3/26/12 Code: A-20

## **Diplete - ET/CS (NEW SCHEME) - Code: DE53 / DC53**

Subject	COMPLITER	<b>FUNDAMENTALS</b>	& C	PROCR	AMMING
Subject:	COMPULER	T UNDAMEN I ALS	$\alpha$	rkugk	AMMINING

	Subjecti Collin CTERT CITE	TRITED W CTROCKEN
Time: 3 Hours	JUNE 2009	Max. Marks: 100

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q. 1. must be written in the space provided for it in the answer book supplied and nowhere else.
- ırks.

.1	Choose the correct or the best alternative in the following:				
	a. Decimal to Binary conversion of 9 is?				
	(A) 1010 (C) 1000	<b>(B)</b> 1011 <b>(D)</b> 1001			
	b. What is an Operating System?				
	<ul><li>(A) Input device</li><li>(B) Central processing unit</li><li>(C) Interface between user and co</li><li>(D) All the above</li></ul>	omputer			
	c. Choose the correct answer?				
	<ul><li>(A) INTERNET is LAN</li><li>(B) INTERNET is a Network</li><li>(C) ARPANET followed INTER</li><li>(D) None of the above</li></ul>	NET			
	d. If $Y = 8$ , the value of $X = (Y) + (Y) = 0$	- 5 is			
	<b>(A)</b> 10 <b>(C)</b> 11	(B) 12 (D) 13			
	e. Which of the following statements	is used to take the control to the begin	ning of the loop?		
	<ul><li>(A) exit</li><li>(C) continue</li></ul>	<ul><li>(B) break</li><li>(D) none of the above</li></ul>			
	f. When int B[2][3] = {5, 6, 7, 8, 9 What will be the value of B[1][3]				
	(A) 5 (C) 8	(B) 7 (D) 6			
	g. Arrays are passed as arguments to	a function by?			
	<ul><li>(A) Value</li><li>(C) Both (A) and (B) above</li></ul>	<ul><li>(B) Reference</li><li>(D) None of the above</li></ul>			

FILE \*p;

h. Opening a file:

p = fopen ( "amps", "a" );

3/26/12 Code: A-20

(A) "a" is for reading the file

**(C)** "a" is for modifying the file

	i.	i. Which of these is correct to define a pointer?				
		(A) int_ptr c; (C) *int ptr;	(B) int *ptr; (D) *y;			
	j.	Mathematical functions are available in which header file in C?				
		(A) stdio.h (C) math.h	<ul><li>(B) stdlib.h</li><li>(D) io.h</li></ul>			
		Answer	any FIVE Questions out of EIGHT Qu Each question carries 16 marks.	estions.		
Q.2	a.	Explain, what is an algorithm?	How can a problem be solved using comp	uters?	(4)	
	b.	Describe the basic model of a	computer?	(4)		
	c.	Explain the use of Binary Num	bers in Computers?	(4)		
	d.	Convert decimal number 23.6	to binary number, upto 5 digits after decim	al point?	(4)	
Q.3	a.	How Input and Output Data is	processed on the computers?	(4)		
	b.	Describe various types of the l	Input Units?	(4)		
		c. Why computer prairies languages?	rogramming language is required? List o	ut some of the	e prominent programming (4)	
	d.	Define operating system. Expl	lain personal computer operating system.	(4)		
Q.4	a.	Give a brief about Developmen	nt and Evolution of Microcomputers?	(3)		
	b. Describe briefly an Actual Microcomputer and its CPU, and Minimum Microcomputer Configuration.  (3)					
	c. What is a Network? How Computer Networks can help in communication and data exchange?  (4)					
	d.	What is ARPANET? What is	its significance?	(3)		
	e.	What is Internet?		(3)		
Q.5		Write short notes, with examp	les, on:			
		<ul><li>(i) Real or Float Constants</li><li>(ii) Variable data and its iden</li></ul>	tification (4)	(4)		
		(iii) Relational operators		(4)		
		(iv) Write the output of the fold/* Program #include <simain()< th=""><th>n demonstrating printing</th><th>(4)</th><th></th></simain()<>	n demonstrating printing	(4)		

(B) "a" is for writing the file

**(D)** None of the above

3/26/12 Code: A-20

```
{ int A = 1246, B = -5436; float C = -123.1246, D = 1347.13; double E = -136.1234467809, F = 136123446.7809; printf ("Values are:\n"); printf ("\n"); printf ("\n", C,D); printf ("\n"); printf (\n"); printf (\n"); printf (\n"); printf (\n"); printf (\n"); printf (\n"); printf (\
```

- Q.6 a. In what ways does a switch statement differ from an if statement? (3)
  - b. Find errors, if any, in the following program segment:

if (code >1); a = b+c else a=0

**(3)** 

c. Salary structure of a company is given below. Write a program in C to derive salary of a desired category of worker (10)

Worker	Experience Years	Qualification	Salary
Skilled	More than 5	ITI	11000
	More than 5	HSec	8000
	Less than 5	ITI	7000
	Less than 5	HSec	5000
Semi Skilled	More than 5	ITI	9000
	More than 5	HSec	6000
	Less than 5	ITI	5000
	Less than 5	HSec	4000

- **Q.7** a. Define an array. Explain the need for array variables.
  - b. Describe the limitations of using getchar and scanf functions for reading strings.
  - c. Write a program to find the greatest number and its position in the following Array; Array[6] = { 2, 5, 3, 8, 6, 4};

Print the maximum number and its position.

(8)

**(4)** 

**(4)** 

- Q.8 a. The function main() is a user defined function. How does it differ from other user defined functions?

  (4)
  - b. Distinguish between the following:
    - (i) Actual and formal arguments.
    - (ii) Global and local variables.

**(6)** 

3/26/12 Code: A-20

		c. Write a function 'prime' that returns 1 if its argument is a	prime number and returns	zero otherwise.
		(6)		
<b>Q.9</b>	a.	What is a pointer? How is it initialized?	(4)	
	b.	Explain the difference between 'call by reference' and 'call by value'.	(5)	
		1 1 100 0	40	
	c.	How does an append mode differ from a write mode?	(4)	
	A	What is the significance of EOE?	(2)	
	u.	What is the significance of EOF?	(3)	