Technische Universität Dresden, Fakultät Informatik, Lehrstuhl Aßmann

Final Exam for

Software ReEngineering

in the Summer Semester of 2014

Student: _____ Points: _____

Student Number: _____ Grade: _____

1. What was the original goal of software reengineering?

_____

_____

_____

_____

_____

_____

_____

_____

2. What is technical debt? Give a brief explanation.

_____

_____

_____

_____

_____

_____

_____

_____

3. How does technical debt accumulate?

_____

_____

_____

_____

_____

_____

4.) Why is it necessary to reverse engineer, i.e. redocument , an existing software system before starting to redevelop it?

_____

_____

_____

_____

_____

_____

5. What should come out of a reverse engineering project, what are the results? Name five.

1) _____

2) _____

3) _____

4) _____

5) _____

6.) What is meant by traceability in a software system?

_____

_____

_____

_____

7.) What is the difference between reverse engineering and reengineering?

_____

_____

_____

_____

8.) What is meant by Program-Downsizing?

_____

_____

_____

_____

_____

_____

_____

_____

9.) What are the three approaches to Program-Downsizing?

1) _____

2) _____

3) _____

10.) What are the steps to reengineering a procedural program? Name five.

1) _____

2) _____

3) _____

4) _____

5) _____

11.) Why is reengineering a prerequisite to software migration?

_____

_____

_____

_____

12.) What are the techniques used in refactoring object-oriented programs? Name at least four.

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

13.) What are the steps to reengineering a Java source? Name five.

1) _____

2) _____

3) _____

4) _____

5) _____

14.) What is meant by code flattening and why is it done?

_____

_____

_____

_____

_____

_____

_____

_____

15.) What are the four objectives of data reverse engineering?

1) _____

2) _____

3) _____

4) _____

16.) What is the reason for wrapping legacy software?

_____

_____

_____

_____

_____

_____

17.) What are the types of software objects that can be wrapped? Name four?

1) _____

2) _____

3) _____

4) _____

18.) What is the purpose of a service-oriented architecture (SOA)?

_____

_____

_____

_____

19.) Why is it so important to separate the user interface processing from the business logic processing?

_____

_____

_____

_____

_____

_____

20.) Why is it so important to separate the data access processing from the business logic and presentation processing?

_____

_____

_____

_____

_____

_____

21.) What are the reasons for converting old procedural programs into a modern day object-oriented language like Java? Name four.

1) _____

2) _____

3) _____

4) _____

22.) How are objects derived from C, COBOL and PLI programs?

_____

_____

_____

_____

_____

_____

23) How are methods taken from a COBOL program?

_____

_____

_____

_____

_____

_____

24.) What are the biggest disadvantages to converting legacy software into a modern day programming language? Name four.

1) _____

2) _____

3) _____

4) _____

25.) What is in your opinion the best way to migrate old software into a new system? Explain why!

1) Redevelop it from scratch because:

_____

_____

_____

2) Re-implement it based on a documentation of the old software because:

_____

_____

_____

3) Wrap it for reuse in the new system because:

_____

_____

_____

4) Convert it to a modern day language because:

_____

_____

_____

Every question is worth 4 points.