b. Develop activity diagram for eliciting requirements. List the elements of analysis model.

30. a. Describe the four basic design principles applicable to component level design.

(OR)

b. Describe object oriented design concepts.

31. a. Write as many manual test cases for, if you are a new customer and you want to open a credit card account then there are 3 conditions, first you will get a 15% discount on all your purchases today, second if you are an existing customer and you hold a loyalty card, you get a 10% discount and third if you have a coupon, you can get 20% off today (but it can't be used with the 'new customer discount").

(OR)

b. Write short notes on the following
   (i) Structured coding techniques
   (ii) Coding styles

32. a. Explain the reverse engineering process. How is it different from forward engineering?

(OR)

b. State the purpose of software reengineering model. List and explain the phases involved.

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Reg. No.															

B.Tech. DEGREE EXAMINATION, DECEMBER 2019
First to Eighth Semester

15SE202 – SOFTWARE ENGINEERING PRINCIPLES
(For the candidates admitted during the academic year 2015-2016 to 2017-2018)

Note:
(i) **Part - A** should be answered in OMR sheet within first 45 minutes and OMR sheet should be handed over to hall invigilator at the end of 45th minute.
(ii) **Part - B** and **Part - C** should be answered in answer booklet.

Time: Three Hours Max. Marks: 100

PART – A (20 × 1 = 20 Marks)
Answer **ALL** Questions

1. Which one of the following is not a software process quality?
   (A) Productivity (B) Portability
   (C) Time lines (D) Visibility

2. The special model has two dimensions namely ____and _____
   (A) Diagonal, angular (B) Radial, perpendicular
   (C) Radial, angular (D) Diagonal, perpendicular

3. ____is responsible for spent meeting
   (A) Product owner (B) Scrum master
   (C) Scrum team (D) Stake holders

4. Which four framework activities are found in the extreme programming (XP)?
   (A) Planning, design, coding, testing (B) Analysis, design, coding, testing
   (C) Planning, analysis, design, coding (D) Planning, analysis, coding, testing

5. Which one of the following is not a step of requirement engineering?
   (A) Elicitation (B) Analysis
   (C) Documentation (D) Design

6. Which of the following is not a diagram studied in requirement analysis?
   (A) Activity diagram (B) Entity relationship diagram
   (C) State transition diagram (D) Use cases

7. _____and _____are the two issues of requirement analysis.
   (A) Performance, design (B) Functional, non-functional
   (C) Stake holder, developer (D) Design, non-functional

8. The requirements that result from requirements analysis are typically expressed from one of these perspective or view. What is that perspective or view?
   (A) Developer (B) Physical
   (C) Non functional (D) User

9. Which of these are followed in the case of software design process?
   (A) Analysis occurs at start of product design with a product idea
   (B) Analysis occurs at the end of engineering design with the SRS
   (C) Product design resolution produces the design document
   (D) Engineering design resolution produces the SRS

10. Which of the following is not a construct?
   (A) Sequence
   (B) Condition
   (C) Repetition
   (D) Selection

11. The essential characteristics of an object that distinguish from all other kind of objects, this provide crisply defined conceptual boundaries, relative to the perspective of the viewer is called _____
   (A) Encapsulation
   (B) Modularity
   (C) Abstraction
   (D) Hierarchy

12. Identify the key concept that does not impose transformation in architectural pattern in design
   (A) Scope of pattern is less board
   (B) Transformation imposed on the design
   (C) Imposes rules on the architecture
   (D) Tends to address specific behavioral issues

13. Which of the following term describes testing?
   (A) Connecting errors
   (B) A stage of all projects
   (C) Finding broken code
   (D) Evaluating deliverable to find errors

14. Which of the property of software modularity is incorrect with respect to benefit software modularity?
   (A) Modules are mostly dependent
   (B) Modules are robust
   (C) Modules be separately compiled and stored in library
   (D) Modules can use other modules

15. Validity test, that focused a comparing test scores of already existing employees to a measure of their job performance?
   (A) Predictive validity
   (B) Concurrent validity
   (C) Criterion validity
   (D) Content validity

16. Acceptance testing is also called as _____
   (A) Gray box
   (B) White box
   (C) Black box
   (D) Alpha testing

17. Which of the following process ensures that versions of systems and components are recorded and maintained?
   (A) Configuration control
   (B) Code line
   (C) Version
   (D) Works pace

18. In reverse engineering process, what refers to the sophistication of the design information that can be extracted for the source code?
   (A) Abstraction level
   (B) Interactivity
   (C) Completeness
   (D) Direction level

19. Which of the following process is concerned with analyzing the cost and benefits of proposal charges?
   (A) Version management
   (B) System binding
   (C) Change management
   (D) Release management

20. The loss of reverse engineering is an activity called
   (A) Interactivity
   (B) Restructure code
   (C) Directionality
   (D) Extract abstraction

PART – B (5 × 4 = 20 Marks)
Answer **ANY FIVE** Questions

21. Umbrella activities occur throughout the software process, do you think they are applied evenly across the process, or some concentrated in one or more framework activities.

22. Identify which agile methodology emphasizes the self organizing teams. Be descriptive with neat sketch.

23. Why do requirements change so much? Do you recommend face to face communication? Justify.

24. Discuss the role of web application design in software design process.

25. Differentiate between top down and bottom up integration testing.

26. Design re-engineering. Discuss the course of re-engineering in the development of a system.

27. Develop a detailed use case diagram for car insurance system.

PART – C (5 × 12 = 60 Marks)
Answer **ALL** Questions

28. a. The process provides interaction between user and designer, between user and evolving tools and between designer and evolving tools? List out your validation for the following questions with examples.
   (i) Designer should ask user?
   (ii) User should ask designer?
   (iii) User should ask themselves about software product that is to be built.
   (iv) Designer should ask themselves about software product that is to be built and the process that will be used to build it?

(OR)

   b. Compare the relative advantage of using the waterfall model, and the spiral model software development. Explain with the help of few suitable examples, the type of problem for which you would adapt waterfall and spiral. If you were developing a security critical system, how would you integrate the security segment engineering and assurance process into the model?

29. a. Develope a use case diagram with top level functional requirement for the clock. The key features of the clock software is to show the time of day. Using buttons the user can set the hours and minutes fields individually and choose between 12 and 24 hours display. It is possible to set one or two alarms. When an alarm fires, it will sound some noise. The user can turn it off, or choose to 'snooze'. If the users does not respond at all, the alarm will turn off itself after 2 mins. 'Snoozing' means to turn off the sound, but alarm will fire again after some mins of delay. This snoozing time is pre adjustable.

(OR)