Gandhi Institute of Engineering & Technology University, Gunupur – 765022

B. Tech (Third Semester)

CYCLE TEST – I

[23BBHS23001/23BCDPE23011]

Intermediate Communication Skills and Critical Thinking

Time: 75 Minutes Maximum: 30 Marks

(The figures in the right hand margin indicate marks.)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ALL questions

		CO #	Blooms Level
a.	Lucubrate Comprehensive Listening .	1	k5
b.	Give two examples of Appreciative Listening.	2	k1
c.	Discuss any two causes of Stage Fear.	3	K3
d.	What is Open-mindedness in Listening?	2	K5
e.	Discuss the following terms of Public Speaking: i) Preparation ii) Performance	3	K3

PART – B **(10 x 2 = 20 Marks)**

Answer ALL Questions

		Marks	CO#	Blooms Level
2.a.	Explicit the types of Listening.	5	2	K5
b.	Comprehensive Listening helps in resolving Conflicts. Justify.	5	1	K2
	(OR)			
c.	Explain the role of feedback in Comprehensive Listening.	5	2	K5
d.	What is Public speaking? Discuss its importance.	5	3	K3
3.a.	Write difference between Active listening and Passive listening.	5	2	K5
b.	Public speaking facilitates Critical Thinking and Career Advancement. Elaborate.	5	3	K3
	(OR)			
b.	Explain the importance of personal development and its connection with public speaking.	5	3	K4
c.	Briefly lucubrate the symptoms and techniques to overcome Stage Fear.	5	3	K3

Gandhi Institute of Engineering & Technology University, Gunupur – 765022

B. Tech (Third Semester)

CYCLE TEST – I

OOPS Using JAVA

[23BCSPC23002/23BCMPC23002/23BCDPC23002]

Time: 75 Minutes | Maximum: 30 Marks

(The figures in the right hand margin indicate marks.)

PART – A

(2 x 5 = 10 Marks)

	Q.1. Answer ALL questions	CO #	Blooms Level
a.	What do you mean by this keyword in Java. Write down its usage.	CO1	K2
b.	List out the usage of "**static**" keyword in java.	CO1	K1
c.	What do you mean by constructor. Describe different types of constructor.	CO2	K1
d.	Why java is known as platform independent language. Explain.	CO2	K1
e.	What do you mean by scope of a variable. Describe different types of scope.	CO2	K2

PART – B

(10 x 2 = 20 Marks)

	Answer ALL Questions	Marks	CO#	Blooms Level
2.a.	What do you mean by jagged array. Explain with an example.	5	CO1	K1
b.	Write a program to initialize an integer array and find the maximum and minimum value of the array.	5	CO1	K2
	(OR)			
c.	Explain all the features of Java.	5	CO1	K1
d.	Write a program to accept a number and check and display whether it is a spy number or not. (A number is spy if the sum of its digits equal the product of its digits.) Example : Consider the number 1124, Sum of the digits = 1 + 1 + 2 + 4 = 8 Product of the digits = 1 x 1 x 2 x 4 = 8.	5	CO1	K2
3.a.	Write a java program to find the area of a circle, rectangle and square using method overloading.	5	CO2	K2
b.	Write down the differences between constructor and method.	5	CO2	K1
	(OR)			

P.T.O

c.	Create a class Box that uses a parameterized constructor to initialize the dimensions of a box. The dimensions of the Box are width, height, depth. The class should have a method that can return the volume of the box. Create an object of the Box class and test the functionalities.	5	CO2	K2
d.	Write down difference between instance variable and class variable.	5	CO2	K1

GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA,
GUNUPUR 765022

B. Tech (Third Semester)

CYCLE TEST – I

23BCSES2303/23BCMES23001/23BCDES23001: DIGITAL ELECTRONICS

Time: 75 Minutes | Maximum: 30 Marks

(The figures in the right hand margin indicate marks.)

PART – A (2 x 5 = 10 Marks)

Q.1. Answer ALL questions

		CO #	Blooms Level
a.	Define pulse width and duty cycle for a pulse waveform.	CO1	L1
b.	Convert the decimal number 268.75 into binary, octal and hexadecimal	CO1	L2
c.	Define self-complementing code with one example.	CO2	L1
d.	State De-Morgan's Theorems. Draw the equivalent logic diagrams.	CO3	L1
e.	Prove that dual of EX-OR is EX-NOR.	CO3	L2

PART – B (10 x 2 = 20 Marks)

Answer ALL Questions

		Marks	CO#	Blooms Level
2.a.	Do the following operations using 1's complement method, where A=25 and B=14. (i)A-B (ii) B-A.	5	CO2	L2
b.	Mention the IEEE 754 format for the single precision method and find out the floating-point number from the following representation. 0 10000011 00111000000000000000000	5	CO2	L3
	(OR)			
c.	Do the following operations using 2's complement method, where A=46 and B=16. (i)A-B (ii) B-A.	5	CO2	L2
d.	Mention the IEEE 754 format for the double precision method and Express -3.75 as a floating-point number using IEEE single precision.	5	CO2	L2
3.a.	State consensus Theorem and show that: $AB+AB'C+BC'=AC+BC'$	5	CO3	L2
b.	Express the Boolean function $F = A + B'C$ as a sum of minterms and also find out the all possible Maxterms.	5	CO3	L2
	(OR)			
b.	Reduce the expression: A+B[AC+(B+C') D] and with the reduced form draw the equivalent diagram.	5	CO3	L3
c.	Express the Boolean function $F = xy + x'z$ as a product of maxterms and also find out the all possible minterms.	5	CO3	L2

Gandhi Institute of Engineering & Technology University, Gunupur – 765022

B. Tech (Third Semester)

CYCLE TEST – I

23BCSBS23001: DISCRETE MATHEMATICS

Time: 75 Minutes (CSE) Maximum: 30 Marks

(The figures in the right hand margin indicate marks.)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer ALL questions

		CO #	Blooms Level
a.	Construct the truth table of $(p \vee \sim q) \rightarrow (p \wedge q)$	CO1	K1
b.	Assume that the domain for the variables x and y consists of all real numbers. Then translate the expression $\forall x \forall y(x + y = y + x)$ into English	CO2	K2
c.	Express the statement "If a person is female and a parent, then this person is someone's mother". As a logical expression involving predicates and quantifiers.	CO2	K2
d.	What rule of inference is used in the argument "If it snows today, the university will close. The university is not closed today. Therefore , it did not snow today.	CO2	K2
e.	What form does a particular solution of the linear non homogeneous recurrence relation $a_n = 6a_{n-1} - 9a_{n-2} + 3^n$ has?	CO2	K2

PART – B

(10 x 2 = 20 Marks)

Answer ALL Questions

		Marks	CO#	Blooms Level
2.a	Show that $(p \wedge q) \rightarrow r$ and $(p \rightarrow r) \wedge (q \rightarrow r)$ are not Logically equivalent.	5	CO2	K2
b.	Show that $(p \rightarrow q) \wedge (q \rightarrow r) \rightarrow (p \rightarrow r)$ is a tautology.	5	CO2	K2

OR

c.	Let L(x, y) be the statement "x loves y", where the domain for both x and y consists of all people in the world. Use quantifiers to express each of these statement a) Everybody loves Jerry b) Everybody loves somebody c) There is somebody whom everybody loves d) Nobody loves everybody e) There is somebody whom Lydia does not love	10	CO3	K3

P.T.O

3.a.	Find the solution of the recurrence relation $a_n = 6a_{n-1} - 11a_{n-2} + 6a_{n-3}$ with the initial conditions $a_0 = 2, a_1 = 5, a_2 = 15$	5	CO2	K2
b.	Find the solution of recurrence relation of Fibonacci numbers.	5	CO3	K2
	OR			
c.	Prove by method of contradiction that $\sqrt{2}$ is an irrational number.	5	CO2	K2
d.	Prove by method of induction that for every positive integer n, $1.2 + 2.3 + \cdots + n(n+1) = n(n+1)(n+2)/3$	5	CO2	K2

Gandhi Institute of Engineering & Technology University,
Gunupur – 765022

B. Tech (Third Semester)

CYCLE TEST – I

DATABASE MANAGEMENT SYSTEMS

[23BCSPC23001/23BCMPC2300123BCDPC23001

Time: 75 Minutes | Maximum: 30 Marks

(The figures in the right-hand margin indicate marks.)

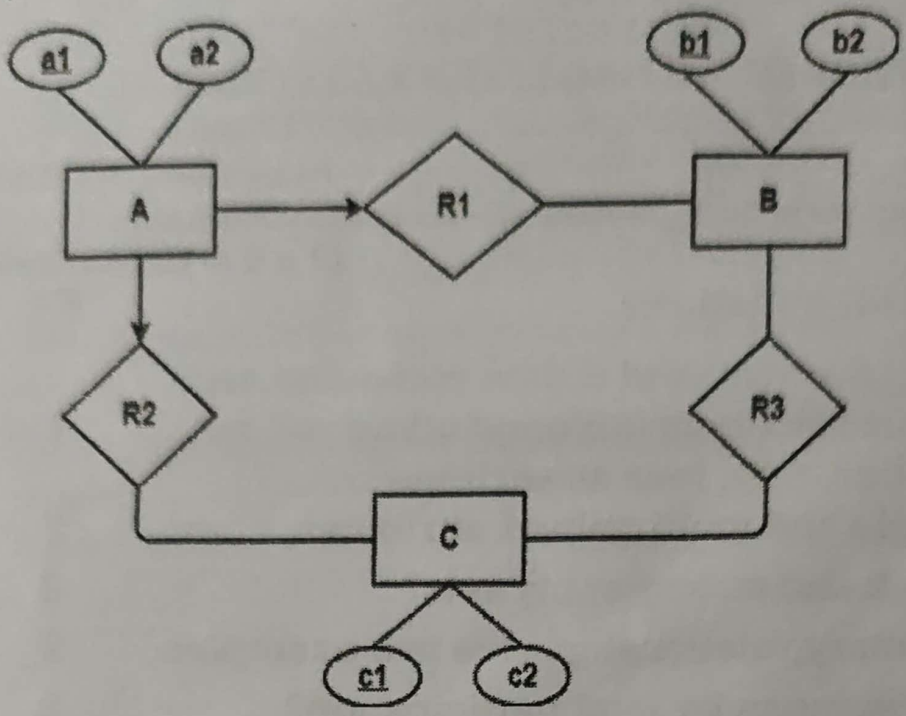
PART – A **(2 x 5 = 10 Marks)**

	Q.1. Answer ALL questions	CO #	Blooms Level
a.	Write down the syntax of create command and create a basic students table including roll no, name, gender, dob, fees as attribute	1	1
b.	Define single and multi-valued attributes	2	2
c.	Define weak and strong entity sets?	2	1
d.	What is a unary relationship give two examples	2	2
e.	What do you mean by total participation?	2	1

PART – B **(10 x 2 = 20 Marks)**

	Answer ALL Questions	Marks	CO#	Blooms Level
2.a	Explain database constraints with suitable examples.	5	1	1
b.	What is the work of a DBA? explain	5	2	1
	(OR)			
c.	Explain three schema architecture in DBMS.	5	1	2
d.	Mention five differences between file system and DBMS	5	2	2
3.a	Explain KEYs in the DBMS	5	2	1
b.	Explain about mapping cardinality	5	2	2
	(OR)			
c.	Find the minimum number of tables required to represent the given ER diagram in relational model.	5	2	1

P.T.O



d. Write down short notes (any two) 5 2 2

(i)Data independence

(ii)3-tier architecture

(iii)end users