QuizzBuzz – Syllabus

1. **Algorithms and Data Structures:** (20%) – Algorithms and data structures form the foundation of programming. Questions in this category can cover topics such as sorting algorithms, searching algorithms, dynamic programming, graph algorithms, trees, linked lists, stacks, queues, etc.

2. **Programming Languages:** (15%) – Include questions related to popular programming languages such as Python, Java, C++, JavaScript, etc. Cover language-specific syntax, features, best practices, and common pitfalls.

3. **Software Engineering Principles:** (15%) – This category should cover software design principles, software development methodologies (Agile, Scrum, Waterfall, etc.), design patterns, SOLID principles, refactoring techniques, testing strategies, and version control systems (Git, SVN, etc.).

4. **Database Management Systems**: (10%) – Cover concepts related to relational databases (SQL), NoSQL databases, normalization, indexing, transactions, database administration, and database design.

5. **Web Development:** (10%) – Include questions on HTML, CSS, JavaScript, front-end frameworks (React, Angular, Vue.js), back-end development (Node.js, Django, Flask), RESTful APIs, HTTP protocols, and web security.

6. **Operating Systems:** (10%) – Cover concepts related to process management, memory management, file systems, concurrency, scheduling algorithms, and operating system security.

7. **Networking:** (5%) – Include questions on networking protocols (TCP/IP, HTTP, HTTPS, DNS), network topologies, OSI model, socket programming, network security, and troubleshooting network issues.

8. **Security**: (5%) – Cover topics such as cryptography, encryption algorithms, authentication mechanisms, secure coding practices, common security vulnerabilities (SQL injection, XSS, CSRF), and cybersecurity best practices.

9. **Mobile Development**: (5%) – Include questions on mobile app development platforms (iOS, Android), mobile UI/UX design, mobile development frameworks (React Native, Flutter), and mobile app testing.

10. **Miscellaneous/Advanced Topics**: (5%) – Allocate a small percentage for miscellaneous or advanced topics that are currently trending or gaining importance in the industry. This could include topics like machine learning, artificial intelligence, blockchain, cloud computing, etc.