C Programming Review Sample Answers

Question 1

```c
#include <stdio.h>

int main(void) {
    int num1, num2;

    printf("Enter the first integer: ");
    scanf("%d", &num1);
    printf("Enter the second integer: ");
    scanf("%d", &num2);

    if(num1 >= 0 && num2 >= 0) {
        printf("The integers %d and %d are both positive\n", num1, num2);
    } else {
        printf("The integers %d and %d are not both positive\n", num1, num2);
    }
    return 0;
}
```

Question 2

```c
#include <stdio.h>

float abs(float num) {
    if(num < 0.0) {
        return -num;
    } else {
        return num;
    }
}

int main(void) {
    float num;

    printf("Enter a floating-point number: ");
    scanf("%f", &num);
    printf("The absolute value of %f is %f\n", num, abs(num));
    return 0;
}
```

Question 3

```c
#include <stdio.h>

int main(void) {
    int start, end, i;

    printf("Enter the start integer: ");
    scanf("%d", &start);
    printf("Enter the end integer: ");
    scanf("%d", &end);
    for(i = start; i <= end; i++) {
        printf("%d ", i);
    }
    printf("\n");
    return 0;
```

```
}
```

Question 4

```c
#include <stdio.h>

int main(void) {
    int n, i;
    float f;
    float prod = 1.0;

    printf("How many floating point numbers do you want to multiply together: ");
    scanf("%d", &n);

    for(i = 0; i < n; i++) {
        printf("Enter a floating point number: ");
        scanf("%f", &f);
        prod *= f;
    }
    printf("The product is %f\n", prod);
    return 0;
}
```

Question 5

```c
#include <stdio.h>

#define SIZE 5

void array_abs(float a[SIZE]) {
    int i;

    for(i = 0; i < SIZE; i++) {
        if(a[i] < 0) {
            a[i] = -a[i];
        }
    }
}

int main(void) {
    float nums[SIZE];
    int i;

    for(i = 0; i < SIZE; i++) {
        printf("Enter a floating point number: ");
        scanf("%f", &nums[i]);
    }

    array_abs(nums);

    printf("The result is:");
    for(i = 0; i < SIZE; i++) {
        printf(" %f", nums[i]);
    }
    printf("\n");
    return 0;
}
```

Question 6

```c
#include <stdio.h>
```

```c
#define MONTHS 12

int main(void) {
    int day;
    int month;
    int days_in_month[MONTHS] = {31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31};
    int i;
    int total_days = 0;

    do {
        printf("Enter the month: ");
        scanf("%d", &month);
    } while(month < 1 || month > MONTHS);

    do {
        printf("Enter the day: ");
        scanf("%d", &day);
    } while(day < 1 || day > days_in_month[month - 1]);

    for(i = 0; i < month - 1; i++) {
        total_days += days_in_month[i];
    }
    total_days += day;

    printf("%d/%d is the day number %d in the year\n", day, month, total_days);
    return 0;
}
```