rectangle() a) line()

· diffe	rent data cyl
2) A is a group of data elements that may have diffe	o Heion
collected together in	d) Union
3)These are function related to the FILE Concept a)clrser() b)printf() c) fopen()	d) fclose()
4) Which functions are used to allocate memory	d)malloc()
a) free() b) int c) calloc()	a)IIIIII
5) which are following Syntax of code same	d)i[i]
a) arr[i] b)i[arr] c) arr[arr]	
0.3 Wwite	20
Q.3 Write a short note on following (any Five)	
1) What is Array? Explain with example	
2) What is Pointer? Explain with example	
3) Give difference between Structure and Union 4) Write a C.P. Structure and Union	• • -
 Write a C Program of using Recalloc() function Explain fopen() function. and describe different type 	pes of mode used in
function	
6)Write important applications of computer graphics	
Section - II	
Section - II	om the following.
Instructions: 1) Answer any six questions fr	30
2) Each question carries five	marks.
4 A) Explain multidimensional array and write a progra	am to accept two
dimensional array as matrix and print it on screen.	
B) Explain array and string and write a c program to	take your name as a input
and write it on screen	2.5
C) Write a C program to write addition of two matrix	rs.
D) Write a C program to show working of calloc() ar	nd free() function.
F) Explain Poster method with diagram	id free() rans-
E) Explain Raster method with diagram.	
F) What is file? Explain different operation of file.	
G) Explain gets() and puts() function.	
H) Explain different devices used in Computer Graph	nics as Input and Output
devices(Each two devices)	
 Explain graphics function with example as line() a 	and rectangle()
J) What is Structure ? Explain it with example.	
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Ine Best	

Bachelor of Computer Application (BCA)

	Part	helor of Computer Applic - II SEM-II, Examination	: April2019	Code	Marks
Day and Date	Part	Cubicat Nama	Time		75
Wednesday 27/04/2019	п	Environment Science & RTI	11.00 AM TO 1.30 PM	2104	

Instructions: All questions are compulsory.	
Section - I	(10)
A) Non point source of pollution 4) Which of the following is not as consequence of global we have a source of pollution A) Rising sea level B) Increased agricultural B) Increased agricultural B) Increased storm frequence. 5) Which of following is a logical sequence. A) Producer – Decomposer – Consumer B) Decomposed – Consumer – Producer B) Decomposed – Consumer – Producer D) Decomposer – Consumer – Producer B) Decomposer – Consumer – Producer D) Decomposer – Consumer – Producer B) Decompo	Industrial discharged Agricultural runoff Trrigation varming. productivity worldwide ency and intensity of
II) Manufacturing, III) Disposing of computer associated subsystem using the property of the above	D) None of these
7) Which method use the dispose e waste A) Land filing B) Compositing C) Recycler 8) The law RTI is passed by parliament in which year. A) 2001 B) 2005 C) 2013 D) 2016 D) Which of the following is the smallest soil particle.	
A) Clay B) Fine sand C) Graver D)	

C) reuse, reimburse and regain D)	None of the above
appeal to the heart it draws upon the aud	
B) Match of the following.	(05)
Group A	Group B
A) Biomagnificating	1) BOD
B) Thermal Polluting	2) Leakage from oil tank
C) Oil spills	3) DO
D) Biological oxygen demand	4) DDT
E) Dissolved oxygen	5) Hot industrial effluent
C) Select correct answer from given T	True and False. (05)
1) Alkaline and Saline soil also k	
2) Nuclear power is the cleanest s	
3) Tropical grassland with scatter	red tress are also known as savannas.
 Destructive power of tsunami wavelength. 	result mainy from it's momentum and long
5) The atmosphere pressure is mo	easured by manometer.
Q.2 Answer any two of the following.	(20)
1) Discuss the concept of green - IT?	
virtualization	Approaches of green - 11 such as
and power management.	
pollution?	urces, effect and control measure of soil
3) What are natural resources? Give	the types of natural resources. Discuss
forest as a resources.	
Q.3 Answer any four of the following	(20)
 What adverse effect can e-waste? 	How can the solid waste be managed
 Discuss the State Information Cor 	mmission and their duties
What are food chain and food we significance.	b? Give example and discuss their
5) Give disaster management of eart	umerate source of exposure to radiation? hquake.
Q.4 Write Short notes any five.	44.50
1) Telecommunication	(15)
2) Benefit of Green IT	
3) Soil erosion	
4) Ecological pyramid	
5) Landslides.	
6) Human rights	

Bachelor of Computer Application (BCA)
Part - I SEM-II, Examination: Apr.-2018.

Day and Date	Part	Subject Name	1 2016.		
			Time	Code	Marks
Friday 24/04/2019	11	Introduction to Logic Circuits and Digital Design	11.00 AM TO 1.30 PM	2101	75

Instructions: All questions are compulsory.

	C.K.C.		
Slanke.	cetion - I		
tput at any instar	it in time depen	ds only on combination of its	
co	mbinational cir	cuit there are only	
was invented by so known as			
or False	- 1		
f hexadecimal F	is 14	05	
sums (POS) is ba	sically the OR	ing of ANDed terms	
ystem has digits	2 and 1.	and of the Dea terms	
ora, $\overline{A} = A$.			
of 1010 is conv	erted to the pro	oduct term ABCD.	
raat american f			
bra the OR oper	om options (Si	ngle) 0	5
e properties	b) Cor	med by which properties?	
	d) A11	of the Mentioned	
	1 = ?	or the Mentioned	
Output is 0 if an	y input is		
	u 1 d)nor	ne	
	c) Digits	d) Both a and b	
[20] [40] [40] [40] [40] [40] [40] [40] [4			
b) Outputs	c) Digits	d) Both a and b	
	or False f hexadecimal Esums (POS) is basystem has digits ora, \$\overline{A} = A\$. c of 1010 is converted answers from the OR opensor of t	data output. was invented by so known as mber system is or False f hexadecimal E is 14 sums (POS) is basically the OR system has digits 2 and 1. ora, \(\bar{A} = A\). of 1010 is converted to the properties by a properties ve properties	or False of hexadecimal E is 14 sums (POS) is basically the ORing of ANDed terms system has digits 2 and 1. or and in 1010 is converted to the product term ABCD. rect answers from options (Single) bra, the OR operation is performed by which properties? ve properties b) Commutative properties? ve properties b) Commutative properties? ve properties c) A c) O' d) A' Output is 0 if any input is 1 c) all input 1 d)none its requires two b) Outputs c) Digits d) Both a and b its requires two

05

Q.2 B) Choose	correct any t	wo answers fro	m optio	ns.	10
1) Below are t a) Not	ne combinatio				
2) Below are b	b) AND	c)NAND	d)NOF		
a) OR	b) NOT	-) EV NO	D	d) EX-OR	
3)Below are se	guential gate	c) EX-NO	R	d) LA	
a)JKFF	b)SRFF	c) NAND	d) N	IOR	
4) Which is use	ed to add two	single bit bings	v numbe	r	
a) INVITAD	D) NOT	c) Half A	ddor	diffull Adder	6
5) Which is use	ed to substrac	t two single bit	binary n	umber	
a) NAND	b) NOT	c) Half Su	btractor	d)Full Sub	tractor
Q.3 Write a short	rt note on fol	lowing (any F	ive)		20
TIUPI 61 Jan 17 (IDer System?	Evalain in bais	f.		
-/CAPIAIII Deci	mai Number	system			
b) what is binar	ry logic and e	xplain ite fine	tion or or	peration	
, - Premi Das	C Gates With	truth table and	circuit c	liagram	
b) Convert Bin	ary to Decim	al		in Bruin	
a) (1	1010.11)2	b) (101	1101)2		
6) What is sequ	ential circuit	explain with d	iagram		
		Section - I	I		
Instructio	ns: 1) Answ	er any six que		om the follo	wing
	2) Each	question carr	ies five i	narks.	30
.4 A) Explain J k	FF with h	lock diagram			
B) Explain 4:1	Multipleyer	diagram,	uum tab	e and circuit	diagram
C) What is Un					
D) Write Evol	oin SOP (Sw	n of Deadwet	C		
D) Write Expl	lan sor (su	in of Product)	form		
E) Simplify be	low express	ion			
\ 					
a) (A+B)+(A					
b) A'B'C'+A'					
F) Explain Mir	nterm and M	axterm			
G) Explian 2 v	ariable K-M	ap.			
H) Design 4:1					
I) Explain Der			rom on	d its avamal	27
J) Explain Hal		vidi block diag	grain an	d its example	-
******	******	*All The Bes	L**** **	*****	*****

Bachelor of Computer Application (BCA)

Day and Date	Part	Subject Name	Time	Code	Marks
Friday 25/04/2019	п	Discrete Structures & Graph Theory are compulsory.	11.00 AM TO 1.30 PM	2102	75

Section - I

MATERIAL STATE OF THE STATE OF	5.97 2 6.
Q.1 A) Fill in the blanks:	05
1) Ais an ordered co	ollection of objects.
2) A set which contain only one element	t is called Singleton
A Relation R on set A is called	If a E A is related to a (a R a). RCE
4) In a graph their is an edge from a nod	
5) are the different ways in arrange. Per mulahon	which a collection of items can be
arrange. (E Pour arror)	
Q.1 B) State True or False	05
 Every element in the co domain is the domain. 	ne image of at least one element in the
Finite set is also called equal set. X	
Graph is a non-linear data structure.	<u></u>
 Permutation are the different ways i arrange. 	n which collection of item can be
5) Ø € (1,2,3). ×	
Q.2 A) Choose correct answers from opt	ions (Single Ans.) 05
1) If $A = (1,3,9)$ then which of the following	ng power set of the A?
i){ {1,3},{3,9},{3,1},{9,3},{1,9}}	
LET) { {},{1},{3},{9},{1,3},{1,9},{3,9}	,{1,3,9}}
iii) $\{\{\emptyset\},\{1,4\},\{1,9\},\{3,7\},\{A\}\}$	
iv) $B = \{\{1,3\},\{3,9\}\}$	
) Ais an ordered collection	of objects.
a) Relation b) Function > Se	et d) Proposition.
In how many ways can the letter of the	word 'LEADER' be arrange?
a) 72 b) 144 ce) 360 d) N	None of these.
Power set of empty set has exactly	Subset.
(a)-One b) Two c) Zero	d) Three
A line by I wo cyzero	as have either on edge or no edges is
A digraph in which each pair of vertic	es have either on edge of no edges is
known as	
a) Directed graph	b) Undirected graph
Asymmetric diagraph	d) simple graph

Q.2 B) Choose correct any two answers from options. 1) Pictorial representation of Sets represented by closed figures are called-(b) Venn diagram c) Function d) Set diagrams. 2) A relation is an equivalence relation if it is Reflexive----- & (b) symmetric (a) Transitive c) antisymmetric d) none of these 3) Which are the following is the well defined set. (a)' All the colors in the rainbow. b)All the honest members in the family. (a) All the colors in the rambow. b)All the honest members in the factor)All the prime no's less than 100. d)None of these. ・
4) The set of all x values is called ------ and the set of all y values is called----- . a) Set 1) Domain c) Relation 1 Range. Set can be classified as ----a) Finite b) Graph (e) Infinite d) Range Q.3 Write a short note on following (any Five) 20 1) Inverse of Function 2) Directed & Undirected Graph, Types of Sets. 4) Explain GCD & LCM with example. 5) Roster & Set Builder form. Complement of graph. 7) Reflexive relation & Antisymmetric relation Section - II Instructions: 1) Answer any six questions from the following. 2) Each question carries five marks. Q. 4 A) Let f(x) = x + 2 & g(x) = 2x + 1 find (fog) (x) & (gof) (x).30 B) Consider $S = \{1,2,3,4,5\}$ $R = \{ (1,1),(2,2),(3,3),(4,4),(5,5),]$ (1,2),(2,1),(2,3),(3,2),(1,3),(3,1)Find [1], [2], [3], [4],[5]. C) How many different word can be formed with the letter of the word 'SUPER' such that the vowels always come together? D) Shows 1+2+----+n = n(n+1)/2 by using principal of Mathematical induction E) Explain complement of graph & sub graph with example. F) Consider the set $A = \{a,b,3,d\}$ compute P(A) the Power set of A. G) Solve the recurrence relation fn = 5fn - 1 - 6fn - 2 where f0 = 1 & f1 = 4. H) In how many ways can a committee of 1 Men & 3 Women can be formed from a group of 3 Men & 4 Women? Define following terms with suitable example. i) Subset ii) Equal set iii) Singleton set / Unit set iv)Universal set v) Infinite set.

Bachelor of Computer Application (BCA) Part - I SEM-II, Ext

Day and Date	Part	Subject Name			
Friday		Introduction to	Time	Code	Marks
26/04/2019	n	Problem Solving and	11.00 AM TO	2102	9950
nstructions: All	question	s are compulsory.	1.30 PM	2103	75

on A) Fill in the blanks:	Section			
1) A file can be a text of	-			05
1) A file can be a text fil 2) The Process of alloca 3) A is a	e or	dep	ending upon its co	ntents
				types.
by Eden string is termina	ted with	n hold the memory	address of another	variable
Q.1 b) State True or False		racter		
 Arrays allow random 	nccess			05
Expression *ptr++ an	d++*ntr are o			
3) Structure and Union a	re same			
In memory allocation All files must be applied.	functions poi	nters one		
All files must be expli	citly closed	mers are not used		
Q.2 A) Choose correct answer	s from optio	ne (Single)		
1) "&" is called as	in no	inter consent		0:
a) Conditional Op	erator	b) Logical Opposite	<u>.</u>	
b) Address Opera	or	d) None of these		
In C, if you pass an ar	ray as an argu	iment to a function	, what actually or	ets
passeur				010
a) Value of eleme	nts in array	b) First element	of the array	
c) Base address of	the array	d) Address of the	ne last element of	array
Presence of code like '	s.t.b = 10 in	ndicates		
 a) Syntax Error 	b) S	tructure		
 c) double data type 	d) A	n ordinary variabl	e name	
4) A line drawn in the bac	ekground col	or is		
a) Visible	아이라 그리를 되어 먹는 사람들이 모르겠다.) Invisible		
c) Visible or Invisi	The state of the s		26	
2.2 B) Choose correct any two				10
1) Using and			any talamala	10
a) line() b) re	ctangle()	c)notycen()		
u) mic() b) ic	ctaligic()	c)porygon()	d) init()	

05

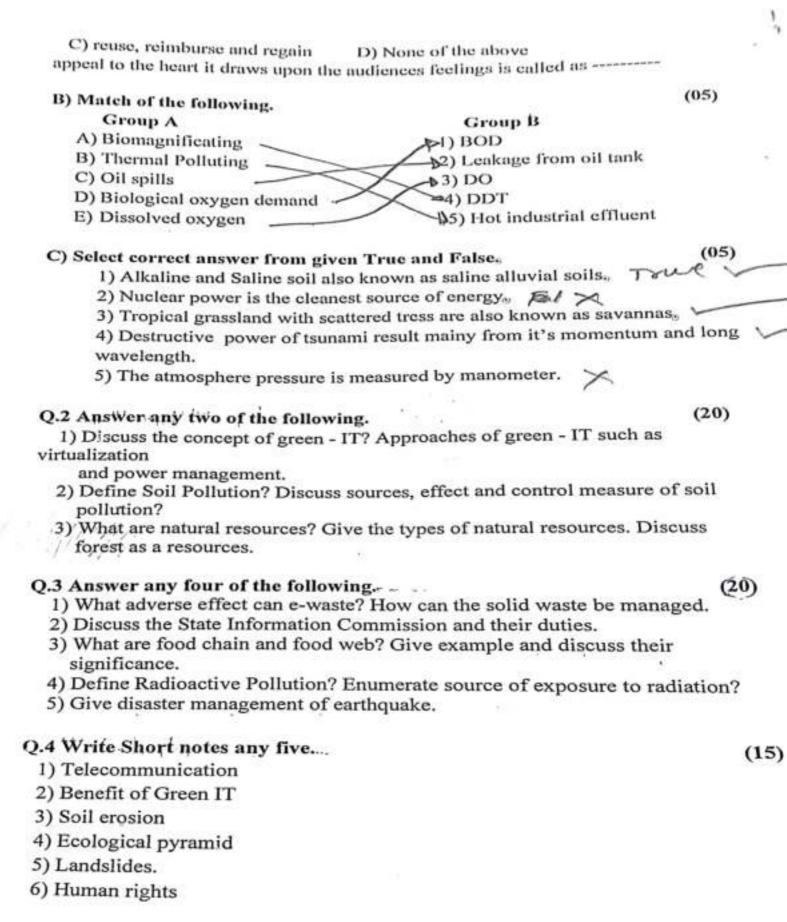
2) A is a group of data elements that may have different data types are collected together in and d) Union b) structure c) array a) pointer 3)These are function related to the FILE Concept d) fclose() b)printf() c) fopen() a)clrscr() 4) Which functions are used to allocate memory d)malloc() c) calloc() b) int a) free() 5) which are following Syntax of code same d)i[i] b)i[arr] c) arr[arr] a) arr[i] 20 O.3 Write a short note on following (any Five) 1)What is Array? Explain with example 2) What is Pointer? Explain with example 3)Give difference between Structure and Union 4) Write a C Program of using Recalloc() function 5)Explain fopen() function, and describe different types of mode used in 6)Write important applications of computer graphics Section - II Instructions: 1) Answer any six questions from the following. 2) Each question carries five marks. Q.4 A) Explain multidimensional array and write a program to accept two dimensional array as matrix and print it on screen. B) Explain array and string and write a c program to take your name as a input and write it on screen C) Write a C program to write addition of two matrixs. D) Write a C program to show working of calloc() and free() function. E) Explain Raster method with diagram. F) What is file? Explain different operation of file. G) Explain gets() and puts() function. H) Explain different devices used in Computer Graphics as Input and Output devices. .(Each two devices) Explain graphics function with example as line() and rectangle() J) What is Structure ? Explain it with example.

30

SHA HID VIRPATNI LAYMINA MERSEY WOMEN'S UNIVERSITY SHAHID VIRPATNI LAXMI MAHAVIDYALAY, TITAVE

	Bac Part	riciof of Com	VIDYALAY	, TITAVE	RSITY
Day and Date	Part	- II SEM-II, Examination Subject Name	: April2019		
Wednesday 27/04/2019	n	Environment Science &	7774	Code	Marks
		RTI s are compulsory.	11.00 AM TO 1.30 PM	2104	75

Pulsory.	J F M
Q.1 (A) Select correct answer from given alternativ 1) Acid rain is formed due to contribution from the fol A) Methane & Ozone C) Methane and S.	lowing pair of seem
The concentration of which gas is highest in our en A) O2 B) H C) N	vide and Sulpur dioxide vironment.
3) Which of the following are the example of municip	oal and Industrial discharged
A) Non point source of polluting C) Point source of pollution	B) Agricultural runoff
4) Which of the following is not as consequence of gl	D) Irrigation lobal warming.
A) Kishig sea level B) Increased agricu	ultural productivity was 14 1
C) Worsening health effect D) Increased storm 5) Which of following is a logical sequence. A) Producer – Decomposer – Consumer B) Decomposed – Consumer – Producer C) Producer – Consumer – Decomposer D) Decomposer – Consumer – Producer 6) Green computing or Green IT is the study and pra I) Designing, II) Manufacturing, III) Disposing of computer associated subsystem	actice of
A) Only I B) I and II C) All of the abo	
A) Land filing B) Compositing C) Recy 8) The law RTI is passed by parliament in which ye A) 2001 B) 2005 C) 2013 D) 20 9) Which of the following is the smallest soil partic	ear. 016
10) The three R's of waste management hierarchy	D) Silt is / are redox and reoxidation



Bachelor of Computer Application (BCA)

Part - I SEM-II, Examination: Apr.-2018.

Day and Date		- I SEM-II, Examinatio	Time	Code	Marks
and Date	Part	Subject Name	11 00 ABA		A 25 Y 10 COS-
Friday 24/04/2019	11	Introduction to Logic Circuits and Digital Design	11.00 AM TO 1.30 PM	2101	75

- one inputs and n data output.

 3) Boolean algebra was invented by in 1854
- A NOT gate is also known as -----.

Instructions: All questions are compulsory.

5) Base of Octal number system is -----

Q.1 B) State True or False

√ 1) Decimal value of hexadecimal E is 14

- 2) The product-of-sums (POS) is basically the ORing of ANDed terms
- 3) Binary number system has digits 2 and 1.
- √ 4) In Boolean algebra,
 ¬ = A.
 - 5) The binary value of 1010 is converted to the product term ABCD.

Q.2 A) Choose correct answers from options (Single)

I) In Boolean algebra, the OR operation is performed by which properties?

- a) Associative properties
- b) Commutative properties
- c) Distributive properties
- d) All of the Mentioned
- 2) According to Boolean law: A + 1 = ?
 - a) 1 b) A
- c) 0'
- d) A'
- 3) In NAND Gate Output is 0 if any input is
- a) 0 b)1 c) all input 1 4) Half adder circuits requires two
 - a) Inputs
 - b) Outputs
- c) Digits

d)none

d) Both a and b

- 5) Full adder circuits requires two
 - a) Inputs
- b) Outputs
- c) Digits
- d) Both a and b

05

05

Q.2 B) Choose co	rrect any two	answers fro	om option	in.	10
1) Below are the					
n) Not	b) AND	c)NAND	d)NOR	3	
2) Below are bas		100000000000000000000000000000000000000	22		
n) OR	b) NOT	c) EX-NO	R	d) EX-OR	
3)Below are sequence a)JKFF			483963	NAMES :	
	b)SRFF	c) NAND	d) V	1OR	
 Which is used NAND 	by NOT				
	b) NOT	c) Half A	dder	d)Full Adde	
5) Which is used	b) Next				
a) NAND	b) NOT	c) Half S	ubtractor	d)Full Sul	otractor
0.3 Write a short	note on follo	wing (any I	Five)		20
1)What is Numb	er System? E	xplain in bri	ef.		
2)Explain Decim	al Number s	ystem			
3)What is binary	logic and ex	plain its fund	ction or o	peration	
4) Explain Basic	Gates with t	ruth table an	d circuit	diagram	
5) Convert Binar	v to Decimal			and and	
2) (110	010.11)2 2	-75 W(10	1110132	93	
6) What is sague	atial airavit a	0) (10	11101)2	7-	
6) What is sequent	itiai circuit e	xpiain with	diagram		
		Section -	II		
Instruction	s: 1) Answe	r any six ar	estions	from the fol	lowing
	2) Fach o	uestion car	reios fivo	manka	
	2) Each q	uestion car	ries live	marks.	30
A) Explain J K	FF with blo	ock diagram	, truth ta	ble and circ	uit diagram
B) Explain 4:1	Multiplexer		•		
C) What is Univ		Tigt thom			
D) Write Explai			t) form		
E) Simplify below	ow expression	on			
\ \(\overline{\sigma} = \overline{\sigma} \)	. D. 5	5 50			V.
a) (A+B)+(A-B) A'B'C'+A'B	+B). B+	13 = 13 -	1 1 5	(B-C))
b) A'B'C'+A'B	'C+A'C'	A- (B+L) 1	5 5 6	
F) Explain Mint	erm and Ma	vterm			
- 1 1 1 1 1 1 1 1.					
G) Explian 2 va		A			
I) Design 4:1 M	fux by using	2:1 Mux.			
Explain Demi			iagram s	an dite eve	mple
		iai olock d	agrain a	an a no exa	inpie
) Explain Half	Adder.				
and				alle de	

Bachelor of Computer Application (BCA) Part - I SEM-II, Examination: Apr. -2018.

	Lui	t - I SEM-II, Examinatio	n: Apr2018.		
Day and Date +	Part	Subject Name	Time	Code	Marks
Friday 25/04/2019	m	Discrete Structures & Graph Theory	11.00 AM TO 1.30 PM	2102	75

Instructions: All questions are compulsory.	
. Section	-1
Q.1 A) Fill in the blanks: 1) A is an ordered ed. 2) A set which contain only one element 3) A Relation R on set A is called-Rec. 4) In a graph their is an edge from a noc. 5) are the different ways in	t is called———————————————————————————————————
arrange. Permutation.	. 05
 Q.1 B) State True or False 1) Every element in the co domain is the domain. 2) Finite set is also called equal set. 3) Graph is a non-linear data structure 4) Permutation are the different ways arrange. 5) Ø € (1,2,3). 	= -
) A digraph in which each pair of vert	ang power set of the A. },{1,3,9}} n of objects. Set d) Proposition. ne word 'LEADER' be arrange? None of these Subset.
known as a) Directed graph c) Asymmetric diagraph	b) Undirected graphd) simple graph

Q.2 B) Choose correct any two answers from options. 10 Pictorial representation of Sets represented by closed figures are called----(b)-Venn diagram c) Function d) Set diagrams! A relation is an equivalence relation if it is Reflexive------ & ------(a) Transitive √b) symmetric c) antisymmetric d) none of these 3) Which are the following is the well defined set. All the colors in the rainbow. b)All the honest members in the family. c)All the prime no's less than 100. d)None of these. 4) The set of all x values is called ---- and the set of all y values is called----a) Set 1 Domain c) Relation (Range. Set can be classified as ---(a) Finite b) Graph (c) Infinite d) Range Q.3 Write a short note on following (any Five) 20 1) Inverse of Function Directed & Undirected Graph. Types of Sets. Explain GCD & LCM with example. Roster & Set Builder form. Complement of graph. 7) Reflexive relation & Antisymmetric relation Section - II Instructions: 1) Answer any six questions from the following. Each question carries five marks. 30 Q. 4 A) Let f(x) = x + 2 & g(x) = 2x + 1 find (fog) (x) & (gof) (x).B) Consider $S = \{1,2,3,4,5\}$ $R = \{ (1,1),(2,2),(3,3),(4,4),(5,5), \}$ (1,2),(2,1),(2,3),(3,2),(1,3),(3,1)Find [1], [2], [3], [4],[5]. C) How many different word can be formed with the letter of the word 'SUPER' such that the vowels always come together? D) Shows 1+2+----+n=n(n+1)/2 by using principal of Mathematical induction E) Explain complement of graph & sub graph with example. F) Consider the set $A = \{a,b,3,d\}$ compute P(A) the Power set of A. G) Solve the recurrence relation fn = 5fn - 1 - 6fn - 2 where f0 = 1 & f1 = 4. H) In how many ways can a committee of 1 Men & 3 Women can be formed from a group of 3 Men & 4 Women? I) Define following terms with suitable example. i) Subset ii) Equal set iii) Singleton set / Unit set iv)Universal set v) Infinite set.

Bachelor of Computer Application (BCA) Part - 1 SEM-II, Examination: Apr.-2018.

Time

11.00 AM

TO

Code

2103

d) Address of the last element of array

Marks

75

Subject Name

Introduction to

Programming and

Problem Solving using

Day and Date

Friday

26/04/2019

Part

20/04/2019	Problem Sol	Former companies.	1.30 PM	2100	1	
Instructions: All c	questions are compulso	ry.			1	
O.1 A) Fill in the		ection – I				05
Q.1 A) I in the	nn be a text file or	Suspaid			- Ten months	
2) The Prov	case of allocating man	211	de	pending up	on its conte	normic.
2) 1 8 1 1 6	cess of allocating men	nory during	program exe	base 4166	aned	nes all
3) A	is a variable t	bat can bel	ents that may	y nave diffe	Conother to	riable.
4) A	ing is terminated with	nat can not	the memory	address o	another va	Table
5) Each stri	ing is terminated with	a character	1.21	**		05
Q.1 B) State True	or False					0.5
- 1) Arrays a	llow random access.					
F 2) Expressi	on *ptr++ and ++*ptr	r are same				
F 3) Structure	and Union are same	•	100			
F 4) In memo	ry allocation function	ns pointers	are not used			
TEN All files	must be explicitly clo	osed				-
Change CO	rrect answers from	options (S	ingle)			05
4 5 10 to 11 1 - 4 to	Had ac	III DOMINGE	COHOOPE			
100	- ditional (Ingrator	011	Elear Obere	tor		
1.1 P. 1.		A) N	one of these			
O FAC	ddress Operator ou pass an array as a	n argumen	t to a function	on, what a	ctually get	S
passed?	lue of elements in a	rray b)	First eleme	ent of the	array	
a) Va	lue of elements in a	av d)	Address of	the last e	lement of	array

c) Visible or Invisible Q.2 B) Choose correct any two answers from options.

A line drawn in the background color is

e) Base address of the array

a) Syntax Error

a) Visible

c) double data type

3) Presence of code like "s.t.b = 10" indicates

1) Using and function ,we can draw triangle

c)polygon() d) init() b) rectangle() a) line()

_b) Structure

(b) Invisible

d) An ordinary variable name

d) None of theses

10

concer	CO Libertine	that may have diffe and c) array	
a) pointer	_b) structure	Ell E Consent	*d) Union
3)These are funct	ion related to u	ie FILE Concept	020220000000
a)clescr()	DJDrining	C) ropen()	(d)-fclose()
4) Which function	is are used to	allocate memory	
n) free()	b) int	~c)-calloc()	d)malloc()
5) which are follo	wing Syntax o	f code same	, , , , , ,
n).arr[i]	b)i[arr]	c) arr[arr]	d)i[i]
ite a short note	on following (any Five)	
What is Array? E:			
어린 이 마일하다. 이 시간입니다 네트리아 중에 모르는데?	2200 아마스 이번 이번 나는 아니다 [15] 하다	507070 B 7070	

Q.3 Wr

2) What is Pointer? Explain with example

- 3)Give difference between Structure and Union
- 4) Write a C Program of using Recalloc() function
- 5)Explain fopen() function. and describe different types of mode used in
- 6)Write important applications of computer graphics

Section - II

Instructions: 1) Answer any six questions from the following. 2) Each question carries five marks.

30

20

- Q.4 A) Explain multidimensional array and write a program to accept two dimensional array as matrix and print it on screen.
 - B) Explain array and string and write a c program to take your name as a input and write it on screen
 - C) Write a C program to write addition of two matrixs.
 - D) Write a C program to show working of calloc() and free() function.
 - E) Explain Raster method with diagram.
 - F) What is file? Explain different operation of file.
 - G) Explain gets() and puts() function.
 - H) Explain different devices used in Computer Graphics as Input and Output devices. .(Each two devices)
 - I) Explain graphics function with example as line() and rectangle()
 - J) What is Structure? Explain it with example.

**************All The Best***************

SHAHID VIRPATNILLAND ARTHACKERSEV WOMEN'S UNIVERSITY SHAIIID VIRPATNI LAXMI MAHAVIDYALAY, TITAVE

Bachelor of Computer Application (BCA) Part - II SEM-II, Examin

Day and Date	Part	Subject Samination	April -2019		
700000000000000000000000000000000000000		Subject Name	Time	Code	Sylverion
Wednesday 27/04/2019	11	Environment Science & RT1	TO	2104	75
All .	questions	are compulsory.	1.30 PM	The second section is	17.0

		Section	- 1	
Q.1 (A) Select con 1) Acid rain is for A) Methane & C C) Methane and	med due to e Ozone I Sulpur diox	cides D)	rom the followi Oxygen and N Carban dioxide	itrous oxide and Sulpur dioxide
2) The concentrati	on of which	C) N	D) CO2	nment.
A) O2	B) H			nd Industrial discharged
7 V 200	mowing are			and an argentarged
pipe. A) Non point so	ource of poll	luting		B) Agricultural runoff
ON Detect course	of pollution	1		D) Irrigation
4) Which of the fo	ollowing is n	ot as conseq	uence of globa	l warming.
A) Rising sea le	vel	B) Incre	ased agricultur	at productivity worldwide
C) Worsening h	ealth effect			quency and intensity
5) Which of follow	wing is a log	gical sequence	e.	
A) Producer – D	ecomposer	- Consumer		
B) Decomposed	– Consume	Decemposes		
C) Producer – C	consumer –	Produce		
D) Decomposer 6) Green computi	- Consume	TT is the st	ndy and practic	ce of
	ng or Green	i i is the se	ady unio present	
I) Designing,				
II) ManufacturIII) Disposing	ing,	r associated	subsystem us	ing
	of compute	C) A1	l of the above	D) None of these
A) Only I	B) I and II			
7) Which method	use the disj	pose e wasii	C) Recycle	er D) Incineration
 A) Land filing 	B) Con	npositing		50 COM #50 COM #50 COM
8) The law RTI is		parliament	n which year.	
	B) 2005	C) 2013		
9) Which of the f				
A) Clay I	Fine sand	1900 F. 1900 F	경찰에 하면 작가진 것	Silt
10) The three R's	of waste m	nanagement	hierarchy is /	are
A) Reduce, reu	se and recy	cle B	Reduce, red	ox and reoxidation

Bachelor of Computer Application (BCA)

Part - II SEM-II, Examination: April.-2019.

Day and Date	Part	Subject Name	Time	Code	Marks
Wednesday 27/04/2019	11	Environment Science & RTI	11.00 AM TO 1.30 PM	2104	75

Instructions: All questions are compulsory.

Section - I				
Q.1 (A) Select correct answer from given alternatives. 1) Acid rain is formed due to contribution from the following pair of gases. A) Methane & Ozone B) Oxygen and Nitrous oxide C) Methane and Sulpur dioxides D) Carban dioxide and Sulpur dioxide 2) The concentration of which gas is highest in our environment. A) O2 B) H C) N D) CO2 3) Which of the following are the example of municipal and Industrial discharge pipe.	21			
A) Non point source of polluting B) Agricultural runof	P) A animultural arm off			
C) Point source of pollution D) Irrigation				
Which of the following is not as consequence of global warming.				
	B) Increased agricultural productivity worldwide			
C) Worsening health effect D) Increased storm frequency and intensity	D) Increased storm frequency and intensity			
5) Which of following is a logical sequence.				
A) Producer – Decomposer – Consumer				
B) Decomposed – Consumer – Producer				
C) Producer – Consumer – Decomposer				
D) Decomposer - Consumer - Producer				
) Green computing or Green IT is the study and practice of				
I) Designing,				
II) Manufacturing,				
III) Disposing of computer associated subsystem using				
A) Only I B) I and II C) All of the above D) None of the	se			
Which method use the dispose e waste				
A) Land filing B) Compositing C) Recycler D) Incineration	on			
The law RTI is passed by parliament in which year.				
A) 2001 B) 2005 C) 2013 D) 2016				
Which of the following is the smallest soil particle.				
A) Clay B) Fine sand C) Gravel D) Silt				
The three R's of waste management hierarchy is / are				
() Reduce reuse and recycle B) Reduce redox and reoxidation	2.0			

C) reuse, reimburse and regain appeal to the heart it draws upon the audiences feelings is called as -----B) Match of the following. (05)Group A A) Biomagnificating Group B B) Thermal Polluting 1) BOD Leakage from oil tank C) Oil spills D) Biological oxygen demand 3) DO 4) DDT E) Dissolved oxygen 5) Hot industrial effluent C) Select correct answer from given True and False. (05) Alkaline and Saline soil also known as saline alluvial soils. Nuclear power is the cleanest source of energy. Tropical grassland with scattered tress are also known as savannas. 4) Destructive power of tsunami result mainy from it's momentum and long wavelength. The atmosphere pressure is measured by manometer. (20)Q.2 Answer any two of the following. 1) Discuss the concept of green - IT? Approaches of green - IT such as virtualization and power management. 2) Define Soil Pollution? Discuss sources, effect and control measure of soil pollution? 3) What are natural resources? Give the types of natural resources. Discuss forest as a resources. (20)Q.3 Answer any four of the following. What adverse effect can e-waste? How can the solid waste be managed. Discuss the State Information Commission and their duties. 3) What are food chain and food web? Give example and discuss their significance. 4) Define Radioactive Pollution? Enumerate source of exposure to radiation? Give disaster management of earthquake. (15)Q.4 Write Short notes any five. 1) Telecommunication 2) Benefit of Green IT Soil erosion 4) Ecological pyramid Landslides. Human rights

Bachelor of Computer Application (BCA)
Part - I SEM-II, Examination: Apr.-2018.

Subject-Name	Time	Code	Marks
Discrete Structures & Graph Theory	11.00 AM TO 1.30 PM	2102	75
	Discrete Structures &	Discrete Structures & 11.00 AM TO	Discrete Structures & 11.00 AM TO 2102

Section - I

A------ is an ordered collection of objects.
 A set which contain only one element is called------

c) Asymmetric diagraph

Q.1 A) Fill in the blanks:

3) A Relation R on set A is calledIf a ∈ A is related to a (a	R a).
4) In a graph their is an edge from a node to itself, it is known as	
5) are the different ways in which a collection of items can	a be
. arrange.	
. arrange.	
Q.1 B) State True or False	05
 Every element in the co domain is the image of at least one element domain. 	t in the
2) Finite set is also called equal set.	
3) Graph is a non-linear data structure.	
 Permutation are the different ways in which collection of item car arrange. 	ı be
5) Ø € (1,2,3).	
	0
Q.2 A) Choose correct answers from options (Single Ans.)	
1) If A = (1,3,9) then which of the following power set of the A?	
i){ {1,3},{3,9},{3,1},{9,3},{1,9}}	
Π) { {},{1},{3},{9},{1,3},{1,9},{3,9},{1,3,9}}	
iii) {{Ø},{1,4},{1,9},{3,7},{A}}	
iv) $B = \{\{1,3\},\{3,9\}\}$	
2) Ais an ordered collection of objects.	
a) Relation b) Function c) Set d) Proposition.	~~?
3) In how many ways can the letter of the word 'LEADER' be arranged	ger
a) 72 b) 144 c) 360 d) None of these.	
4) Power set of empty set has exactly Subset.	
a) One b) Two c) Zero d) Three.	
a) One b) 1 wo c) 2010 d) 1 mee.	no edges
5) A digraph in which each pair of vertices have either on edge or r	to cages
known as	
a) Directed graph b) Undirected graph	

d) simple graph

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c)All the prime no's less than 100. 4) The set of all x values is called ----- and the set of all y values is called-----. a) Set b) Domain c) Relation d) Range. Set can be classified as ----a) Finite b) Graph c) Infinite d) Range Q.3 Write a short note on following (any Five) 20 1) Inverse of Function Directed & Undirected Graph. Types of Sets. Explain GCD & LCM with example. Roster & Set Builder form. Complement of graph. 7) Reflexive relation & Antisymmetric relation Section - II Instructions: 1) Answer any six questions from the following. 2) Each q uestion carries five marks. Q. 4 A) Let f(x) = x + 2 & g(x) = 2x + 1 find (fog) (x) & (gof) (x). B) Consider $S = \{1,2,3,4,5\}$ $R = \{ (1,1),(2,2),(3,3),(4,4),(5,5), \}$ (1,2),(2,1),(2,3),(3,2),(1,3),(3,1)Find [1], [2], [3], [4],[5]. C) How many different word can be formed with the letter of the word 'SUPER' such that the vowels always come together? D) Shows 1+2+-----+n = n(n+1)/2 by using principal of Mathematical induction E) Explain complement of graph & sub graph with example. F) Consider the set $A = \{a,b,3,d\}$ compute P(A) the Power set of A. G) Solve the recurrence relation $f_0 = 5f_0 - 1 - 6f_0 - 2$ where $f_0 = 1 & f_1 = 4$. H) In how many ways can a committee of 1 Men & 3 Women can be formed from a group of 3 Men & 4 Women? Define following terms with suitable example. i) Subset ii) Equal set iii) Singleton set / Unit set iv)Universal set

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d) none of these

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Q.2 B) Choose correct any two answers from options.

b) symmetric

b) Venn diagram

Which are the following is the well defined set.

a) All the colors in the rainbow.

a) Transitive

1) Pictorial representation of Sets represented by closed figures are called-

2) A relation is an equivalence relation if it is Reflexive----- & -----

c) Function
 d) Set diagrams.

b)All the honest members in the family.

c) antisymmetric

d)None of these.