Registration No: | | | | | | | | | | |

Total Number of Pages: 02 **B.Tech.**
PCS3I104

3rd Semester Regular / Back Examination 2017-18
SOFTWARE ENGINEERING
BRANCH: CSE
Time: 3 Hours
Max Marks: 100
Q.CODE: B806

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions: *multiple type or dash fill up type*** **(2 x 10)**

a) Who writes the SRS ?
a)System Developer
b) System Tester
c) System Analyst
d)None of these above

b) What is a DFD ?
A. The modern version of flowchart
B. Mainly used at systems specification stage
C. The primary output of the system design phase
D. All of the above

c) Checking quality of software in both simulated and live environments is known as
A. Checking
B. Usability
C. Vaidity
D. Validation

d) The best file organization in which one has to process all data records in a file called
A. Indexed
B. Sequential
C. Direct access
D. Random access

e) The largest percentage of total life cycle cost of software is:
A. Design cost
B. Maintenance cost
C. Coding cost
D. Testing cost

f) The database design activity deals with the design of
A. Logical database
B. Physical database
C. Both (a) and (b)
D. None of the above

g) Which of the following is not a component of object oriented software engg.
A. Process
B. Method
C. Architecture
D. None of the above

h) Cost of error correction is least at
A. Implementation stage
B. Design stage
C. Development stage
D. Requirement analysis stage

i) Studying in detail the information needs of users and any information system presently used.

A. Systems analysis
B. Functional requirement
C. Systems design
D. User interface, data and process design

Answer Report Discuss

j) The rating of coupling of modules for strongest (least desirable) to weakest (most desirable) are

A. content, common, control, stamp, data
B. common, content, control, stamp, data
C. data, common ,stamp, content, common
D. data, control, common, stamp, content

Q2 **Answer the following questions: *Short answer type*** **(2 x 10)**

a) Explain any three principles of software engineering.
b) How the limitations of waterfall model overcome ?
c) List down three agile principles.
d) What are the characteristics of SRS?
e) Differentiate hard real time & soft real time systems
f) Define White Box Testing?
g) What is a boundary value analysis?
h) What are the common approaches in debugging?
i) Write about drivers and stubs.
j) What is Regression Testing?

Q3 **a)** Explain in details about spiral model with a neat sketch and describe why this model comes under both evolutionary and RAD models. **(10)**
b) List and describe good characteristics of a good software. **(5)**

Q4 **a)** Describe how to prepare a software requirement specification (SRS) document. List possible users and use of SRS for each user. **(10)**
b) Illustrate functional and non functional requirements in Software Engineering. **(5)**

Q5 **a)** Explain different types of Cohesion and coupling techniques. **(10)**
b) Discuss Object Oriented Analysis(OOA) and modeling in detail. **(5)**

Q6 **a)** What are architectural and procedural software designs? Explain. **(10)**
b) Describe how the DFD is important in system design with example. **(5)**

Q7 **a)** Write elaborately on Unit testing and Regression testing. How do you develop test suites ? **(10)**
b) What is cyclomatic complexity and what are the ways to compute it. **(5)**

Q8 **a)** What is UML ? Explain the following in context to UML. **(10)**
A)Use Case Diagram
B)Sequence Diagram
C)State Diagram
D)Classes and Objects
b) Black Box Testing vs White Box Testing. **(5)**

Q9 **a)** Explain Software Reverse Engineering and Software Reengineering. **(10)**
b) Briefly describe Service Oriented Architecture(SOA) in software engineering. **(5)**