Indian Institute of Information Technology Vadodara

End semester, Autumn/ Winter examination

B.Tech/ M.Tech/ Research student

(Strike off non applicable)

Course Code: CS201 Course Name: OODP Date: 05/01/2022

Candidate Name: Archit Agrawal Student ID: 20205121 3

Number of Supplementary booklets:-- 1/2/3

Read the instructions carefully	
1	Listen to the instruction stated by invigilator carefully. It may be in addition to mentioned on answer sheet / question paper.
2	It is mandatory to present your ID card to the invigilator.
3	Answer new question in a new page.
4	Possession of books, notebook, data storage device, scanner, mobile phone is considered as malpractice in examination hall (scientific, non programable calculator are permitted) unless specified by the course instructor.
5	Any type of communication or request for stationery items such as scale, pencil, eraser to other examines during exam will be treated as unfair means.
6	Don't write anything except your roll number on question paper unless specifically instructed.
7	At the end of exam, leave the examination hall quickly and quietly.

Question No.	Marks
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
Total	



Pledge

I shall abide by rules and regulation of Institute. I affirm that I will not take any unauthorize help during exam.

Student's Signature Archit Agrawal

Information Verified

Invigilator's Signature

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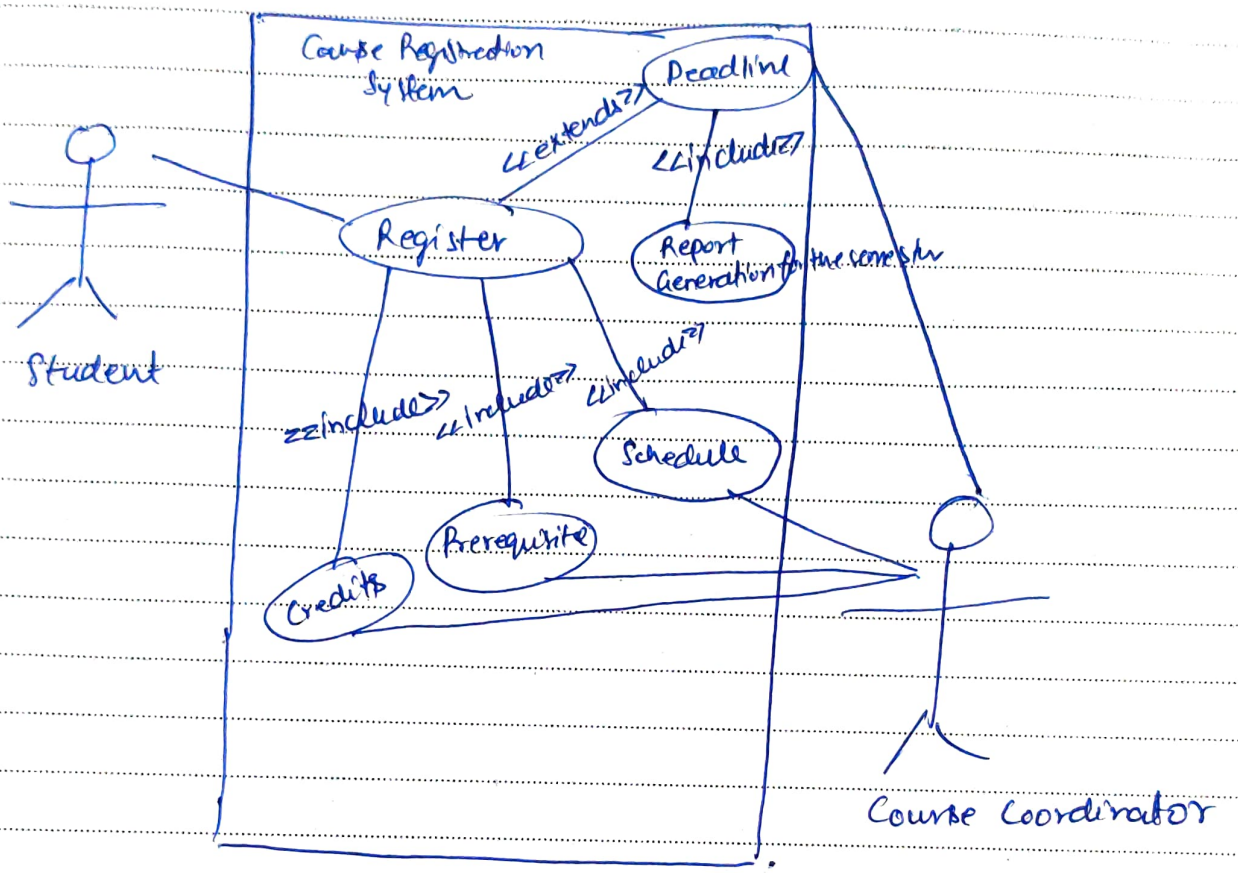
Question 1 (a)



(b) The actor "Student" can "Register" for any course. Since, the course includes "Credits", "Prerequisites" and "Schedule", they are shown by using <<Include>> and since they are set by course coordinator, they are connected to the actor "Course Coordinator". Registration process has an "deadline" after which registration closes and "Report Generation" for the semester starts. Since, both deadline and Report Generation are done by Course Coordinator, they both are connected to course coordinator in the diagram.

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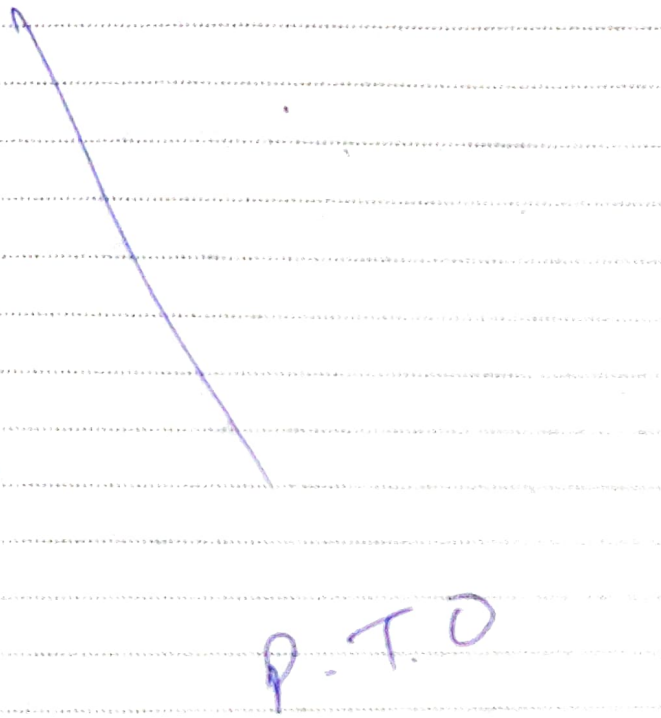

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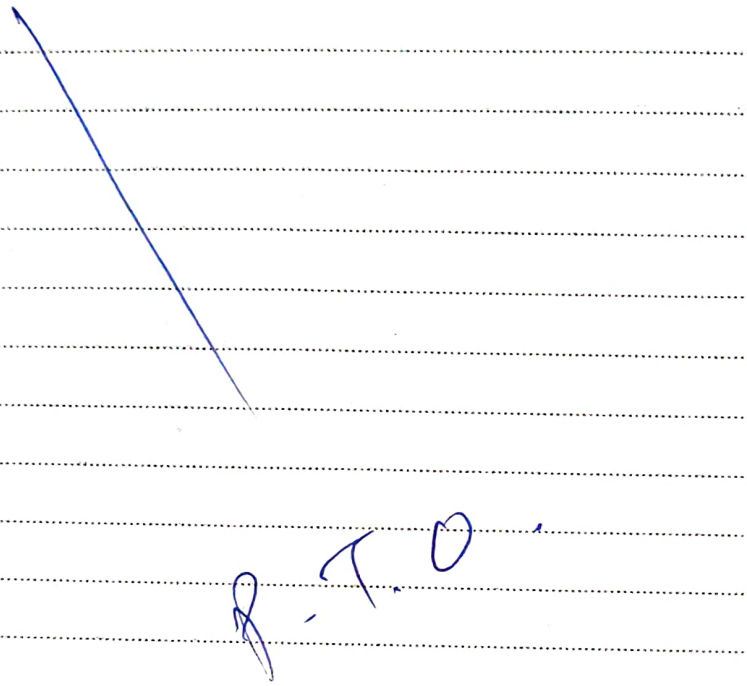

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Question 2 (a)

```
class Question {

    String question;        // the question
    int difficulty;         // its difficulty
    String[] options;       // the options
    String corrAns;         // the correct answer

    public Question(String q, int d, String[] o, String cA){

        this.question = q;
        this.difficulty = d;
        this.options = o;
        this.corrAns = cA;
    }

    public void display() {
        System.out.println(question);
        for(int i=0; i < options.size; i++) {
            System.out.println("Option "+ i +": "+ options[i]);
        }
    }

}
```

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```
class Quiz {
    String[] answers;
    Question[] questions;
    int n;              // no. of questions
    Response[][]

    public Quiz(int n) {
        // this.n = n;
        // this.questions = new Question[n];

    }   // this.n = n;
        // this.questions = new Question[n];

        if (n <= 10) {
            this.n = n;
            this.questions = new Question[n];
        } else {
            System.out.println("Quiz can't have more than
                                10 questions");
        }
    }

    public void addQuestion( ) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the question");
        String s =

    public void addQuestion(String question, int d, String[] o,
                            String cA) {
        Questions[i] = Question(question, d, o, cA);

    }
```

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```
public void giveQuiz() {

    for(int i=0; i< ~~quest~~ this.n ; i++) {
        int x = Math.rand(n-i);
        questions[x].display();
        System.out.println("Enter your response");
        Scanner sc = new Scanner(System.in);
        String s = sc.nextLine();
        answers[n-i] = s;
        ~~questions[n-i] =~~
        Question swap = question[x];
        question[x] = question(n-i);
        questions[n-i] = swap;
        ~~responses[n-i] =~~
    }
}

class QuizTime {

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    ~~Quiz q = new Quiz~~
    System.out.println("Enter number of questions");
    int n = sc.nextInt();

    Quiz q = new Quiz(n);
    // populating the quiz
    for(int i=0; i<n; i++) {
        System.out.println("Enter the question");
        String quest = sc.nextLine();
        String[] options = new String[4];
        for(int j=0; j<4; j++){
            System.out.println("Enter option"+j);
            options[j] = sc.nextLine();
        }
```

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```
System
        System.out.println("Enter difficulty");
        int d = sc.nextInt();
        System.out.println("Enter correct answer");
            String cA= sc.nextLine();

        q.addQuestion(quest, d, options, cA);

    }
}
```

// displaying the quiz

```
q.giveQuiz();
int count=0;
for(int i=0; i<n; i++){
    ~~q.questions[i].setAns();~~
    System.out.println(q.questions[i].question);
    //System.out.println(q.answers[i]);
    System.out.println("Your answer" + q.answers[i]);
    System.out.println("Correct answer" + q.questions[i].corAns);
    if(q.questions[i].corAns.equals(q.answers[i])){
        count++;
    }

}
System.out.println("You got "+count+" out of "+n);
```

Question 2(b).

```
// Overloading the giveQuiz method only.

public void giveQuiz(int low, int high){

    for(int i=0; i< this.n; i++){
        int x = Math.rand(n-i);
        Question swap = question[x];
        questions[x] = questions[n-i];
        question[n-i] = swap;

        if( questions[n-i].difficulty >= low &&
            questions[n-i].difficulty <= high){

            questions[n-i].display();
            System.out.println("Enter your response");
            Scanner sc = new Scanner(System.in);
            String s = sc.nextLine();
            answers[int-i] = s;
        }
    }
}

// Modifying main method for displaying
   the quiz
```

```
public static void main (String[] args) {

    Scanner sc = new Scanner (System.in);

    System.out.println ("Enter no. of questions");
     int n = sc.nextInt();

    System.out.println ("Enter diffi
    // populating quiz code is same

    // . .
    // . .
    // . .

    // displaying the quiz

    System.out.println ("Enter range of difficulty
                                low to high");

     int low = sc.nextInt();
     int high = sc.nextInt();

     q.giveQuiz( low, high);

    // remaining code is same
    // . . .
    // . . .
    // . . .

}
```