

MGM University, Jawaharlal Nehru Engineering College, Chhatrapati Sambhajinagar
CA-1 Examination

Class: SY-B. Tech (All)

Course Code: 20UCC401B

Course Name: Engineering Statistics

Date: 02.02.2024

Sem: IV

Max.Marks:10

Time:10.00 -10.45

Read the instructions carefully.

1. Use of nonprogrammable calculator is allowed.
2. Digits on right hand side indicate the marks.

Q.1 Solve any **Two** questions.

- A) A car travels 25 miles at 25 miles per hour (mi/h), 25 miles at 50 mph, and 25 miles at 75 mph. Find the arithmetic mean of the three velocities and the harmonic mean of the three velocities. Which is correct? (5M)
- B) The points given to the students belonging to two management institutes on the overall performance in a year are as follows: (5M)

Institute A	60	64	75	82	48	66	81	92	44	80
Institute B	70	65	54	72	80	68	79	77	71	74

The performance of which management institute is more consistent (Use coefficient of variation)? Which management institute has higher level of performance?

- C) The first four moments of a distribution about the value 5 of the variable are 2, 20, 40 and 50. Show that the mean is 7. Also find the other moments, β_1 and β_2 . (5M)

MGM University, Jawaharlal Nehru Engineering College, Chhatrapati Sambhajinagar
CA-1 Examination

Class: SY-B. Tech (All)

Course Code: 20UCC401B

Course Name: Engineering Statistics

Date: 02.02.2024

Sem: IV

Max.Marks:10

Time:10.00 -10.45

Read the instructions carefully.

1. Use of nonprogrammable calculator is allowed.
2. Digits on right hand side indicate the marks.

Q.1 Solve any **Two** questions.

- A) A car travels 25 miles at 25 miles per hour (mi/h), 25 miles at 50 mph, and 25 miles at 75 mph. Find the arithmetic mean of the three velocities and the harmonic mean of the three velocities. Which is correct? (5M)
- B) The points given to the students belonging to two management institutes on the overall performance in a year are as follows: (5M)

Institute A	60	64	75	82	48	66	81	92	44	80
Institute B	70	65	54	72	80	68	79	77	71	74

The performance of which management institute is more consistent (Use coefficient of variation)? Which management institute has higher level of performance?

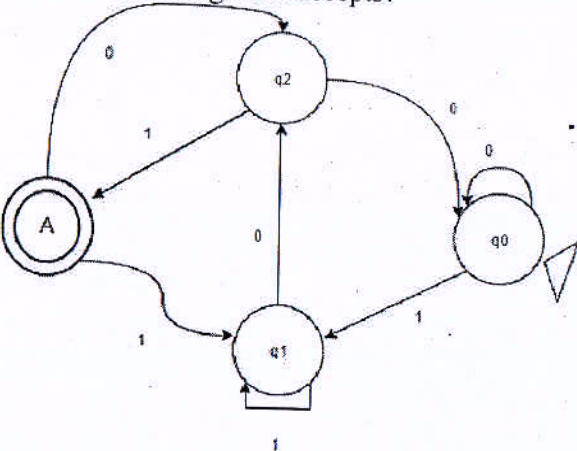
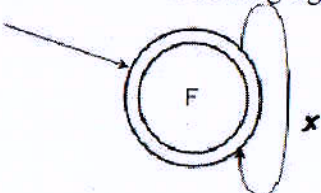
- C) The first four moments of a distribution about the value 5 of the variable are 2, 20, 40 and 50. Show that the mean is 7. Also find the other moments, β_1 and β_2 . (5M)

MGM University
Jawaharlal Nehru Engineering College
Department of Computer Science & Engineering

Academic Year: 2023-24 Part-II
Class: S.Y. B.Tech. (CSE I, II & III)
Time: 45 Min
Test – CA-1

Semester: IV
Subject: FLAT (20UCS404D)
Max Marks: 10
Date of Exam: 02/02/2024

Note: Solve any Ten. Each question carries one mark.

Q. No	Question	BTL	CO
1	Finite Automata recognize--- a) Any Language b) Context Sensitive Language c) Context Free Language d) Regular Language	1	CO1
2	Which of the following is a not a part of 5-tuple finite automata? a) Input alphabet b) Transition function c) Initial State d) Output Alphabet	1	CO1
3	What the following DFA accepts?  a) x is a string such that it ends with '101' b) x is a string such that it ends with '01' c) x is a string such that it has odd 1's and even 0's d) x is a strings such that it has starting and ending character as	2	CO1
4	There are _____ tuples in finite state machine. a) 4 b) 5 c) 6 d) unlimited	1	CO1
5	What does the following figure most correctly represents?  a) Final state with loop x b) Transitional state with loop x c) Initial state as well as final state with loop x d) Insufficient Data	1	CO1
6	A Language for which no DFA exist is a _____ a) Regular Language b) Non-Regular Language c) May be Regular d) Cannot be said	1	CO1
7	NFA, in its name has 'non-deterministic' because of : a) The result is undetermined b) The choice of path is non-deterministic c) The state to be transited next is non-deterministic d) All of the mentioned	1	CO1

Handwritten signature/initials

MGMU JNEC, Chh Sambhajinagar CSE DEPT
CA-I (2023-24) Part-II

Class: SY (I, II, III) (IV SEM)

Max Marks: 10

Subject: Object Oriented Programming

Duration: 45 Minutes

Name:

PRN

Date:

Sr. No.	Question	Marks	C O	B L
1	When is the object created with a new keyword? a. At run time b. At compile time c. Depends on program d. NONE	1	1	1
2	Which of the following functions can be inherited from the base class? a) constructor b) destructor c) static d) None	1	1	1
3	Choose the option below for which instance of the class cannot be created. a) Nested class b) Parent class c) Abstract class d) Anonyms class	1	1	2
4	What is the size of a class? a) Sum of the size of all inherited variables along with the variables of the same class b) The size of the class is the largest size of the variable of the same class c) Classes in the programming languages do not have any size d) Sum of the size of all the variables within a class.	1	1	1
5	Which of these components are used in a Java program for compilation, debugging, and execution? a. JDK b. JVM c. JRE d. JIF	1	1	1
6	Which definition best defines the concept of abstraction? a) Hides the important data b) Hides the implementation and showing only the features c) Hiding the implementation d) Showing the important data	1	2	1
7	Parent class of all java classes is _____ a) Java.lang.system b) Java.lang.object c) java.lang.class d) java.util.scanner	1	2	1
8	What is Garbage collection in the context of data? a) Operating System periodically deletes all the java files available on the system b) When all references to an object are gone then the memory used by the object is automatically reclaimed. c) Any java package imported in program not being used automatically deleted. d) JVM checks the output of program any java program and deleted anything that does not make sense	1	1	2
9	Out of these, which one is the correct way of calling a constructor that has no parameters of the superclass A by the subclass B? a) superclass.(); c) super(); b) super(void); d) super.A();	1	1	1
10	Where does the String Pool get stored? a. Method area b. Java Stack c. Java Heap Memory d. Permanent Generation	1	1	2
11	Can method overloading be achieved by changing the return type of a method? a) Yes, as long as the parameters are different b) No, changing the return type alone is not enough for method overloading c) Yes, as long as the method name is also changed d) No, Java does not allow method overloading based on return type	1	1	2
12	Which of these can be used to fully abstract a class from its implementation? a) Objects b) Packages c) Interfaces d) None of the Mentioned	1	2	1

11 MAR 2024/SY/CSE/CA-I/II/23-24/CSE

MGM UNIVERSITY, Chh. Sambhajinagar
Jawaharlal Nehru Engineering College
Department of Computer Science & Engineering
CA-1

Program: B. Tech CSE (SY)

Course Name: Microprocessor & Microcontroller

Max Marks: 10

Semester: IV

Subject Code: 20UCS406D

Duration: 45 minute

Date - 03/02/2024

Instructions to the Students:

1. Attempt any 2 questions.
2. Illustrate your answer with neat sketches, diagram etc. wherever necessary.

Q. No	Question	CO	BL	Marks
Q. 1	Explain internal architecture of 8086 microprocessor.	CO1	1	5
Q. 2	The contents of the following registers are: CS=4564H, DS=8939 H SP=B170 H IP=12FCH SS=25389H DI=6040 H Calculate the corresponding physical addresses for the address bytes in CS, DS and SS.	CO1	2	5
Q. 3	Identify and explain the Addressing mode of given instruction: a. ADD AL, [SI] b. MOV AX,[5500] c. SUB BX, [BP+5] d. MOV DX,1000H	CO1	2	5

MGM UNIVERSITY, Chh. Sambhajinagar
Jawaharlal Nehru Engineering College
Department of Computer Science & Engineering
CA-1

Program: B. Tech CSE (SY)

Course Name: Microprocessor & Microcontroller

Max Marks: 10

Semester: IV

Subject Code: 20UCS406D

Duration: 45 minute

Date - 03/02/2024

Instructions to the Students:

1. Attempt any 2 questions.
2. Illustrate your answer with neat sketches, diagram etc. wherever necessary.

Q. No	Question	CO	BL	Marks
Q. 1	Explain internal architecture of 8086 microprocessor.	CO1	1	5
Q. 2	The contents of the following registers are: CS=4564H, DS=8939 H SP=B170 H IP=12FCH SS=25389H DI=6040 H Calculate the corresponding physical addresses for the address bytes in CS, DS and SS.	CO1	2	5
Q. 3	Identify and explain the Addressing mode of given instruction: a. ADD AL, [SI] b. MOV AX,[5500] c. SUB BX, [BP+5] d. MOV DX,1000H	CO1	2	5

[Signature]
01 Feb 24

11 MAR 2024 / sy / CSE / CA - I / II / 23-24 / CSE