

Quiz 2
Operating Systems and Networks
IIIT Hyderabad
Time: 30 minutes; Max. Marks: 24

Note: Give a brief and correct answer. **Mention your name and roll number on the answer sheet. Answer the question after writing the question in the answer sheet.**

1. “The notion of virtual machine is a logical conclusion of layered design” Elaborate.
2. Explain merits and demerits of direct and indirect communication system designer level and programmer level:
3. Explain the issues if you do not employ “medium term scheduler”.
4. What do you understand with the word “Atmost Once” semantics?
5. Provide two programming examples in which multithreading provide better performance than a single-threaded execution.
6. Using the following program explain what will be the output at LINE A.

```
#include <sys/types.h>
#include <stdio.h>
#include <unistd.h>
int value =5;
int main()
{
    pid_t pid;
    pid=fork();
    if (pid == 0) { /* child process */
        value +=15;
    }
    else if (pid > 0){ /* parent process */
        printf("PARENT: value =%d",value); /* LINE A */
        exit(0);
    }
}
```