**1. Benefits of measuring code coverage**  
It exposes untested parts of the code and guides more effective testing, reducing hidden bugs and boosting software reliability.

**2. Change request metrics**  
They track how many and how frequently modifications are requested. By monitoring trends (like increased requests), teams can spot process inefficiencies and improve development workflow.

**3. Maintenance quality metrics**  
These track bug-fix times, release stability, and overall health of the codebase. They’re crucial to ensure the software remains reliable and doesn’t devolve into a spaghetti mess over time.

**4. Benefits of applying various software metrics**  
They highlight potential risks (like complex code), ensure thorough testing, and help the team pinpoint improvement areas—kinda like a quick "health check" for your project.

**5. Key characteristics of software failures**  
They’re unexpected disruptions or behaviors that break normal use. Detect them through logs, error reports, and user complaints, mitigate by root-cause analysis and patching.

**6. Downtime**  
It’s whenever the system goes offline or becomes unusable. Downtime hits reliability and user trust, plus it often costs money or productivity.

**7. Reliability**  
Often done via metrics like Mean Time to Failure (MTTF) and defect rates. Good reliability prevents nasty surprises for users and maintains high product confidence.

**8. Product measures**  
These evaluate size, complexity, performance, and maintainability of the final product. They help teams see if their design is robust or if it needs rethinking.

**9. Stages of design**  
Usually: requirements analysis, architecture design, detailed design, and design validation. Each stage refines the solution until you have a clear blueprint to build on.

**10. Design quality**  
It’s how well the chosen design meets functional needs, remains flexible, and is easy to maintain. Good design quality is assessed via reviews, metrics (like coupling and cohesion), and real-world testing.