1) Write a program to display present date and time using c language

```
#include <stdio.h>

int main(){
   printf("Date :%s\n", __DATE__ );
   printf("Time :%s\n", __TIME__ );
   return 0;
}
```

2) Write a c program to demonstrate pre-processor directives

i) Macros

```
#include <stdio.h>

// Define a macro for finding the maximum of two numbers
#define MAX(x, y) ((x) > (y) ? (x) : (y))

// Define a macro to print a message
#define PRINT_MSG(msg) printf("Message: %s\n", msg)
g
// Define a macro to calculate the square of a number
#define SQUARE(x) ((x) * (x))

int main() {
   int a = 10, b = 20;

   // Using MAX macro to find the maximum of two numbers
   printf("Maximum of %d and %d is %d\n", a, b, MAX(a, b));
```

```
    // Using PRINT_MSG macro to print a message
    PRINT_MSG("Hello, world!");

    // Using SQUARE macro to calculate the square of a number
    printf("Square of %d is %d\n", a, SQUARE(a));

    return 0;
}
```

In this program:

- We first include the standard input-output library **<stdio.h>**.
- Then, we define three macros using **#define** directive:
  - **MAX(x, y)**: This macro takes two arguments **x** and **y** and returns the maximum of the two.
  - **PRINT_MSG(msg)**: This macro takes a single argument **msg** and prints it as a message.
  - **SQUARE(x)**: This macro takes a single argument **x** and returns the square of it.
- In the **main()** function, we demonstrate the usage of these macros:
  - We use **MAX** macro to find the maximum of two numbers **a** and **b**.
  - We use **PRINT_MSG** macro to print a message.
  - We use **SQUARE** macro to calculate the square of a number **a**.
- The macros are expanded during preprocessing, before the actual compilation of the program.

ii) Conditional Compilation.

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

```
#define DEBUG
int main() {
    #ifdef DEBUG
        printf("Debugging mode is enabled.\n");
    #else
        printf("Debugging mode is disabled.\n");
    #endif
    return 0;
}
```