

# Operating System:

## GATE PYQ – Threads

By: Vishvadeep Gothi



**VISHVADEEP GOTHI SIR**

**AIR- 19, 119, 440, 682**  
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**Mtech BITS Pilani in Data**  
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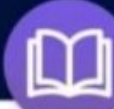


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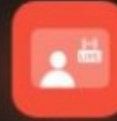
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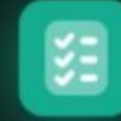
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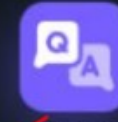
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# GATE-2004

Consider the following statements with respect to user-level threads and kernel-supported threads

- ~~I.~~ context switch is faster with kernel-supported threads
- ✓ II. for user-level threads, a system call can block the entire process
- ✓ III. Kernel supported threads can be scheduled independently
- ✓ IV. User level threads are transparent to the kernel

Which of the above statements are true?

- ~~A.~~ II, III and IV only
- B. II and III only
- C. I and III only
- D. I and II only

# GATE-2004

Which one of the following is NOT shared by the threads of the same process ?

- ☒ A. Stack
- ☐ B. Address Space
- ☐ C. File Descriptor Table
- ☐ D. Message Queue

# GATE-2007

Consider the following statements about user level threads and kernel level threads. Which one of the following statements is FALSE?

- A. Context switch time is longer for kernel level threads than for user level threads. — True
- B. User level threads do not need any hardware support. — True
- C. Related kernel level threads can be scheduled on different processors in a multi-processor system. — True
- D. Blocking one kernel level thread blocks all related threads. — False



# GATE-2011

A thread is usually defined as a light weight process because an Operating System (OS) maintains smaller data structure for a thread than for a process. In relation to this, which of the following statement is correct?

- A. OS maintains only scheduling and accounting information for each thread
- B. OS maintains only CPU registers for each thread
- C. OS does not maintain virtual memory state for each thread ✓
- D. OS does not maintain a separate stack for each thread

↓  
for process

# GATE-2014

Which one of the following is **FALSE**?

- A. User level threads are not scheduled by the kernel. — True
- B. When a user level thread is blocked, all other threads of its process are blocked. — True
- C. Context switching between user level threads is faster than context switching between kernel level threads. — True
- ☒ D. Kernel level threads cannot share the code segment. — False

# GATE-2017

Threads of a process share

- A. global variables but not heap
- B. heap but not global variables
- C. neither global variables nor heap
- ☒ D. both heap and global variables



# GATE-2017

Which of the following is/are shared by all the threads in a process?

- I. Program counter ~~X~~
- II. Stack ~~X~~
- III. Address space ✓
- IV. Registers ~~X~~ → Code

- A. I and II only
- B. III only
- C. IV only
- D. III and IV only



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