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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION- December-2018
B.Tech V Semester

COURSE CODE: 10B1WCI515 MAX. MARKS:35
COURSE NAME: Software Testing & Debugging
COURSE CREDITS: 04 MAX. TIME: Two Hours

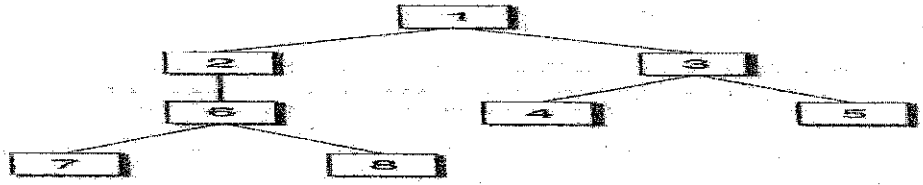
Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. Explain how regression testing ensures quality of software with suitable diagram. Explain selective retest techniques with suitable diagram. What are different parameters to evaluate such techniques? Illustrate with examples. [7]

2. Consider a two-player video game where the following rules will be followed
   (i) each player has a start button
   (ii) the player who presses the start button first gets the first serve
   (iii) the current player serves and a volley follows. One of the three things ends the volley:

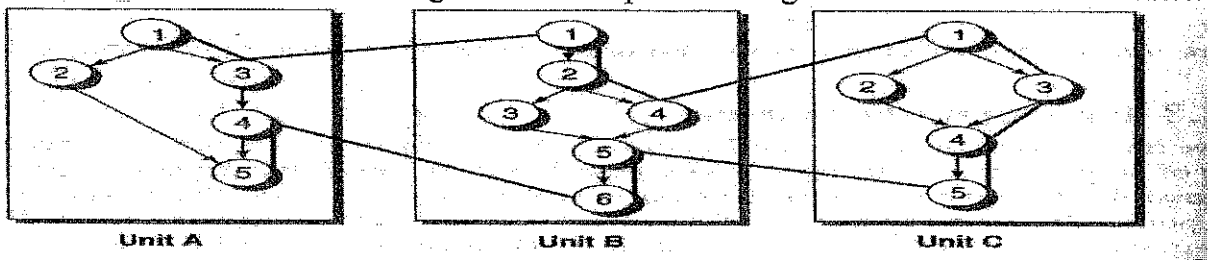
– if the server misses the ball, the server's opponent becomes the server
– if the server's opponent misses the ball, the server's score is incremented and the server gets to serve again
– if the server's opponent misses the ball and the server's score is at game point, the server is declared the winner (here: a score of 21 wins, so 20 is the game point)
Make the state transition diagram of the game and derive the test case table from it. [7]

3. Compare incremental and big bang approach with suitable example. Which one is better and why? Consider the decomposition tree given below:



Exercise step wise top down and bottom up integration testing strategies on the above deecomposition tree. How many numbers of drivers and stubs are needed in each strategy? [7]

4. Consider the following MM path diagram for 3 modules:



Show all modules execution paths and make corresponding MEP graph for the same. [7]

5. Explain the following techniques with suitable diagrams along with their power to localize the bug: Debugging by brute force Debugging by induction Debugging by deductionDebugging by backtracking [7]