

Hall Ticket Number :

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R11

Code: 1G182

IV B.Tech. II Semester Supplementary Examinations Nov/Dec 2016

Design Patterns

(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

1. a) Distinguish between design patterns and frameworks. 7M
b) Designing reusable object oriented software is harder. Justify. 7M
2. a) With the help of suitable example explain the data model classes and data objects. 7M
b) Design an immutable class to carry the data related to a college such as the college Name, college address, phone, fax, URL and Contact details. 7M
3. a) When can we use the factory method? Explain. 7M
b) Which pattern ensures a class only has one instance. Explain it in detail. 7M
4. a) Distinguish between internal and external iterators. 5M
b) With the help of suitable example explain the design of flyweight by using java. 7M
c) Mention situation in which visitor pattern is used. 2M
5. a) Which design pattern is used to convert the interface of class into another interface? Explain its structure, applicability and participants. 7M
b) List and explain the consequences and implementation issues of a bridge pattern. 7M
6. a) Describe the process of adding new observers to the existing one. 7M
b) How can we construct the tree structure for a given language? Explain with example. 7M
7. a) What is the motivation for template method? Describe it. 7M
b) Give brief description about the object authenticator. 7M
8. a) Write short notes on guarded suspension. 7M
b) What criteria should be followed for read – write locks and mention the issues for read write locks. Explain with example. 7M

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R11

Code: 1G187

IV B.Tech. II Semester Supplementary Examinations Nov/Dec 2016

Software Testing Methodologies

(Computer Science & Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **five** questions

All Questions carry equal marks (14 Marks each)

1. a) Distinguish between Testing & debugging? 7M
b) Discuss about consequences and taxonomy of bugs. 7M
2. a) Explain the terms Dicing, Dataflow and transaction flow in detail. 6M
b) Explain nice and ugly domains. 8M
3. a) Discuss in detail about Testability of domains. 7M
b) Write about Data Flow Anomalies and explain how data flow testing will explore them. 7M
4. Explain the procedure to find the maximum number of different paths possible and fewest number of paths possible with an illustration. 14M
5. Reduce the following functions using
a) K-maps.
 $F(A,B,C,D) = p(4,5,6,7,8,12,13) + d(1,15)$ 7M
b) Write short notes on stage bugs and dead states. 7M
6. a) Write testers comments about state graphs. 7M
b) Explain the process of simplifying topologies of domains? 7M
7. a) Write Boolean algebra rules? Illustrate the rules with path expressions. 6M
b) Use a karnargh map to minimize
 $f=AB^1C^1D^1 + ABC^1D + A^1BCD + ABD + B^1CD^1+A^1B^1C^1D$ 8M
8. a) Explain about usage of WinRunner Tool for functional Testing. 7M
b) Write about Matrix operations in Tool Building in detail. 7M
