| | | Test Results | | | |
|-----|---|--|------------|--------------|---------------------|
| No. | Main Code | Mutant Code | Result | Run Time(ms) | Executed test cases |
| 1 | $\begin{array}{c} H(q1); \\ CNOT(q1, q2); \end{array}$ | $\begin{array}{c} \text{CNOT}(\text{q1, q2}); \\ \text{H}(\text{q1}); \end{array}$ | killed | 63 | 1 |
| 2 | Z(qAlice) | Y(qAlice) | killed | 71 | 1 |
| 3 | Z(qAlice) | Y(qAlice) | not killed | 76 | 10 |
| 4 | Z(qAlice) | duplicate | killed | 67 | 1 |
| 5 | Z(qAlice) | duplicate | not killed | 106 | 10 |
| 6 | X(qAlice) | duplicate | not killed | 62 | 10 |
| 7 | if (message::Bit1) $Z(qAlice);$ | deleted | killed | 64 | 1 |
| 8 | if (message::Bit1) Z(qAlice); | deleted | not killed | 60 | 10 |
| 9 | if (message::Bit2) X(qAlice); | deleted | killed | 58 | 1 |
| 10 | if (message::Bit2) X(qAlice); | deleted | not killed | 61 | 10 |
| 11 | MResetZ(qAlice) == One | MResetZ(qAlice) != One | killed | 64 | 1 |
| 12 | MResetZ(qBob) == One | MResetZ(qBob) != One | killed | 58 | 1 |
| 13 | MResetZ(qAlice) == One | MResetZ(qAlice) == Zero | killed | 57 | 1 |
| 14 | MResetZ(qBob) == One | MResetZ(qBob) == Zero | killed | 61 | 1 |
| 15 | ProtocolMessage(MResetZ(qAlice) == One, MResetZ(qBob) == One); | ProtocolMessage(MResetZ(qAlice) == Zero, MResetZ(qBob) == Zero); | killed | 65 | 1 |
| 16 | Entangle(qAlice, qBob) | Entangle(qBob,qAlice) | killed | 61 | 1 |
| 17 | Entangle(qAlice, qBob) | $\operatorname{Entangle}(\operatorname{qBob,qAlice})$ | not killed | 63 | 10 |
| 18 | DecodeMessage(q1, q2) | DecodeMessage(q2, q1) | not killed | 65 | 10 |
| 19 | Entangle(q1, q2); EncodeMessage(q1, message); | EncodeMessage(q1, message);Entangle(q1, q2); | killed | 69 | 1 |
| 20 | Entangle(q1, q2); EncodeMessage(q1, message); | EncodeMessage(q1, message);Entangle(q1, q2); | not killed | 70 | 10 |
| | The mutation score was $= 60$ | The average execution time $= 66 \text{ (ms)}$ | | | |