#### **MONITORS**

Monitors use the concept of data abstraction, encapsulate shared data structure with their operations and hide their representations, that is, make shared data structures abstract data types.

One of the most important features of monitors is that shared data is resident in the monitor rather than in any of the client units. Because all accesses are resident in the monitor, the monitor implementation can be made to guarantee synchronized access by simply allowing only one access at a time.

## Principles of Programming Languages:

EasyExamNotes.com covered following topics in PPL.

- Language Evaluation Criteria
- Influences on Language Design
- Language Categories
- Programming Paradigms
- Compilation
- Virtual Machines
- Programming Environments
- Issues in Language Translation
- Parse Tree
- Pointer and Reference type
- Concept of Binding
- Type Checking

- Strong typing
- Sequence control with Expression
- Exception Handling
- Subprograms
- Fundamentals of sub-programs
- Scope and lifetime of variable
- Static and dynamic scope
- Design issues of subprogram and operations
- Local referencing environments
- Parameter passing methods
- · Overloaded sub-programs
- Generic sub-programs
- Design issues for functions
- Co routines
- Abstract Data types
- Abstraction and encapsulation
- Static and Stack-Based Storage management
- Garbage Collection
- OOP in C++
- OOP in Java
- OOP in C#
- OOP in PHP
- Concurrency
- Semaphores
- Monitors
- Message passing
- Java threads
- C# threads

- Exception handling
- Exceptions
- Exception Propagation
- Exception handler in C++
- Exception handler in Java
- Introduction and overview of Logic programming
- Basic elements of Prolog
- Application of Logic programming
- Functional programming languages
- Introduction to 4GL

#### **Practicals:**

- Memory Implementation of 2D Array.
- Memory Implementation of 3D Array.
- Implementation of pointers in C++.
- Write a program in Java to implement exception handling.
- Write a program in C++ to implement call by value parameter passing Method.
- Write a program in C++ to implement call by reference parameter passing Method.
- Write a program in Java to implement concurrent execution of a job using threads.
- Implement Inheritance in C#.
- Implement Encapsulation in C#.
- Implement static/compiletime Polymorphism in C#.
- Implement dynamic/runtime Polymorphism in C#.

## Previous years solved papers:

- PPL|RGPV|May 2018
- PPL|RGPV|June 2017

## A list of Video lectures

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- 3. Tucker, "Programming Languages: Principles and paradigms ", Tata McGraw –Hill.
- 4. E Horowitz, "Programming Languages", 2nd Edition, Addison Wesley

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