1. **شاخص‌ها**

| **ردیف** | **شرح** | **شاخص** | |
| --- | --- | --- | --- |
| 1 | پروژه | *i,j* | *i,j=1,…,24 ;* |
| 2 | هدف استراتژیک | *t* | *t=1,…,9 ;* |
| 3 | پروژه پس‌نیاز | *g* |  |
| 4 | پروژه پیش ‌نیاز | *h* |  |
| 5 | منبع | *k* | *k=1,…,12 ;* |
| 6 | تکنولوژی | *f* | *f=1,…,5 ;* |



| **ردیف** | **پروژه (*i*)** | **میزان هم‌افزایی ناشی از تعاملات فنی ()** |
| --- | --- | --- |
| 1 |  | 75/0 |
| 2 |  | 5/0 |
| 3 |  | 1 |
| 4 |  | 5/0 |
| 5 |  | 5/0 |
| 6 |  | 5/0 |
| 7 |  | 1 |
| 8 |  | 25/0 |
| 9 |  | 1 |
| 10 |  | 25/0 |
| 11 |  | 75/0 |
| 12 |  | 1 |
| 13 |  | 5/0 |
| 14 |  | 25/0 |
| 15 |  | 5/0 |
| 16 |  | 1 |
| 17 |  | 1 |
| 18 |  | 5/0 |
| 19 |  | 1 |
| 20 |  | 75/0 |
| 21 |  | 1 |
| 22 |  | 5/0 |
| 23 |  | 1 |
| 24 |  | 1 |

1. **و**

| **کد پروژه** | **امتیاز پروژه ()** | **ریسک پروژه ()** | **کد پروژه** | **امتیاز پروژه ()** | **ریسک پروژه ()** |
| --- | --- | --- | --- | --- | --- |
|  | 3 | 3/0 |  | 2 | 4/0 |
|  | 2 | 15/0 |  | 4 | 05/0 |
|  | 5 | 4/0 |  | 4 | 15/0 |
|  | 2 | 5/0 |  | 2 | 3/0 |
|  | 3 | 4/0 |  | 4 | 1/0 |
|  | 4 | 08/0 |  | 3 | 25/0 |
|  | 5 | 2/0 |  | 5 | 55/0 |
|  | 3 | 35/0 |  | 2 | 05/0 |
|  | 2 | 1/0 |  | 5 | 35/0 |
|  | 2 | 15/0 |  | 3 | 2/0 |
|  | 5 | 2/0 |  | 2 | 1/0 |
|  | 5 | 35/0 |  | 4 | 3/0 |

|  |  |  |  |
| --- | --- | --- | --- |
| **کد پروژه** | **ارزش خالص فعلی پروژه (میلیارد تومان)** | **کد پروژه** | **ارزش خالص فعلی پروژه (میلیارد تومان)** |
|  | 15 |  | 120 |
|  | 10 |  | 8 |
|  | 5/11 |  | 10 |
|  | 23 |  | 6/28 |
|  | 100 |  | 23 |
|  | 25/30 |  | 62 |
|  | 18 |  | 5/12 |
|  | 25 |  | 7/79 |
|  | 5/31 |  | 11 |
|  | 56 |  | 45/8 |
|  | 55 |  | 4 |
|  | 3 |  | 45 |

|  |  |
| --- | --- |
| **t** |  |
| 1 | 1392/0 |
| 2 | 0544/0 |
| 3 | 1433/0 |
| 4 | 1152/0 |
| 5 | 1192/0 |
| 6 | 0828/0 |
| 7 | 1132/0 |
| 8 | 1096/0 |
| 9 | 1231/0 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **هم‌راستایی پروژه‌ها با اهداف استراتژیک سازمان** |  |  |  |  |  |  |  |  |  |
|  | 2 | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 1 |
|  | 3 | 4 | 4 | 4 | 3 | 2 | 2 | 3 | 2 |
|  | 4 | 4 | 4 | 3 | 4 | 2 | 4 | 4 | 1 |
|  | 3 | 2 | 3 | 3 | 3 | 2 | 4 | 2 | 3 |
|  | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 4 | 3 |
|  | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 |
|  | 3 | 4 | 3 | 5 | 3 | 4 | 3 | 3 | 2 |
|  | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
|  | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
|  | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
|  | 4 | 4 | 4 | 5 | 5 | 4 | 3 | 4 | 4 |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
|  | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 3 |
|  | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 4 |
|  | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 4 |
|  | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 3 |
|  | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 2 |
|  | 4 | 3 | 5 | 4 | 4 | 4 | 4 | 4 | 4 |
|  | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 3 |
|  | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
|  | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 |
|  | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|  | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |

| **ردیف** | **پروژه (*i*)** | **میزان هم‌افزایی ناشی از تعاملات منابع ()** |
| --- | --- | --- |
| 1 |  | 269/0 |
| 2 |  | 275/0 |
| 3 |  | 4015/0 |
| 4 |  | 43375/0 |
| 5 |  | 29/25 |
| 6 |  | 125/13 |
| 7 |  | 32/1 |
| 8 |  | 625/11 |
| 9 |  | 744/5 |
| 10 |  | 25/31 |
| 11 |  | 495/20 |
| 12 |  | 36/0 |
| 13 |  | 25/32 |
| 14 |  | 3/0 |
| 15 |  | 71575/0 |
| 16 |  | 835/7 |
| 17 |  | 175/8 |
| 18 |  | 15/25 |
| 19 |  | 79/4 |
| 20 |  | 625/34 |
| 21 |  | 275/1 |
| 22 |  | 34/1 |
| 23 |  | 264/0 |
| 24 |  | 41/0 |

| **ردیف** | **پروژه (*i*)** | **میزان هم‌افزایی ناشی از تعاملات تکنولوژی ()** |
| --- | --- | --- |
| 1 |  | 04/1 |
| 2 |  | 9/0 |
| 3 |  | 86/0 |
| 4 |  | 31/2 |
| 5 |  | 85/1 |
| 6 |  | 59/1 |
| 7 |  | 25/2 |
| 8 |  | 0 |
| 9 |  | 05/3 |
| 10 |  | 71/1 |
| 11 |  | 92/0 |
| 12 |  | 0 |
| 13 |  | 56/0 |
| 14 |  | 64/0 |
| 15 |  | 5/1 |
| 16 |  | 0 |
| 17 |  | 06/2 |
| 18 |  | 71/2 |
| 19 |  | 05/1 |
| 20 |  | 06/3 |
| 21 |  | 0 |
| 22 |  | 0 |
| 23 |  | 0 |
| 24 |  | 92/2 |

| **ردیف** | **پروژه (*i*)** | **مجموع هزینه‌های مستقیم و غیرمستقیم پروژه ()** |
| --- | --- | --- |
| 1 |  | 7/8 |
| 2 |  | 4 |
| 3 |  | 5 |
| 4 |  | 2/10 |
| 5 |  | 40 |
| 6 |  | 20 |
| 7 |  | 10 |
| 8 |  | 5/16 |
| 9 |  | 15 |
| 10 |  | 42 |
| 11 |  | 36 |
| 12 |  | 9/0 |
| 13 |  | 56 |
| 14 |  | 3 |
| 15 |  | 4 |
| 16 |  | 5/15 |
| 17 |  | 19 |
| 18 |  | 45 |
| 19 |  | 8 |
| 20 |  | 70 |
| 21 |  | 6/3 |
| 22 |  | 4 |
| 23 |  | 1/1 |
| 24 |  | 5/30 |

1. **B**

B=300

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
|  | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 20 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
|  | 15 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10000 | 25 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
|  | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 10 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 15 | 0 |
|  | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
|  | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 8000 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 40 |
|  | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
|  | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
|  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | *j* | | | | |
| 1 | 3 | 9 | 15 | 23 |
| *i* | 1 | 0 | 5 | 4 | 3 | 5 |
| 3 | 5 | 0 | 6 | 6 | 5 |
| 9 | 4 | 6 | 0 | 6 | 1 |
| 15 | 3 | 6 | 6 | 0 | 1 |
| 23 | 5 | 5 | 1 | 1 | 0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | *j* | | | | | |
| 1 | 2 | 3 | 7 | 18 | 24 |
| *i* | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 0 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 0 | 2 | 1 | 1 |
| 7 | 1 | 1 | 2 | 0 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 0 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | *j* | | | | | |
| 2 | 3 | 4 | 15 | 16 | 19 |
| *i* | 2 | 0 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 0 | 25/0 | 25/0 | 2/0 | 1 |
| 4 | 1 | 25/0 | 0 | 5/0 | 2/0 | 1 |
| 15 | 1 | 25/0 | 5/0 | 0 | 2/0 | 1 |
| 16 | 1 | 2/0 | 2/0 | 2/0 | 0 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 0 |

|  |  |  |
| --- | --- | --- |
|  | | *j* |
| 9 |
| *i* | 9 | 0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | *j* | | | |
| 5 | 10 | 13 | 18 |
| *i* | 5 | 0 | 1 | 5/0 | 1 |
| 10 | 1 | 0 | 5/0 | 1 |
| 13 | 5/0 | 5/0 | 0 | 5/0 |
| 18 | 1 | 1 | 5/0 | 0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | *j* | | | | | |
| 5 | 14 | 15 | 16 | 19 | 22 |
| *i* | 5 | 0 | 2/0 | 2/0 | 1 | 5/0 | 1 |
| 14 | 2/0 | 0 | 1 | 3/0 | 1 | 5/0 |
| 15 | 2/0 | 1 | 0 | 2/0 | 1 | 2/0 |
| 16 | 1 | 3/0 | 2/0 | 0 | 2/0 | 1 |
| 19 | 5/0 | 1 | 1 | 2/0 | 0 | 2/0 |
| 22 | 1 | 5/0 | 2/0 | 1 | 2/0 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | *j* | | | | |
| 6 | 8 | 13 | 17 | 20 |
| *i* | 6 | 0 | 25/0 | 3/0 | 2/0 | 1 |
| 8 | 25/0 | 0 | 1 | 1/0 | 2/0 |
| 13 | 3/0 | 1 | 0 | 5/0 | 5/0 |
| 17 | 2/0 | 1/0 | 5/0 | 0 | 25/0 |
| 20 | 1 | 2/0 | 5/0 | 25/0 | 0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | *j* | | | |
| 9 | 10 | 16 | 19 |
| *i* | 9 | 0 | 1 | 1 | 25/0 |
| 10 | 1 | 0 | 1 | 5/0 |
| 16 | 1 | 1 | 0 | 1 |
| 19 | 25/0 | 5/0 | 1 | 0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | *j* | | | |
| 7 | 17 | 21 | 22 |
| *i* | 7 | 0 | 25/0 | 1 | 1 |
| 17 | 25/0 | 0 | 25/0 | 5/0 |
| 21 | 1 | 25/0 | 0 | 2 |
| 22 | 1 | 5/0 | 2 | 0 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | | *j* | |
| 11 | 20 |
| *i* | 11 | 0 | 2000 |
| 20 | 2000 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | *j* | | | | |
| 7 | 11 | 12 | 15 | 23 |
| *i* | 7 | 0 | 1 | 2/0 | 25/0 | 1/0 |
| 11 | 1 | 0 | 5/0 | 1/0 | 05/0 |
| 12 | 2/0 | 5/0 | 0 | 3/0 | 2/0 |
| 15 | 25/0 | 1/0 | 3/0 | 0 | 25/0 |
| 23 | 1/0 | 05/0 | 2/0 | 25/0 | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | *j* | | |
| 4 | 21 | 24 |
| *i* | 4 | 0 | 5/0 | 4/0 |
| 21 | 5/0 | 0 | 25/0 |
| 24 | 4/0 | 25/0 | 0 |

| **ردیف** | **منبع (*k*)** | **موجودی منبع ()** |
| --- | --- | --- |
| 1 |  | 30 |
| 2 |  | 4 |
| 3 |  | 5 |
| 4 |  | 2 |
| 5 |  | 5 |
| 6 |  | 5 |
| 7 |  | 3 |
| 8 |  | 2 |
| 9 |  | 4 |
| 10 |  | 12500 |
| 11 |  | 75 |
| 12 |  | 92 |

1. **مجموعه**

پروژه‌های و (*i*=24,7)

1. **مجموعه**

پروژه‌های ، ، و (*i*=20,17,15,5)

1. **تقدم و تأخر**

پروژه بهپروژه *و پروژه به پروژه وابسته است.*

*محدودیتش میشه:*