1. **Which command is used to initialize a Go module?**
   * go init
   * go start
   * **go mod init**
   * go module init
2. **How do you start a new goroutine in Go?**
   * go newFunction()
   * goroutine newFunction()
   * start newFunction()
   * launch newFunction()
3. **Which of the following will help manage synchronization between multiple goroutines?**
   * Goroutine locks
   * WaitGroups
   * Context cancellation
   * Mutexes
4. **Which function is used to block the main program and wait for goroutines to complete execution?**
   * sync.WaitGroup.Wait()
   * sync.WaitGroup.Done()
   * time.Sleep()
   * sync.Wait()
5. **What is the purpose of a channel in Go?**
   * To store global variables
   * To allow communication between goroutines
   * To define a pipeline of functions
   * To manage memory allocation in a program
6. **How do you send a value into a channel in Go?**
   * ch.send(val)
   * ch <- val
   * send(ch, val)
   * val <- ch
7. **How do you close a channel in Go?**
   * close(ch)
   * ch.close()
   * close(ch())
   * ch := nil
8. **Which file is used by Go to track dependencies and versions?**
   * go.conf
   * go.dependencies
   * go.lock
   * go.mod
9. **How can you install an external package in Go?**
   * go install <package-name>
   * go get <package-name>
   * go add <package-name>
   * go fetch <package-name>
10. **How do you add a counter to a WaitGroup in Go?**
    * wg.Add(1)
    * wg.Set(1)
    * wg.Increment(1)
    * wg.Push(1)
11. **Which package in Go is used to handle HTTP requests and responses?**
    * net/tcp
    * http/srv
    * net/http
    * net/socket
12. **Which of the following is a core package in Go for formatting strings?**
    * fmt
    * strconv
    * strings
    * text
13. **Which Go package is used to read and write to files?**
    * sys
    * io
    * os
    * file
14. **Which of the following is used to wrap errors in Go to provide more context?**
    * fmt.Errorf
    * log.Fatal
    * error.Wrap
    * panic.Wrap
15. **Which Go package is commonly used for creating HTTP-based REST APIs in a microservice architecture?**
    * net/http
    * github.com/gin-gonic/gin
    * github.com/gorilla/mux
    * All of the above
16. **What is the primary purpose of a goroutine in Go?**
    * To execute code synchronously in the same thread
    * To execute code concurrently in a separate thread
    * To spawn new processes for parallel computation
    * To define a new function scope
17. **What does the go test command do?**
    * Runs the tests in a specified package
    * Installs a testing framework
    * Builds the test binary
    * Creates test files