Vadodara Institute of Engineering
Diploma Engineering–Semester –1–Mid-Examination –Winter-2025
Subject Code:DI01000131
Date: 08-12-2025
Subject Name: CPF
Branch: CE
Time: 12:30 PM TO 03:00 PM
Total Marks:70

Q2. C
Write a Menu Driven Program to generate calculator using switch case statement

Code

```
#include <stdio.h>

int main() {
   int choice;
   float num1, num2, result;

   while (1) {
      printf("\n----- CALCULATOR MENU -----\n");
      printf("1. Addition\n");
      printf("2. Subtraction\n");
      printf("3. Multiplication\n");
      printf("4. Division\n");
      printf("5. Exit\n");
      printf("Enter your choice: ");
      scanf("%d", &choice);

      if (choice == 5) {
         printf("Exiting the program...\n");
         break;
      }

      printf("Enter first number: ");
      scanf("%f", &num1);
      printf("Enter second number: ");
      scanf("%f", &num2);

      switch (choice) {
         case 1:
            result = num1 + num2;
            printf("Result = %.2f\n", result);
            break;

         case 2:
```

```
            result = num1 - num2;
            printf("Result = %.2f\n", result);
            break;

        case 3:
            result = num1 * num2;
            printf("Result = %.2f\n", result);
            break;

        case 4:
            if (num2 != 0) {
                result = num1 / num2;
                printf("Result = %.2f\n", result);
            } else {
                printf("Error! Division by zero is not allowed.\n");
            }
            break;

        default:
            printf("Invalid choice! Please select a valid option.\n");
      }
   }

   return 0;
}
```

Q5. A. Write a program to addition of two integer numbers

```
#include <stdio.h>

int main() {
   int num1, num2, sum;

   printf("Enter first integer: ");
   scanf("%d", &num1);

   printf("Enter second integer: ");
   scanf("%d", &num2);

   sum = num1 + num2;

   printf("Sum = %d\n", sum);

   return 0;
}
```

Q5. C Write a program to check whether a student is pass or fail. If student is pass then give him a grade.(more than 75:Distinction, 65-75:First Class, 50-65: Second Class, 40-50 Pass Class) .

```
#include <stdio.h>

int main() {
   float marks;

   printf("Enter student's marks: ");
   scanf("%f", &marks);

   if (marks < 40) {
      printf("Result: FAIL\n");
   }
   else {
      printf("Result: PASS\n");

      if (marks > 75) {
         printf("Grade: Distinction\n");
      }
      else if (marks >= 65 && marks <= 75) {
         printf("Grade: First Class\n");
      }
      else if (marks >= 50 && marks < 65) {
         printf("Grade: Second Class\n");
      }
      else if (marks >= 40 && marks < 50) {
         printf("Grade: Pass Class\n");
      }
   }

   return 0;
}
```