

Code: 1G187

IV B.Tech. II Semester Advanced Supplementary Examinations June 2017

Software Testing Methodologies

(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **five** questionsAll Questions carry equal marks (**14 Marks** each)

1. a) Explain in detail about Data Bugs. 4M
 b) Why is it impossible for a tester to find all the bugs in a system? Why might it not be necessary for a program to be completely free of defects before it is delivered to its customers? 10M
2. a) Discuss about the similarities and differences between Control Flow Graph and Flow Chart 7M
 b) Construct a control flowgraph for Binary Search Application 7M
3. a) What is meant by Test Case? Design a Test case for Matrix Multiplication. 7M
 b) Discuss about Transaction Flow Testing techniques 7M
4. a) Explain about Domain Clouse and Domain Dimensionality. 7M
 b) Briefly explain about different domain errors 7M
5. What is Flow Graph? Discuss about different ways to discover the paths ins Flow Graph with an example 14M
6. a) Explain about Decision Table Testing? 4M
 b) An Application calculates the gross salary of an employee with references to the total number of working hours. If the total working hours per week are less than or equal to 45, then employee receives normal basic salary and benefits. The hours over 45 on normal working days are calculated at the rate of 1.25 times of the salary and benefits. However, on Sundays or holidays, the hours are calculated at the rate of 2.15 times of the salary and benefits. Construct the Decision Table for the above Specification 10M
7. a) Discuss about state based testing with help of an example 7M
 b) Explain about different issues that can be encounter, while doing State Based Testing 7M
8. a) Discuss about partition algorithm for Graph Matrix 7M
 b) Discuss the algorithm for finding set of all paths. 7M

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R11/R13

Code: 1G184

IV B.Tech. II Semester Advanced Supplementary Examinations June 2017

Virtual Reality

(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **five** questions

All Questions carry equal marks (**14 Marks** each)

1. a) Write a brief note on the evolution of VR in Industry 7M
b) Explain the three I's of VR with a VR triangle diagram 7M
2. a) Explain about Ultrasonic Trackers in detail 7M
b) Compare the features of Pinch Glove and Cyber Glove 7M
3. a) Brief about various graphics display for VR 7M
b) Write a brief note Speaker based 3D sounds 7M
4. a) Explain in detail about kinematics modeling 7M
b) Write a brief note on Level-of-Detail Management 7M
5. a) Discuss about the influence of system responsiveness on user performance 7M
b) Explain in detail about Cybersickness 7M
6. a) Summarize the role of VR in robotics 7M
b) Explain how VR applications are used in Surgery and Rehabilitation 7M
7. a) Discuss briefly about how model's shape attributes are adjusted 7M
b) Draw the class diagram of Lathe3D and explain. 7M
8. a) Write a brief note on Full-Screen Exclusive Mode(FSEM) 7M
b) Explain how touring Sprite is controlled 7M

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R11/R13

Code: 1G181

IV B.Tech. II Semester Advanced Supplementary Examinations June 2017

Artificial Neural Networks

(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **five** questions

All Questions carry equal marks (**14 Marks** each)

1. What are the main differences among the three models of artificial neuron, namely, McCulloch-Pitts, perceptron and adaline? 14M

2. a) What are the different types of Hebbian learning? 7M
 b) What are the different types of competitive learning? 7M

3. What are the three functional units? Why are they called functional units? 14M

4. Explain how to interpret perceptron learning as a gradient descent algorithm. What is the gradient term here? 14M

5. a) Describe the Boltzmann machine. 7M
 b) What is the basis for Boltzmann learning law? 7M

6. What are the salient features of the Kohonen's self-organizing learning algorithm? 14M

7. a) Explain in detail about pattern mapping 7M
 b) Write in detail about associative memory. 7M

8. How is an optimization problem formulated for solution using a neural network model? 14M
