|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Activity | Predecessor | Time Estimated | | | Expected Time |
| Optimistic time | Normal time | Pessimistic time |
| A |  | 0 | 0 | 0 | 0 |
| B | A | 6 | 7 | 9 | 7.17 |
| C | A | 1 | 2 | 3 | 2 |
| D | C | 9 | 10 | 12 | 10.17 |
| E | B | 9 | 10 | 12 | 10.17 |
| F | B | 9 | 10 | 12 | 10.17 |
| G | D | 9 | 10 | 12 | 10.17 |
| H | E  F  G | 4  4  3 | 5  5  4 | 7  7  5 | 5.17  5.17  4 |

*TE*

|  |  |  |  |
| --- | --- | --- | --- |
| Event | Immediate Predecessor | TE for predecessor and activity time | TE |
| A | None |  | 0 |
| B | A | 0 +7.17 | 7.17 |
| C | A | 0+2 | 2 |
| D | C | 2+10.17 | 12.17 |
| E | B | 7.17+10.17 | 17.34 |
| F | B | 7.17+10.17 | 17.34 |
| G | D | 12.17+10.17 | 22.34 |
| h | E | 17.34+5.17 | 22.51 |
|  | F | 17.34+5.17 | 22.51 |
|  | G | 22.34+4 | 26.34 –This is the earliest possible time to finish the project |

*TL*

|  |  |  |  |
| --- | --- | --- | --- |
| Event | Immediate successor | TL for successor and activity time | TL |
| H | None | - | 26.34 |
| G | H | 26.34-4 | 22.34 |
| F | H | 26.34-5.17 | 21.17 |
| E | H | 26.34-5.17 | 21.17 |
| D | G | 22.341-10.17 | 12.17 |
| C | D | 12.17-10.17 | 2 |
| B | E | 21.17-10.17 | 11 |
| A | F | 21.17-10.17 | 11 |
|  | B | 11-7.17 | 3.83 |
|  | C | 2-2 | 0 |

**σ2 of pert diagram along critical path**

A= [(0-0)/6]^2 = 0

B= [(9-6)/6]^2 = 0.25

C= [(3-1)/6]^2 = 0.11

D= [(12-9)/6]^2 = 0.25

G= [(12-9)/6]^2 = 0.25

H= [(7-4)/6]^2 = 0.25

RT=9 weeks

Z=(RT- TE)/(sum of variances on CP)½

Z=(9-3.76)/(0+0.25+0.11+0.25+0.25+0.25)^1/2 = 4.973587898