

Examination: Quiz
Duration: 30 minutes

BRAC UNIVERSITY
Department of Computer Science and Engineering

Semester: Summer 2024
Full Marks: 25

CSE 470: Software Engineering

Name:

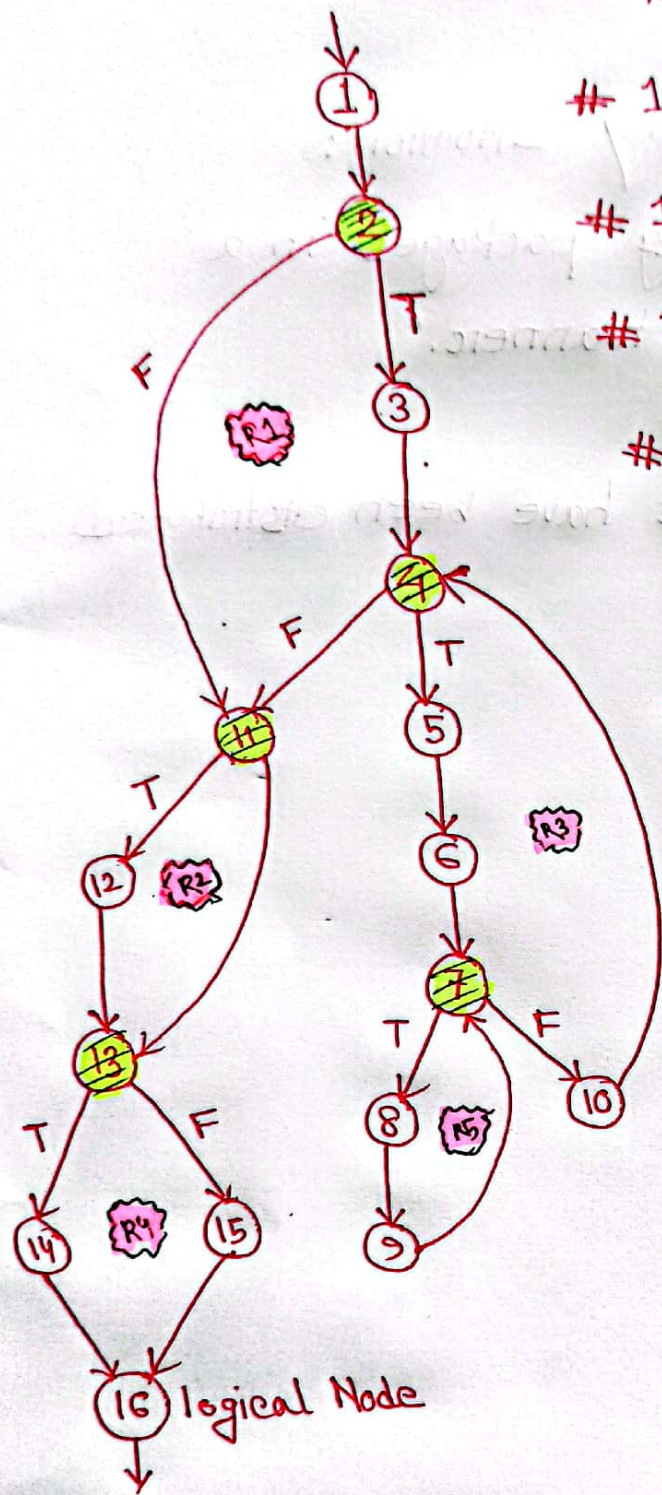
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Section:

Take a look at the following code snippet

JAVA CODE	PYTHON CODE
<pre>public class BangladeshRelief { public static void main(String[] args) { Scanner scanner = new Scanner(System.in); int totalPackages = 100; int distributedPackages = 0; boolean isEmergency = true; if (isEmergency) { System.out.println("Emergency situation: Start distribution of relief packages."); while (distributedPackages < totalPackages) { System.out.println("Distributing package " + (distributedPackages + 1)); for (int family = 1; family <= 3; family++) { System.out.println(" Giving to family " + family); distributedPackages++; } } else if (!isEmergency) { System.out.println("Non-emergency situation: Distributing packages in a planned manner."); } if (distributedPackages >= totalPackages) { System.out.println("All packages have been distributed!"); } else { System.out.println("Some packages are still remaining."); } } } }</pre>	<pre>def main(): total_packages = 100 distributed_packages = 0 is_emergency = True if is_emergency: print("Emergency situation: Start distribution of relief packages.") while distributed_packages < total_packages: print(f"Distributing package {distributed_packages + 1}") for family in range(1, 4): print(f" Giving to family {family}") distributed_packages += 1 elif not is_emergency: print("Non-emergency situation: Distributing packages in a planned manner.") if distributed_packages >= total_packages: print("All packages have been distributed!") else: print("Some packages are still remaining.") if __name__ == "__main__": main()</pre>

Q-1:



Q3: Independent Paths

1 → 2 → 11 → 12 → 13 → 14 → 16

1 → 2 → 11 → 13 → 15 → 16 →

1 → 2 → 3 → 4 → 11 → 13 → 15 → 16

1 → 2 → 3 → 4 → 5 → 6 → 7 → 10

16 ← 14 ← 13 ← 11 ← 4 ←

1 → 2 → 3 → 4 → 5 → 6 → 7 → 8

13 ← 11 ← 4 ← 10 ← 7 ← 9 ←

↳ 14 → 16

Q4: Test Case of Path 1

Path: 1 → 2 → 11 → 12 → 13 → 14 → 16

Testing Data: As per the path's executionable Condition we have to consider the following value as our testing value:

totalPackages = 100

distributedPackages = 100

isEmergency = false

Q2: Cyclometric Complexity,

$$M = R + 1$$

$$= 5 + 1$$

$$= 6$$

$$M = P + 1$$

$$= 5 + 1$$

$$M = E - N + 2P$$

$$= 20 - 16 + 2 \cdot 1$$

$$= 4 + 2$$

$$= 6$$

Expected Outcome from test Case:

print 1: "Non-emergency situation:

Distributing packages in a
planned manner."

print 2: "All packages have been distributed."