

CAT 2 NOVEMBER 2024, PRINCIPLES OF C PROGRAMMING

Q.1 a)

Output of code in Image 1

```
i = 1  
i = 2  
i = 3  
i = 4
```

Breaking the loop at $i = 5$

b) i) while loop

#include <stdio.h>

```
int main() {  
    int i = 1;  
    while (i <= 10) {  
        if (i == 5)  
        { printf("Breaking the loop at i = 5\n");  
          break; }  
        printf("i = %d\n", i);  
        i++;  
    }  
    return 0;  
}
```

ii) Do while loop

#include <stdio.h>

```
int main() {  
    int i = 1;  
    do {  
        if (i == 5) {  
            printf("Breaking the loop at i = 5\n");  
            break;  
        }  
        printf("i = %d\n", i);  
        i++;  
    } while (i <= 10);  
}
```

Q.2.

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

```
int main() {
```

```
    int i;
```

```
    for (i=1; i <= 10; i++) {
```

```
        if (i == 3) {
```

```
            printf("skipping iteration at i=3\n");
```

```
            continue;
```

```
        }
```

```
        printf("i=%d\n", i);
```

```
        if (i == 5) {
```

```
            break;
```

```
        }
```

```
    }
```

```
    return 0;
```

```
}
```