

Spring 2000 CSE 142 Midterm 1 Version A

Answer Key

1. A
2. C
3. E
4. A
5. B
6. B
7. C
8. B
9. B
10. A
11. D
12. B
13. See the following program:

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

int main(void) {
    int i, parity, scanfResult;

    scanfResult = scanf("%d", &i);
    assert(scanfResult == 1);
    assert(i >= 0);
    parity = i % 2;
    printf("%d", parity);

    return (0);
}
```

14. See the following program:

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

#define FLAT_PRICE_WEIGHT 10
#define FLAT_CHARGE 3.5
#define PER_POUND_CHARGE 0.4

int main(void) {
    double weight, price;
    int overweight, scanfResult;

    printf("Please, enter the shipment weight: ");
    scanfResult = scanf("%lf", &weight);
    assert(scanfResult == 1);
    assert(weight >= 0.0);
    overweight = (int)weight % FLAT_PRICE_WEIGHT;
    price = (int)weight / FLAT_PRICE_WEIGHT * FLAT_CHARGE +
            overweight * PER_POUND_CHARGE;
    printf("The shipping and handling price is: $%.2f", price);

    return (0);
}
```