**Group 1**

Information on six projects are given below. You are required:

* To select the best project using a multi-weighted scoring model
* To calculate implementation time for the selected project
* To prepare resource schedules with time constrain and maximum workforce of 100 persons per week.
* To recommend a strategy to reduce implementation time for the selected project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/week)** | **Cost (Millions VND/week)** |
| **Project 1** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | D | 8 | 25 | 8 | 80 |
| F | D | 4 | 45 | 10 | 100 |
| G | D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 2** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | D | 1 | 12 | 2 | 30 |
| **Project 3** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | B | 5 | 10 | 6 | 45 |
| D | B | 6 | 18 | 7 | 50 |
| E | A, C | 8 | 25 | 8 | 80 |
| F | A, C | 4 | 45 | 10 | 100 |
| G | A, C | 3 | 60 | 5 | 120 |
| H | D, G | 2 | 15 | 4 | 70 |
| I | E | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/week)** | **Cost (Millions VND/week)** |
| **Project 4** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | B, D | 8 | 25 | 8 | 80 |
| F | B, D | 4 | 45 | 10 | 100 |
| G | B, D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 5** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | E, H | 1 | 12 | 2 | 30 |
| **Project 6** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | C | 8 | 25 | 8 | 80 |
| F | C | 4 | 45 | 10 | 100 |
| G | B, D, E | 3 | 60 | 5 | 120 |
| H | B, D, E | 2 | 15 | 4 | 70 |
| I | F, H | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria Weight** | **ROI** | **Stay with core competencies** | **Defect reduction** | **Sale improvement** | **Customer loyalty improvement** | **Environmental friendly** |
| **0.25** | **0.1** | **0.3** | **0.2** | **0.1** | **0.05** |
| **Project 1** | 6 | 8 | 9 | 8 | 6 | 6 |
| **Project 2** | 7 | 9 | 6 | 8 | 8 | 7 |
| **Project 3** | 10 | 6 | 8 | 7 | 9 | 8 |
| **Project 4** | 8 | 8 | 9 | 6 | 7 | 6 |
| **Project 5** | 9 | 9 | 6 | 8 | 8 | 9 |
| **Project 6** | 10 | 8 | 7 | 9 | 9 | 8 |

**Group 2**

Information on six projects are given below. You are required:

* To select the best one using a multi-weighted scoring model
* To calculate implementation time for the selected project
* To prepare resource schedules with time constrain and maximum machine of 25 units per week in the first four weeks.
* To recommend a strategy to reduce implementation time for the selected project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/week)** | **Cost (Millions VND/week)** |
| **Project 1** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | D | 8 | 25 | 8 | 80 |
| F | D | 4 | 45 | 10 | 100 |
| G | D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 2** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | D | 1 | 12 | 2 | 30 |
| **Project 3** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | B | 5 | 10 | 6 | 45 |
| D | B | 6 | 18 | 7 | 50 |
| E | A, C | 8 | 25 | 8 | 80 |
| F | A, C | 4 | 45 | 10 | 100 |
| G | A, C | 3 | 60 | 5 | 120 |
| H | D, G | 2 | 15 | 4 | 70 |
| I | E | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/week)** | **Cost (Millions VND/week)** |
| **Project 4** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | B, D | 8 | 25 | 8 | 80 |
| F | B, D | 4 | 45 | 10 | 100 |
| G | B, D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 5** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | E, H | 1 | 12 | 2 | 30 |
| **Project 6** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | C | 8 | 25 | 8 | 80 |
| F | C | 4 | 45 | 10 | 100 |
| G | B, D, E | 3 | 60 | 5 | 120 |
| H | B, D, E | 2 | 15 | 4 | 70 |
| I | F, H | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria Weight** | **ROI** | **Stay with core competencies** | **Defect reduction** | **Sale improvement** | **Customer loyalty improvement** | **Environmental friendly** |
| **0.25** | **0.1** | **0.3** | **0.2** | **0.1** | **0.05** |
| **Project 1** | 9 | 9 | 6 | 8 | 8 | 9 |
| **Project 2** | 7 | 9 | 6 | 8 | 8 | 7 |
| **Project 3** | 10 | 6 | 8 | 7 | 9 | 8 |
| **Project 4** | 8 | 8 | 9 | 6 | 7 | 6 |
| **Project 5** | 10 | 8 | 7 | 9 | 9 | 8 |
| **Project 6** | 6 | 8 | 9 | 8 | 6 | 6 |

**Group 3**

Information on six projects are given below. You are required:

* To select the best one using a multi-weighted scoring model
* To calculate implementation time for the selected project
* To prepare resource schedules with time constrain and maximum budget of 200 million VND per week
* To recommend a strategy to reduce implementation time for the selected project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/week)** | **Cost (Millions VND/week)** |
| **Project 1** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | D | 8 | 25 | 8 | 80 |
| F | D | 4 | 45 | 10 | 100 |
| G | D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 2** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | D | 1 | 12 | 2 | 30 |
| **Project 3** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | B | 5 | 10 | 6 | 45 |
| D | B | 6 | 18 | 7 | 50 |
| E | A, C | 8 | 25 | 8 | 80 |
| F | A, C | 4 | 45 | 10 | 100 |
| G | A, C | 3 | 60 | 5 | 120 |
| H | D, G | 2 | 15 | 4 | 70 |
| I | E | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/week)** | **Cost (Millions VND/week)** |
| **Project 4** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | B, D | 8 | 25 | 8 | 80 |
| F | B, D | 4 | 45 | 10 | 100 |
| G | B, D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 5** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | E, H | 1 | 12 | 2 | 30 |
| **Project 6** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | C | 8 | 25 | 8 | 80 |
| F | C | 4 | 45 | 10 | 100 |
| G | B, D, E | 3 | 60 | 5 | 120 |
| H | B, D, E | 2 | 15 | 4 | 70 |
| I | F, H | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria Weight** | **ROI** | **Stay with core competencies** | **Defect reduction** | **Sale improvement** | **Customer loyalty improvement** | **Environmental friendly** |
| **0.25** | **0.1** | **0.3** | **0.2** | **0.1** | **0.05** |
| **Project 1** | 8 | 8 | 9 | 6 | 7 | 6 |
| **Project 2** | 7 | 9 | 6 | 8 | 8 | 7 |
| **Project 3** | 10 | 6 | 8 | 7 | 9 | 8 |
| **Project 4** | 10 | 8 | 7 | 9 | 9 | 8 |
| **Project 5** | 9 | 9 | 6 | 8 | 8 | 9 |
| **Project 6** | 6 | 8 | 9 | 8 | 6 | 6 |

**Group 4**

Information on six projects are given below. You are required:

* To select the best one using a multi-weighted scoring model
* To calculate implementation time for the selected project
* To prepare resource schedules with time constrain and maximum Workforce of 85 persons per week
* To recommend a strategy to reduce implementation time for the selected project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/ week)** | **Cost (Millions VND/week)** |
| **Project 1** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | D | 8 | 25 | 8 | 80 |
| F | D | 4 | 45 | 10 | 100 |
| G | D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 2** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | D | 1 | 12 | 2 | 30 |
| **Project 3** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | B | 5 | 10 | 6 | 45 |
| D | B | 6 | 18 | 7 | 50 |
| E | A, C | 8 | 25 | 8 | 80 |
| F | A, C | 4 | 45 | 10 | 100 |
| G | A, C | 3 | 60 | 5 | 120 |
| H | D, G | 2 | 15 | 4 | 70 |
| I | E | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/ week)** | **Cost (Millions VND/week)** |
| **Project 4** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | B, D | 8 | 25 | 8 | 80 |
| F | B, D | 4 | 45 | 10 | 100 |
| G | B, D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 5** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | E, H | 1 | 12 | 2 | 30 |
| **Project 6** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | C | 8 | 25 | 8 | 80 |
| F | C | 4 | 45 | 10 | 100 |
| G | B, D, E | 3 | 60 | 5 | 120 |
| H | B, D, E | 2 | 15 | 4 | 70 |
| I | F, H | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria Weight** | **ROI** | **Stay with core competencies** | **Defect reduction** | **Sale improvement** | **Customer loyalty improvement** | **Environmental friendly** |
| **0.25** | **0.1** | **0.3** | **0.2** | **0.1** | **0.05** |
| **Project 1** | 10 | 6 | 8 | 7 | 9 | 8 |
| **Project 2** | 7 | 9 | 6 | 8 | 8 | 7 |
| **Project 3** | 10 | 8 | 7 | 9 | 9 | 8 |
| **Project 4** | 8 | 8 | 9 | 6 | 7 | 6 |
| **Project 5** | 9 | 9 | 6 | 8 | 8 | 9 |
| **Project 6** | 6 | 8 | 9 | 8 | 6 | 6 |

**Group 5**

Information on six projects are given below. You are required:

* To select the best one using a multi-weighted scoring model
* To calculate implementation time for the selected project
* To prepare resource schedules with time constrain and maximum budget of 125 million VND per week in the first 4 weeks.
* To recommend a strategy to reduce implementation time for the selected project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/ week)** | **Cost (Millions VND/week)** |
| **Project 1** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | D | 8 | 25 | 8 | 80 |
| F | D | 4 | 45 | 10 | 100 |
| G | D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 2** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | D | 1 | 12 | 2 | 30 |
| **Project 3** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | B | 5 | 10 | 6 | 45 |
| D | B | 6 | 18 | 7 | 50 |
| E | A, C | 8 | 25 | 8 | 80 |
| F | A, C | 4 | 45 | 10 | 100 |
| G | A, C | 3 | 60 | 5 | 120 |
| H | D, G | 2 | 15 | 4 | 70 |
| I | E | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/ week)** | **Cost (Millions VND/week)** |
| **Project 4** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | B, D | 8 | 25 | 8 | 80 |
| F | B, D | 4 | 45 | 10 | 100 |
| G | B, D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 5** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | E, H | 1 | 12 | 2 | 30 |
| **Project 6** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | C | 8 | 25 | 8 | 80 |
| F | C | 4 | 45 | 10 | 100 |
| G | B, D, E | 3 | 60 | 5 | 120 |
| H | B, D, E | 2 | 15 | 4 | 70 |
| I | F, H | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria Weight** | **ROI** | **Stay with core competencies** | **Defect reduction** | **Sale improvement** | **Customer loyalty improvement** | **Environmental friendly** |
| **0.25** | **0.1** | **0.3** | **0.2** | **0.1** | **0.05** |
| **Project 1** | 7 | 9 | 6 | 8 | 8 | 7 |
| **Project 2** | 10 | 8 | 7 | 9 | 9 | 8 |
| **Project 3** | 10 | 6 | 8 | 7 | 9 | 8 |
| **Project 4** | 8 | 8 | 9 | 6 | 7 | 6 |
| **Project 5** | 9 | 9 | 6 | 8 | 8 | 9 |
| **Project 6** | 6 | 8 | 9 | 8 | 6 | 6 |

**Group 6**

Information on six projects are given below. You are required:

* To select the best one using a multi-weighted scoring model
* To calculate implementation time for the selected project
* To prepare resource schedules with time constrain and maximum numbers of 20 machines per week.
* To recommend a strategy to reduce implementation time for the selected project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/ week)** | **Cost (Millions VND/week)** |
| **Project 1** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | D | 8 | 25 | 8 | 80 |
| F | D | 4 | 45 | 10 | 100 |
| G | D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 2** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | D | 1 | 12 | 2 | 30 |
| **Project 3** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | B | 5 | 10 | 6 | 45 |
| D | B | 6 | 18 | 7 | 50 |
| E | A, C | 8 | 25 | 8 | 80 |
| F | A, C | 4 | 45 | 10 | 100 |
| G | A, C | 3 | 60 | 5 | 120 |
| H | D, G | 2 | 15 | 4 | 70 |
| I | E | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project activity** | **Precedent activity** | **Time (week)** | **Workforce (person/ week)** | **Machine (unit/ week)** | **Cost (Millions VND/week)** |
| **Project 4** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | B, D | 8 | 25 | 8 | 80 |
| F | B, D | 4 | 45 | 10 | 100 |
| G | B, D | 3 | 60 | 5 | 120 |
| H | C, E | 2 | 15 | 4 | 70 |
| I | G | 1 | 12 | 2 | 30 |
| **Project 5** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | A | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | A | 8 | 25 | 8 | 80 |
| F | A | 4 | 45 | 10 | 100 |
| G | B, C | 3 | 60 | 5 | 120 |
| H | F, G | 2 | 15 | 4 | 70 |
| I | E, H | 1 | 12 | 2 | 30 |
| **Project 6** | | | | | |
| A | None | 2 | 6 | 4 | 20 |
| B | None | 3 | 8 | 6 | 36 |
| C | None | 5 | 10 | 6 | 45 |
| D | A | 6 | 18 | 7 | 50 |
| E | C | 8 | 25 | 8 | 80 |
| F | C | 4 | 45 | 10 | 100 |
| G | B, D, E | 3 | 60 | 5 | 120 |
| H | B, D, E | 2 | 15 | 4 | 70 |
| I | F, H | 1 | 12 | 2 | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria Weight** | **ROI** | **Stay with core competencies** | **Defect reduction** | **Sale improvement** | **Customer loyalty improvement** | **Environmental friendly** |
| **0.25** | **0.1** | **0.3** | **0.2** | **0.1** | **0.05** |
| **Project 1** | 10 | 8 | 7 | 9 | 9 | 8 |
| **Project 2** | 7 | 9 | 6 | 8 | 8 | 7 |
| **Project 3** | 10 | 6 | 8 | 7 | 9 | 8 |
| **Project 4** | 8 | 8 | 9 | 6 | 7 | 6 |
| **Project 5** | 9 | 9 | 6 | 8 | 8 | 9 |
| **Project 6** | 6 | 8 | 9 | 8 | 6 | 6 |