





MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

Sponsored by CMR Educational Society

(Affiliated to JNTU, Hyderabad, Approved by AICTE - Accredited by NBA & NAAC - "A" Grade - ISO 9001:2015 Certified) Maisammaguda, Dhulapally (Post Via Hakimpet), Secunderabad – 500100, Telangana State, India. Contact Number: 040-23792146/64634237, E-Mail ID: <u>mrcet2004@gmail.com</u>, website: <u>www.mrcet.ac.in</u>

DEPARTMENT OF INFORMATION TECHNOLOGY III B.TECH I SEMESTER R18 REGULAR PREVIOUS QUESTION PAPERS



LIST OF SUBJECTS

CODE	NAME OF THE SUBJECT
R18A1205	Artificial Intelligence
R18A0507	Design and Analysis of Algorithms
R18A0555	Data Visualization
R18A0353	Enterprise Resource Planning
R18A0464	Embedded Systems
R18A0513	Python Programming
R18A0517	Web Technologies

R18

Code No: R18A1205 MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India) **III B.Tech I Semester Regular Examinations, February 2021 Artificial Intelligence** (EEE, CSE & IT) **Roll No** Time: 2 hours 30 min Max. Marks: 70 Answer Any Five Questions All Questions carries equal marks. *** Explain about uninformed search strategies with examples 1 [14M] 2 a) Define Heuristic search? What are the advantages of Heuristic search? [7M] b) Write about any one Heuristic technique [7M] 3 Discuss A* algorithm in detail. [14M] 4 Give a brief note on Alpha-Beta Pruning [14M] 5 Explain how to handle uncertain knowledge in detail. [14M] 6 Write about the Belief Bayesian Networks [14M] 7 a. . Discuss about Winston's Learning Program. [7M] b. Briefly describe learning in Problem Solving [7M] 8 Discuss various ways of knowledge acquisition. [14M]

Code No: R18A0507 MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India) III B.Tech I Semester Regular Examinations, February 2021 Design and Analysis of Algorithms

						(I	T)									
		Roll I	No													
Time: 2 hours 30 minMax. Marks: 70												70				
			I	Ansv	ver A	ny F	Tive	Ques	tion	S						
			All	Que	stion	is car	ries	equa	l ma	rks.						
						**	**									
1.a	a Write a non-recursive algorithm for finding the Fibonacci Sequence and also											[7M]				
1 h	analyze its time complexity.										[7]]					
1.0	Explain t	ne control	abstract	tion	or ar	vide	and	conq	uer	netn	ou.					
2.a	Explain i	n detail abo	out Qui	ck so	ort w	ith e	xamj	ple.								[7M]
2.b	Define A	lgorithm?	Explain	abo	ut Pe	erfor	manc	e Ai	nalys	sis of	Alg	orith	ms.			[7M]
3. a	Let $w = \{$	5,7,10,12,	15,18,2	0} a	nd m	n = 33	5.Fin	d all	pos	sible	sub	sets o	of w	that	sum	[7M]
21	to m. Dra	w the port	ion of t	he st	ate s	pace	tree	that	is ge	enera	ted.			•	T ' 1	177 1 71
3.D	List the	operations	perfor	mea	on	aisjo Limmi	oint	sets.	JUS	tiry hm	now	Col	lapsi	ing .	Find	
1.0	What is	Spanning	Troo? V	Write	$\frac{1}{2}$ its	A pr	licat	ions	gorn and	nn. Cor	nnor	o tha	o Dri	im's	and	[8M]
4. a	What is Spanning Tree? Write its Applications and Compare the Prim's and [8 Kruskal's approaches to find spanning tree															
4.h	Explain 8	S approach S aueens pr	oblem i	using	o hac	ng u k tra	ckin	σ								[6M]
-1.0 5.a	Explain a	and write a	greedy	algo	rithr	n for	Job	s Seai	ienci	ing v	vith 1	Dead	llines	s.		[8M]
5.b	Is Dynan	nic program	iming i	s bes	st co	mpar	red to	o Gre	edy	meth	nod?	Justi	ify.			[6M]
6.a	Obtain th	e solution	to knap	sack	prol	olem	by g	reed	y me	ethod	1 n=7	7,	5			[7M]
	(p1,p2,p	3,p4,p5,p6,	,p7)=(1	0,5,1	5,7,	6,18,	3)		•							
	(w1,w2,w	v3,w4,w5,v	v6,w7)	=(2,3	3,5,7	,1,4,	1) an	d m=	=15.							
6.b	Explain l	now to find	l single	sou	rce s	short	est p	aths	of a	give	en di	recte	d gr	aph	with	[7M]
-	example.		0	• .								1				
7 .a	Solve the	e given inst	ance of	trav	ellin	g sal	espe	rson	prot	lem	usin	g dy	namı	IC		[8M]
	programi 1	ning. 2	3	1												
	1 0	10	J 15	2	0											
	$\frac{1}{2}$ 5	0	9	1	0											
	3 6	13	0	1	2											
	4 8	8	9	0												
	(Note: 1,	2,3 and 4 r	epresen	t ver	tices	of g	raph)								
7.b	Discuss a	bout chain	ed mati	rix n	nultip	olicat	ion.									[6M]
8. a	Compare	LIFO BB	and FI	FO]	BB?	Drav	<i>w</i> the	e stat	e sp	ace t	trees	of L	JFO	BB	and	[8M]
0.	FIFO BB	9? 	•11						-							
8.b	With a neat diagram illustrate the relationship among P, NP, NP-Complete & NP- Hard problems											[6M]				

III B.Tech I Semester Regular Examinations, February 2021

Data V	isua	lization
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(IT)													
Roll No													

Time: 2 hours 30 min

Max. Marks: 70

RA

Answer Any **Five** Questions All Questions carries equal marks. *****

1 2	a) Explain sampling process and types of sampling.b) What are the data types available in R and brief on the types with examplesa) Discuss in brief about the normal distribution of random variables.b) List the descriptive statistics functions using R. Explain each function with an	[6M] [8M] [7M] [7M]
2	example.	F 43 43
3	a) Define Package. Give the syntax for installing and loading Packages in R. b) List Data Manipulation packages in R and briefly discuss their functionality	[41/1] [10M]
4	Explain LUBRIDATE package and its functions each with an example.	[10M] [14M]
5	Explain how to merge and join different data frames using pandas. Give an example.	[14M]
6	a) Discuss in brief the purpose of pandas library and how a data frame created using pandas	[14M]
	b) Explain how slicing can be done on pandas data frames.	
7	Write short notes on the following: a) Pie Chart b) Bubble plot	[14M]
	c) Bar chart	
	d) Area plot	
8	Explain how data visualization can be done by using Seaborn library.	[14M]

R18 Code No: R18A0353 MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India) **III B.Tech I Semester Regular Examinations, February 2021 Enterprise Resource Planning** (CSE & IT) **Roll No** Time: 2 hours 30 min Max. Marks: 70 Answer Any Five Questions All Questions carries equal marks. *** 1 What is Enterprise Resource Planning System? Discuss the benefits of the ERP. [14M] 2 Discuss about the technologies that are used to improve the capabilities of ERP [14M] system. 3 Explain briefly the various measures to be taken by the top management for **[14M]** successful implementation of ERP. 4 Analyse the different phases in ERP implementation of product life cycle. Explain [14M] it. 5 Elaborate the concept of data mining. Discuss the major characteristics and [14M] applications of data mining in business. 6 What do you mean by customer relationship management? Write down the main **[14M]** modules of customer relationship management function in ERP. 7 Explain the success and failure factor of ERP implementation [14M]

8 Explain various extended ERP systems in detail. [14M]



Code No: R18A0464 MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India) III B.Tech I Semester Regular Examinations, February 2021 Embedded Systems (CSE & IT)

		(CSE	αI.	I)								
	Roll No												
Time: 2 hours 30 minMax. Marks: 70											70		
Answer Any Five Questions													
All Questions carries equal marks.													
1												F1 43 4 3	
1	with the help of Architectur	re expla	in the	e opei		n or	8086	micr	opro	cess	sor		[14][1]
2	2 Define addressing mode? And explan about different types of addressing modes										[14M]		
	of 8086 microprocessor												
3 (a)	What is an embedded syste	em? Evi	alain	the c	liffa	rent	annli	catio	ne o	fen	nhedi	hed	[7]
J (a)	what is an embedded syst		Jiam			CIII	appn	callo	113 0		incut	acu	[7M]
(b)	systems.												
	Explain the different classif	fications	of en	mbed	lded	syst	ems.	Give	an	exar	nple	for	
	each.												
4 (a)	Explain the different character	teristics	of em	nbedd	led s	yste	ms in	deta	il?				[7M]
(b)	What is operational quality	attribut	es? E	xnlai	n the	• • imi	norta	nt on	erati	ona	l ana	litv	[7M]
	ettributes to be sensidered in		-bd-d	npiai		, da	,	ni op	ciuti	ona	quu	nty	
	auridules to be considered in	n any en	ibeaa	led sy	sten	n des	sign						
5	Explain the components of a	a typical	embe	eddec	l sys	tem	in de	tail					[14M]
6 (a)	Explain about I2C bus interf	face											[7M]
	Explain about SPI bus interf	face											
(b)	Explain dood of 1 ous men	luce											[7M]
_													
7	Explain the different 'embed	dded firr	nware	e des	ign'	appr	oach	es in	deta	il			[14M]
8	What is the most important	feature i	n java	a that	mał	ces it	t a hig	ghly ı	usefu	ıl hi	gh-le	evel	[14M]
	language for an embedded s	system d	esign										

Code No: R18A0513 MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India) III B.Tech I Semester Regular Examinations, February 2021 Python Programming

			(CSE	& I	T)							
	Roll No												
: 2 hours 3	0 min									N	Max.	Mark	ks: 70
		Answ	ver A	ny F	Five (Ques	tions	5					
	All	Que	stion	s cai **	r1es **	equa	l ma	rks.					
What are	lists and tuples?	What	is th	ie ke	y dif	ferer	nce b	etwe	en th	ne tw	vo?		[7M]
Write a Python program to multiplies all the items in a list.												[7M]	
What are	the advantages ar	nd dis	sadva	antag	ges o	f the	Pyth	non p	orogr	amn	ning		[7M]
language	?												[7M]
Write a P	ython program to	sum	all t	he ite	ems i	in a l	ist.						
Explain a	bout loop stateme	ents i	n Py	thon	Prog	gram	ming	g wit	h exa	ampl	es.		[14M]
a) List di	fferent conditiona	l stat	eme	nts ii	n pyt	hon	with	appr	opri	ate e	xam	ples.	[4M]
b) Write	a Python program	n to	find	the	grea	atest	com	mon	div	isor	(gcd) of ty	wo [10M]
intege	rs.												
a) How a	re arguments pass	ed by	y val	ue o	r by	refer	ence	?					[7M]
b) Explai	n local and global	vari	able	in py	ythor	n wit	h an	exan	nple.				[7M]
a) How t	o add and remove	valu	es to	а ру	thon	arra	y? V	Vith	an ex	kamp	ole		[4M]
b) What	s map function in	Pyth	on?										[10M]
a) How t	o get indices of N	max	imur	n val	lues	in a l	Num	Py a	rray	?			[7M]
b) What	is module and pac	kage	in P	ytho	n?								[7M]
a) Explai	n the terms Class, (Objec	rt, Ał	ostrac	ction	and	Enca	psul	ation	ı witl	h exa	amples	5 [10M]
b) What a	are the features of	Djar	ngo?										[4M]
	 2 hours 3 What are Write a I What are language Write a P Explain a a) List di b) Write integer a) How a b) Explai a) How to b) What i a) How to b) What i a) Explai 	Roll No 2 hours 30 min All What are lists and tuples? We write a Python program to What are the advantages are language? Write a Python program to Explain about loop statemed a) List different conditionare b) Write a Python program to Explain about loop statemed a) List different conditionare b) Write a Python program to Explain about loop statemed a) List different conditionare b) Write a Python program b) Write a Python program a) How are arguments passe b) Explain local and global a) How to add and remove b) What is map function in a) How to get indices of N b) What is module and pace a) Explain the terms Class, O b) What are the features of	Roll No 2 hours 30 min Answer All Quest What are lists and tuples? What Write a Python program to mult What are the advantages and dist language? Write a Python program to sum Explain about loop statements in a) List different conditional stat b) Write a Python program to integers. a) How are arguments passed by b) Explain local and global vari a) How to add and remove valu b) What is map function in Python a) How to get indices of N max b) What is module and package a) Explain the terms Class, Object b) What are the features of Djar	 Roll No Roll No Answer A All Question What are lists and tuples? What is the Write a Python program to multiplie What are the advantages and disadvalanguage? 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Write a Python program to sum all the ite Explain about loop statements in Python a) List different conditional statements in b) Write a Python program to find the integers. a) How are arguments passed by value o b) Explain local and global variable in py a) How to add and remove values to a py b) What is map function in Python? a) How to get indices of N maximum val b) What are the features of Django? 	 Roll No Roll No Answer Any Five O All Questions carries <i>****</i> What are lists and tuples? What is the key difted write a Python program to multiplies all the What are the advantages and disadvantages of language? 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(CSE & IT) Roll No Answer Any Five Questions Answer Any Five Questions All Questions carries equal maximum Answer Any Five Questions All Questions carries equal maximum Answer Any Five Questions All Questions carries equal maximum What are lists and tuples? What is the key difference b Write a Python program to multiplies all the items in a What are the advantages and disadvantages of the Pyth language? Write a Python program to sum all the items in a list. Explain about loop statements in Python Programming a) List different conditional statements in python with b) Write a Python program to find the greatest commintegers. a) a) How are arguments passed by value or by reference b) Explain local and global variable in python with an a) How to add and remove values to a python array? W b) What is map function in Python? a) How to get indices of N maximum values in a Num b) What is module and package in Python? a) Explain the terms Class, Object, Abstraction and Enca b) What are the features of Django?	(CSE & IT) Roll No Answer Any Five Questions All Questions carries equal marks. *** What is the key difference betwee Write a Python program to multiplies all the items in a list What are the advantages and disadvantages of the Python p language? Write a Python program to sum all the items in a list. Explain about loop statements in Python Programming with a) List different conditional statements in python with appr b) Write a Python program to find the greatest common integers. a) How are arguments passed by value or by reference? b) Explain local and global variable in python with an examal How to add and remove values to a python array? With the b) What is map function in Python? a) How to get indices of N maximum values in a NumPy at b) What is module and package in Python? a) Explain the terms Class, Object, Abstraction and Encapsula b) What are the features of Django?	 (CSE & IT) Roll No Answer Any Five Questions All Questions carries equal marks. **** What are lists and tuples? What is the key difference between the Write a Python program to multiplies all the items in a list. What are the advantages and disadvantages of the Python progral language? Write a Python program to sum all the items in a list. Explain about loop statements in Python Programming with exat a) List different conditional statements in python with appropri b) Write a Python program to find the greatest common divintegers. a) How are arguments passed by value or by reference? b) Explain local and global variable in python with an example. a) How to add and remove values to a python array? With an example. a) How to get indices of N maximum values in a NumPy array? b) What is module and package in Python? a) Explain the terms Class, Object, Abstraction and Encapsulation b) What are the features of Django? 	(CSE & IT) Roll No Answer Any Five Questions Answer Any Five Questions All Questions carries equal marks. *** What are lists and tuples? What is the key difference between the tw Write a Python program to multiplies all the items in a list. What are the advantages and disadvantages of the Python programm language? Write a Python program to sum all the items in a list. Explain about loop statements in Python Programming with example a) List different conditional statements in python with appropriate e b) Write a Python program to find the greatest common divisor integers. a) How are arguments passed by value or by reference? b) Explain local and global variable in python with an example. a) How to add and remove values to a python array? With an example. b) What is map function in Python? a) How to get indices of N maximum values in a NumPy array? b) What is module and package in Python? a) Explain the terms Class, Object, Abstraction and Encapsulation wit b) What are the features of Django?	(CSE & IT) Roll No Max. Max. Answer Any Five Questions All Questions carries equal marks. **** What are lists and tuples? What is the key difference between the two? Write a Python program to multiplies all the items in a list. What are the advantages and disadvantages of the Python programming language? Write a Python program to sum all the items in a list. Explain about loop statements in Python Programming with examples. a) List different conditional statements in python with appropriate exam b) Write a Python program to find the greatest common divisor (gcd integers. a) How are arguments passed by value or by reference? b) Explain local and global variable in python with an example. a) How to add and remove values to a python array? With an example b) What is map function in Python? a) How to get indices of N maximum values in a NumPy array? b) What is module and package in Python? a) Explain the terms Class, Object, Abstraction and Encapsulation with example b) What are the features of Django?	(CSE & IT) Roll No Max. Mark Max. Mark Answer Any Five Questions All Questions carries equal marks. All Questions carries equal marks. All Questions carries equal marks. Wat are lists and tuples? What is the key difference between the two? Write a Python program to multiplies all the items in a list. What are the advantages and disadvantages of the Python programming language? Write a Python program to sum all the items in a list. Explain about loop statements in Python Programming with examples. a) List different conditional statements in python with appropriate examples. b) Write a Python program to find the greatest common divisor (gcd) of two integers. a) How are arguments passed by value or by reference? b) Explain local and global variable in python with an example. a) How to add and remove values to a python array? With an example b) What is map function in Python? a) How to get indices of N maximum values in a NumPy array? b) What is module and package in Python? a) Explain the terms Class, Object, Abstraction and Encapsulation with examples b) What are the features of Django?



Code No: R18A0517 MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India) III B.Tech I Semester Regular Examinations, February 2021 Web Technologies

				(IT)							
		Roll No			-							
Time:	ا 2 hours 30) min							N	Max.	Marks	s: 70
		Al	Answer l Questic	Any Fi ons carri ***	ve Ques es equa	stion al ma	s irks.					
1	(a). Expla	in all CSS Types	s with su	itable ex	kample	S						[9M]
	(b). Creat	e a HTML form	with val	idation l	ike em	ail va	alida	tion				[5M]
2	(a). Write different i	e a Java script p input fields like t	rogram ext boxe	to displa s, check	ay user boxes	inpo , radi	ut fro lo bu	om H ttons	HTM	IL fo	orm wit	h [9M]
	(b). Creat	e HTML Tables	with ima	ages as r	ow dat	a						[5M]
3	(a). Create Well-formed and Valid XML document with either DTD or XMLSchema for library information system.Note:- You are allowed to assume your own attributes for library information								L [9M]			
	system (b). Write	PHP program to	o find av	erage of	array e	eleme	ents					[5M]
4	(a). Expla (b). Demo	in briefly about sonstrate Call by r	SAX XN eference	/IL proce in PHP	essor w with s	rith si uitab	uitab le ex	le ex amp	amp le	les		[8M] [6M]
5	(a). List Javax.serv	out some imp vlet.Htpp packag	oortant es	classes	and n	netho	ods	in J	avax	.serv	vlet an	d [8M]
	(b). Expla	un brieffy Sessio	n nandii	ng techn	iiques t	ising	Java	i serv	lets			
6	(a). Expla server	in Servlet Life c	ycle and	l list out	steps t	o dej	ploy	serv	let ir	ı Apj	plicatio	n [7M]
	(b). Demo	onstrate HTTP Se	essions v	vith exa	mple							[7M]
7	(a). Expla (b). Write	in JDBC Drivers brief notes on S	s and Lis trut's	t out ste	ps to c	onne	ct sei	rvlet	with	ı data	abase	[10M] [4M]
8	(a). Differ (b) What	rentiate JSP and a is Java Bean? E	Java Ser xplain bi	vlets riefly ho ******	w to de	eploy	Java	a Bea	ın			[9M] [5M]