Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CS2042** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Software Engineering** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | | | | **Course outcome** | **Marks** |
| **PART-A (40X1=40 MULTIPLE CHOICE QUESTIONS)** | | | | | | |
| 1. | The name of the way that computers manipulate data into information is called\_\_\_\_. | | | |  |  |
|  | a. Programming | b. Processing | c. Organizing | d. Storing | CO1 | (1) |
| 2. | A computer checks the user names and password from\_\_\_\_\_for a match before granting access. | | | |  |  |
|  | a.Website | b. Database | c. Network | d. Backup file | CO2 | (1) |
| 3. | How do you describe software? | | | |  |  |
|  | a. Set of computer programs concerned with the operation of data processing. | b. A set of compiler instructions | c. Mathematical formula | d. Data | CO1 | (1) |
| 4. | Which of the following is not the characteristic of software? | | | |  |  |
|  | a.Software does not wear out | b. Software is flexible | c. Software is not manufactured | d. Software is always correct | CO1 | (1) |
| 5. | During software development which factor is most crucial? | | | |  |  |
|  | a. People | b. Process | c. Product | d. Project | CO1 | (1) |
| 6. | The spiral model was originally proposed by \_\_\_\_. | | | |  |  |
|  | a.IBM | b. Barry Boehm | c. Pressman | d. Royce | CO1 | (1) |
| 7. | RAD stands for\_\_\_. | | | |  |  |
|  | a. Relative Application Development | b. Rapid Application Development | c. Rapid Application Document | d. Rapid Adaptation Development | CO1 | (1) |
| 8. | Which one of the following models is not suitable for accommodating any change? | | | |  |  |
|  | a. Build & Fix Model | b. Prototyping Model | c. RAD Model | d. Waterfall Model | CO1 | (1) |
| 9. | Which model can be selected if user is involved in all the phases of SDLC? | | | |  |  |
|  | a. Waterfall Model | b. Prototyping Model | c. RAD Model | d. Incremental Model | CO1 | (1) |
| 10. | Spiral Model has user involvement in all its phases. True/False. | | | |  |  |
|  | a. True | b. False |  |  | CO1 | (1) |
| 11. | What type of core-relationship is represented by the symbol in the figure below? [software-engg-aggregation symbol](http://www.sanfoundry.com/?attachment_id=56148) | | | |  |  |
|  | a. Aggregation | b. Dependency | c. Generalization | d. Association | CO3 | (1) |
| 12. | Which of the following UML diagrams has a static view? | | | |  |  |
|  | a. Collaboration | b. Use case | c. State chart | d. Activity | CO3 | (1) |
| 13. | What type of relationship is represented by Shape class and Square? [software-engg-generalization](http://www.sanfoundry.com/?attachment_id=56156) | | | |  |  |
|  | a. Realization | b. Generalization | c. Aggregation | d. Dependency | CO3 | (1) |
| 14. | Interaction Diagram is a combined term of\_\_\_ and \_\_\_. | | | |  |  |
|  | a. Sequence Diagram + Collaboration Diagram | b. Activity Diagram + State Chart Diagram | c. Deployment Diagram+ Collaboration Diagram | d. Object Diagram + Class Diagram | CO3 | (1) |
| 15. | Which of the following diagram is time oriented? | | | |  |  |
|  | a.Collaboration | b. Sequence | c. Activity | d. Use case | CO3 | (1) |
| 16. | The ISO 9000 series of standards is a program that can be used for external quality assurance purposes. True/False. | | | |  |  |
|  | a. True | b. False |  |  | CO5 | (1) |
| 17. | According to ISO 9001, the causes of nonconforming product should be\_\_\_\_\_. | | | |  |  |
|  | a. Deleted | b. Eliminated | c. Identified | d. Eliminated and Identified | CO5 | (1) |
| 18. | Which requirements are the foundation from which quality is measured? | | | |  |  |
|  | a. Hardware | b. Software | c. Programmers | d. None of the mentioned | CO4 | (1) |
| 19. | Which of the following is not a SQA plan for a project? | | | |  |  |
|  | a. Evaluations to be performed | b.Amount of technical work | c.Audits and reviews to be performed | d. Documents to be produced by the SQA group | CO5 | (1) |
| 20. | Who identifies, documents and verifies that corrections have been made to the software? | | | |  |  |
|  | a. Project manager | b. Project team | c. SQA group | d. All of the mentioned | CO4 | (1) |

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| 21. | In software metrics which metrics evaluate the track budget, schedule and human resource? | | | | |  |  |
|  | a. Requirement metrics | b. Product metrics | c. Process metrics | d. Analysis metrics | | CO5 | (1) |
| 22. | Changes are made to the system to reduce the chanches of future system failure is called \_\_\_\_\_\_\_\_\_ . | | | | |  |  |
|  | a. Preventive Maintenance | b. Adaptive Maintenance | c. Corrective Maintenance | d. Perfective Maintenance | | CO4 | (1) |
| 23. | The feature of the object oriented paradigm which helps code reuse is \_\_\_\_\_\_\_ . | | | | |  |  |
|  | a. Object | b. Class | c. Inheritance | d. Aggregation | | CO3 | (1) |
| 24. | System size is a metric for the analysis model. True/False. | | | | |  |  |
|  | a. True | b. False |  |  | | CO5 | (1) |
| 25. | Software scope is not a well defined boundary, which encompasses all the activities that are done to develop and deliver the software product. True/False. | | | | |  |  |
|  | a. True | b. False |  |  | | CO2 | (1) |
| 26. | \_\_\_\_represents the amount of work being completed on a project for every unit of cost spent. | | | | |  |  |
|  | a. CPI | b. SPI | c. PERT | d. CPM | | CO4 | (1) |
| 27. | Earned Value is part of  [\_\_](http://www.brighthubpm.com/certification/58364-pm-certification-and-project-cost-management/" \t "_blank) process group. | | | | |  |  |
|  | a. Control Cost | b. Direct Cost | c. Indirect Cost | d. Fixed cost | | CO4 | (1) |
| 28. | \_\_\_\_ is used to determine the cost of each work task represented in the schedule. | | | | |  |  |
|  | a. BCWS | b. BAC | c. BCA | d. BCWP | | CO2 | (1) |
| 29. | \_\_\_\_ provides an indication of the percentage of work have been completed on time. | | | | |  |  |
|  | a. Percent scheduled for completion | b. Percent complete | c. Scheduled Performance Index | d. Cost per completion | | CO2 | (1) |
| 30. | The value for BCWP is the sum of \_\_\_\_\_. | | | | |  |  |
|  | a. BCWS | b. BCSP | c. BAC | d. ACWP | | CO4 | (1) |
| 31. | The elements of module are grouped because the output of one element serves as input to another and so on, it is called \_\_\_\_\_\_\_\_ . | | | | |  |  |
|  | a.Sequential cohesion | b. Functional cohesion | c.Communicational cohesion | | d. Procedural cohesion | CO2 | (1) |
| 32. | \_\_\_\_\_ is an indication of the efficiency for the project is utilizing scheduled resources. | | | | |  |  |
|  | a. SPI | b. CPI | c. BWS | d. PI | | CO3 | (1) |
| 33. | Measure of reliability is given by\_\_\_\_\_\_ . | | | | |  |  |
|  | a. Mean Time between success. | b.Mean reliable | c.MTBF | d. MTTR | | CO4 | (1) |
| 34. | Which document is created by the system analyst after the requirements are collected from various stakeholders? | | | | |  |  |
|  | a. Software requirement specification | b. Software requirement validation | c. Feasibility study | d. Requirement gathering | | CO2 | (1) |
| 35. | An entity in ER Model is a real world being, which has some properties called\_\_\_\_\_. | | | | |  |  |
|  | a. Attributes | b. Relationship | c. Domain | d. Notation | | CO3 | (1) |
| 36. | The maximum number of objects that can participate in a relationship is called\_\_\_\_\_\_\_\_ . | | | | |  |  |
|  | a. Cardinality | b. Attributes | c. Operations | d. Transformers | | CO2 | (1) |
| 37. | In which elicitation process the developers discuss with the client and end users and know their expectations from the software? | | | | |  |  |
|  | a. Requirement gathering | b.Organizing requirements | c. Negotiation | d. Documentation | | CO2 | (1) |
| 38. | Checking quality of software in both simulated and live environments is known as\_\_\_\_\_. | | | | |  |  |
|  | a. Verification | b. Usability | c.Correction | d. Validation | | CO4 | (1) |
| 39. | Who manages the effects of changes throughout the software process? | | | | |  |  |
|  | a. Software project tracking and control | b. Software configuration management | c. Measurement | d. Technical reviews | | CO4 | (1) |
| 40. | During software development which factor is most crucial ? | | | | |  |  |
|  | a. People | b. Process | c. Product | d. Project | | CO4 | (1) |

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| **PART B(8 X 5 = 40 MARKS) (ANSWER ANY EIGHT)** | | | | |
| 41. | What are the problems that are encountered when the waterfall model is applied? | | CO1 | (5) |
| 42. | How does the requirement engineering process get initiated? | | CO2 | (5) |
| 43. | Explain the concept of modularity in design engineering process. | | CO3 | (5) |
| 44. | Explain the fundamental software design concepts in detail. | | CO3 | (5) |
| 45. | What steps are required to perform statistical SQA? | | CO5 | (5) |
| 46. | What steps do we perform to accomplish interface design? | | CO3 | (5) |
| 47. | Discuss about the elements present in the analysis model. | | CO2 | (5) |
| 48. | Write the guidelines for conducting the Formal Technical Review. | | CO4 | (5) |
| 49. | What are the characteristics of software measurement? | | CO5 | (5) |
| 50. | Write about ISO 90001:2000 quality standard. | | CO5 | (5) |
| **PART C( 2 X 10 = 20 MARKS) (ANSWER ANY TWO)** | | | | |
| 51. | Define agile view of process. Describe how to achieve the principles of agility? | | CO1 | (10) |
| 52. | Write short notes on the following: | |  |  |
|  | a | Basis Path Testing | CO4 | (3) |
|  | b | Control Structure Testing | CO4 | (3) |
|  | c | Boundary Value Analysis | CO4 | (2) |
|  | d | Equivalence Partitioning | CO4 | (2) |
| 53. | Draw the use case diagram, class diagram and sequence diagram for the Bank ATM operation. | | CO1 | (10) |

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