**Object oriented programming with JAVA**

**Questions bank**

**UNIT- 9**

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| **SR No** | **Questions** |
| 1 | Explain the difference between a process and a thread. Discuss their respective roles in multitasking and resource management. |
| 2 | Describe the lifecycle of a thread, detailing each state and the transitions between them. |
| 3 | Discuss the types of threads commonly used in multithreading environments. Compare and contrast user-level threads and kernel-level threads. |
| 4 | Explain the process of creating and running a thread in Java. Provide a step-by-step guide, including code examples, to illustrate the process. |
| 5 | Define a class that extends the Thread class or implements the Runnable interface. |
| 6 | Explain the concept of multitasking in the context of both processes and threads. How does it contribute to improving system efficiency? |
| 7 | Discuss the significance of thread synchronization in multithreaded programming. Provide examples of scenarios where synchronization is necessary and explain how it is achieved. |
| 8 | Describe the concept of thread priority in Java and its significance in thread scheduling. How are thread priorities used to influence the scheduling decisions made by the JVM? |
| 9 | Explain the role of the thread scheduler in managing the execution of threads in a multitasking environment. How does the scheduler determine the order in which threads are executed? |
| 10 | Describe the mechanism of inter-thread communication in Java. Explain how threads can communicate and synchronize their actions using methods such as wait(), notify(), and notifyAll(). |