I Sem BSC

MS - 2

Max. Marks :

 $(10 \times 1 = 1)$

II Semester B.A./ B.Sc. Examination, June 2009 (Semester Scheme) COMPUTER SCIENCE (Paper – II) Data Structures and Operating Systems

Time: 3 Hours

(81=Ex8)

Instruction : Answer all the Sections.

Answer any ten questions :

1. Define Data Structure.

2. Specify the size for Integer and float data type.

3. Define malloc () function.

4. List out the operations performed on stack.

5. Define Binary tree.

6. What is circuit in a graph?

7., Mention the role of Bootstrap Program.

Explain Depth first search algorithm in detail.

Evaluation two CPU soluting algorithm.

. Explain double linked list with its oth antage.

vitasi is multiprograming " What we its objectiv." SECTION – A

n. Explamitment search technique

CONCERNING AND STREET

9. What is logical address?

8. Define Response time.

10. Give the advantages of Paged memory allocation.

11. What is a file?

12. Define Thrashing.

MS - 287 SECTION ation. June 2009. Answer any five questions : (Semester Scheme) $(5 \times 3 = 15)$ 13. Write a program to insert an element into an array. 14. Explain doubly linked list with its advantage. X. Marks : 60 15. Explain linked list representation of a binary tree. Instruction : Ammer all the Sections. 16. Explain linear search technique. 17. What is multiprograming ? What are its objectives ? 18. Write a note on overlays. $(01=1\times01)$ Answer any ien questions 19. Explain File Protection Methods. Define Data Structure. SECTION - CSpecify the size for Imeger and float data I Answer any five questions : $\times 7 = 35$ 20. Write a program to create a linked list and to insert a node at the beginning. 21. Write an algorithm to convert infix expression to postfix expression with example. 22. a) Define complete binary tree. 6 What is circuit to a b) Discuss an algorithm to delete item from binary tree. 5 23. Explain Depth first search algorithm in detail. 24. Explain quick sort technique with example. 9. What is marcal address 25. What is PCB ? Explain its function in detail. 10. Give the advantages of Paged memory 26. Explain any two CPU scheduling algorithm. 27. Discuss the different types of file allocation methods.

VIJAYA COLLEGE

P.T.O.

NU - 2211

II Sem. B.C.A. Examination, November/December 2005 (New Scheme) COMPUTER SCIENCE 2 BCA 3 : Data Structures Using C

Time: 3 Hours

Max, Marks: 80.

Instruction : Answer all the Sections.

SECTION -A

Answer any eight questions. Each carries 3 marks :

1. What is linear data structure ?

2. Define a stack.

3. What is sparse matrix ? Give one example.

4. Explain circular queue with an example.

5. Define time and space complexity of an algorithm.

6. Explain any two functions used in dynamic memory allocation.

7. Translate the infix expression to post fix expression A + B/C - D.

8. What is binary search tree ?

9. Mention different operations that are performed on queue.

10. Explain linear search.

SECTION-B

Answer any four questions. Each carries 14 marks :

1.	a)	Give the classification of data structure.	5
	b)	What is a linear linked list ? How do you perform insertion operation on it ?	5
•	c)	Write a C function to find the length of a given string.	4
2.	a)	What are static variables ? Mention the rules that govern the use of static variables.	4
	b)	What are the advantages and disadvantages of a singly linked list ?	. 5
		Write a recursive function to find factorial of a number.	5 P.T.O.
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NU - 2211

3. a) Write an algorithm to delete on item from a linked list.

- b) What are the advantages of a doubly linked list over singly linked list ?
- c) Explain the process o inserting node to the end of a linked list.
- 4. a) Write an algorithm to perform PUSH, POP and display operations on a stack.
 - b) Discuss applications of a queue.
 - c) What is priority queue ? Give an example.
- 5. a) Explain different tree traversals using algorithm.
 - b) Define binary tree. Draw a binary search tree for the following nodes : 70, 15, 85, 79, 50, 10, 100.

6. a) Arrange the following numbers in descending order using radix sort :
36 72 43 21 49 90 65 50
b) Write a Group of the second second

Write a C program to implement binary search.

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MS – 287

II Semester B.A./ B.Sc. Examination, June 2009 (Semester Scheme) COMPUTER SCIENCE (Paper – II) Data Structures and Operating Systems

Time : 3 Hours

(Bister

Max. Marks : 60 Max. Marks : 60

 $(10 \times 1 = 10)$

Instruction : Answer all the Sections.

17 What is mithip regraming? What are its objective SECTION – A

Answer any ten questions :

1. Define Data Structure.

2. Specify the size for Integer and float data type.

3. Define malloc () function.

Arswar any five anestions :

Write a note on overlays

Explain doubly linked list with its advantage.

27 Discuss the different types of file allocation methods.

4. List out the operations performed on stack.

5. Define Binary tree.

 6 6. What is circuit in a graph?

⁶7. Mention the role of Bootstrap Program.

8. Define Response time.

9. What is logical address ?

10. Give the advantages of Paged memory allocation.

11. What is a file?

12. Define Thrashing.

MS - 287

 $(5 \times 3 = 15)$

H.Semester B.A. B.Sc. Eksmination, June 2009

Answer any five questions : (amado2 raizeme2)

- 13. Write a program to insert an element into an array.
- 14. Explain doubly linked list with its advantage.
- Max. Marks . 60
- 15. Explain linked list representation of a binary tree.
- 16. Explain linear search technique.

17. What is multiprograming ? What are its objectives ?

18. Write a note on overlays.

 $(01=1\times01)$

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19. Explain File Protection Methods.

SECTION - C

Instruction . Assessment all the Sections.

Answer any ien questions

(**5=7×5**) addam and **5**

 2 6. What is encuit as a graph

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Minitian the role of Boot

Answer any five questions :

- 20. Write a program to create a linked list and to insert a node at the beginning.
- 21. Write an algorithm to convert infix expression to postfix expression with example.
- 22. a) Define complete binary tree.
 - b) Discuss an algorithm to delete item from binary tree.
- 23. Explain Depth first search algorithm in detail.
- 24. Explain quick sort technique with example.
- 25. What is PCB ? Explain its function in detail.
- 26. Explain any two CPU scheduling algorithm.
- 27. Discuss the different types of file allocation methods.

	B.A/	AS		NU - 1992
Fi	nal B.Sc. Degree I	Examination, N	lovember/December	r 2005
5×3=15	(New Scl COMPU Data Structur	neme) (1992-93 FER SCIENCI	& Onwards) E (Paper – IV) S Data Processing	nA VI 1945 VI 1946
Time 2 1	four comminds of thi	ge / inustrate any	disadvantages "	
Time: 3 H	iours at one unatoret	Wilson in 1989 W	b to galacation si vo M a	ax. Marks : 70
Instruc	ction : Answer all que	stions according i	orchoice. Van nielaxit	(1)
I. Answ	ver any ten questions :		catera sentra dislati.	10×1=10
			na generational administrati	
b) Tr	ransform the infix expr	ession (A – B) * (C + D/E to postfix expr	ession.
		PBroffy cightin	What is track validation	
	hat is AVL tree ?		denne a valid cron ru	
e) De	efine Primary key.		San hidhe Giles? R ^{ight} add	
f) W	hat is sub-schema?			
g) M	ention one disadvanta	ge of centralised	lata base.	
h) W	hat is conceptual sche	ma?		
i) W	hat are transcription e	rrors ?		
j) Na	ame any two mathema	tical functions in l	Lotus 1-2-3.	
k) W	hat is On-line transact	ion processing ?		
1) WI	hat is the primary job	of the accounts de	epartment ?	
II. Answe	er any three questions	:		5×3=15
a) Wi	rite a Pascal procedure	to insert a node i	nto a singly linked list.	
	plain PUSH operation			
	rite a procedure to inse			
			ategies to handle this pr	oblem.
III. Answe	er any three questions	:		5×3=15
a) Wł	hat is meant by DBA ?	What are the func	tions performed by the	
b) Wł			Second Normal Forms	
c) Exp	plain physical and log	ical data independ	lence.	
d) Wh	hat is Data security ? E	xplain.		
				P.T.O.
				1.1.0.

SPO NU - 1992

Final E.Sc. Degree Examination, November/December 2005

- IV. Answer any three questions :
 - a) What is Query language ? Illustrate any four commands of this language.
 - b) What is Distributed data base system ? What are its advantages and disadvantages ?
 - c) How is formatting of data done in ESS ? Explain.
 - d) Explain any two addressing techniques in ESS.
- (1) Answer any three questions :

 $5 \times 3 = 15$

5×3=15

- a) Explain Accounting and stock control. and the pitcher of the state of the state
- b) Explain the management services of the Business organisation.
 - c) What is Data validation ? Briefly explain the checks that could be performed during a validation run.
 - d) Explain key-to-disk systems.

II B.A./B.Sc. Degree Examination, Nov./Dec. 2005 (Revised New Scheme) (98 - 99 & onwards) COMPUTER SCIENCE (Paper – II) Data Structures and Software Engineering

Time: 3 Hours

Max, Marks: 100

Instruction: Answer all the questions.

I. Answer any sixteen questions. Each question carries one mark. $(16 \times 1 = 16)$ a) What is meant by primitive data structure ? b) Mention any two string operations. 1 Wester c) What is the difference between linked list and an array ? mannah to taban OMO 2017 mann d) Define a binary tree. e) Convert the following infix expression into postfix expression. (A * B/C + D/E f) What is software Engineering ? g) Define SRS. Change of the and an and the second states h) What is cost estimation ? i) Mention different kinds of software design. j) What is structured programming ? k) Name any two sections which can be written in the DATA DIVISION. 1) Mention different arithmetic verbs in COBOL. m) What is the purpose of PERFORM statement? n) What is the purpose of FILE-CONTROL paragraph? o) What is the difference between SORT and MERGE command ? p) What is physical data independence ? q) Define primary key. r) Give an example for multivalued attribute. s) What is specialization ? t) Define projection operation on relations. 2. Answer any three questions. Each question carries seven marks. $(3 \times 7 = 21)$ a) i) Give the classification of data structures. ii) Write a C program to perform the following: (2+5)1) Find the length of the string 2) Concatenate two strings.

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NU - 1987	
 b) i) Write an algorithm for PUSH and POP operations in a stack. ii) Mention different types of linked lists. Explain any one type in detail. 	(2 . 4)
 c) Write a C program to insert a node into a linked list. 	(3+4)
ii) Write a note on polish notations.	(5+2)
 a) Explain the different phases of software development life cycle. b) i) Mention different characteristics of an SRS. ii) Explain the different objectives of software design. 	(3+4)
 c) Explain the COCOMO model of planning. d) i) Explain the role of verification in coding. ii) Explain functional testing. 	120
ii) Mention any two advantages of COBOL.ii) What is a literal ? Mention different types of literals in COBOL and explain.	(2.5)
b) Explain different forms of DIVIDE Statement.	(2+5)
 c) Write a COBOL program to merge two data files. (Assume your own record structure). 	d
 d) Explain the use of following verbs in COBOL: i) CLOSE ii) REWRITE iii) EXTEND Mode 	
iv) GO TO DEPENDING ON	
 5. Answer any three questions. Each carries seven Marks. (3×7: a) Explain various Database models. b) i) Explain different kinds and roles of database users. 	
ii) Explain any two DML statements of SQL.	
 c) What are main components of ER diagram ? Explain each with an example. d) Discuss the different guide lines to be followed while doing a good databas design using functional dependencies. 	

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MS (14×4=56) II Semester B.C.A. Examination, June 2009 a) Explain the operations on (emendal iblo) at a structures. 2 B.C.A. 3 DATA STRUCTURES USING C ib off nisloy. A (d Z. a) What is pattern matching ? Write an algorithm for pattern matching. Time : 3 Hours $\frac{\partial H}{\partial r^{2}}$ b) Explain the memory representation of one and two dimensional array. Instruction : Answer all the Sections. we) White havie on complexity of algorithm. PART - Aa) Explain the memory representation of priority queue Answer any 8 questions : b) Write an algorithm to evaluate the positix expression. 1. Distinguish beween 2 . Write an algorithm to find the number of nodes in a linked list. i) Linear and nonlinear datastructures. is a). What is doubly linked list? What are its advantages and disadvantages over ii) Primitive and nonprimitive data structure. singly linked list ? iii) Binary search tree and Heap or s ni meti ne detect of mititogle ne stirW (down à 2. Explain the malloc (), calloc () and free () functions in C - language. 3. 3. What is a garbage collection ? Explain and Optime ? Isam to use stand with (s. . ? 4. Write a C - function to concatenate 2 strings using pointers. (b) Construct a binary search tree. Assume that following muthers are entered one after **5. Explain the town of hand ional dorg ional fo rewot ant nialqx1**. 6. Mention any 3 applications of stack. 49, 23, 20, 89, 79, 88, 25 7. Write an algorithm to delete an element from a linear queue. 29 After deleting node 49, insert node 70 into Binary search tree. 8. What is a general tree ? Explain with example. ð to cate Write Quick sort algorithm to sort the given numbers in ascending order. 9. Explain the linked representation of binary tree. 10. Translate the following infix expression into polish and reverse polish notations. (*+*) A + B/C *D - E/F. ii) Selection Sort.

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B - TRAM Il Semester B.C.A. Examination, June 2009	(14×4=56)
11. a) Explain the operations on non-primitive data structures.	4
b) Explain the different string storage methods.	. 6
c) Write binary search algorithm.	4
12. a) What is pattern matching ? Write an algorithm for pattern matching	hina -
(A) PL, A) POST A POST A POST A PO	A S S S S S S S S S S S S S S S S S S S
b) Explain the memory representation of one and two dimensiona	l array. 5
c) Write a note on complexity of algorithm.	Instr
A (TQ AQ	4
13. a) Explain the memory representation of priority queue. $(\$ S = \xi \times 8)$	4
	Answer any 8
	5
c) Write an algorithm to find the number of nodes in a linked list.	1 Distinguital 1
14. a) What is doubly linked list? What are its advantages and disadv singly linked list?	antages over
and nonpennitive data structure. ? singly linked list?	avonninta (ii 4
b) Write an algorithm to search an item in a sorted linked list.	
c) Write an algorithm to delete an element from circular queue.	
15. a) What is tree traversal ? Write C - functions to traverse the tree in orders.	n 3 different
function to concatenate 2 strings using pointers.	7 Justitw
b) Construct a binary search tree. Assume that following numbers a the other in following sequence.	are entered one after
49, 23, 20, 89, 79, 88, 25 South and any south of the second states and the states and the states are broaded as the second states a	
Delete node 49 from the constructed binary search tree.	Write an alg
should be the mode to much binary search tree.	7
16. a) Write Quick sort algorithm to sort the given numbers in ascending	S. What is a gi
그는 그는 것 것 같아요. 것 같아요. 그는 것 같아요. 그는 것 같아요. 이렇게 귀엽 집에서 귀엽 집에 가지 않는 것 같아요. 것 것 같아요. 가지 않는 것 것 같아요. 가지 않는 것 않는 것 같아요. 가지 않는 것 않는 것 같아요. 가지 않는 것 않는	ng order. 8
b) Write short notes on : snousion dailog astaver bas dailog om noissang a rithi gaiwoliot a i) Sparse Matrix.	
ii) Selection Sort	
9.7.4 0.7.1	J* D\8 + A (4+4)

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