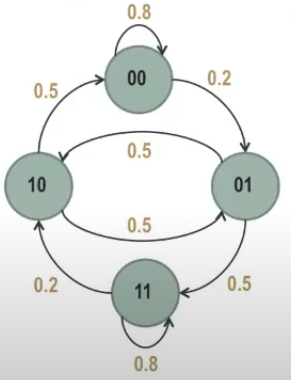
**Matriz estocástica de Periodo 3**

**Orden 1, Extensión 2**



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **00** | **01** | **10** | **11** | **Total Probabilidad** |
| **00** | 0.562 | 0.178 | 0.1 | 0.16 | **1** |
| **01** | 0.25 | 0.1 | 0.205 | 0.445 | **1** |
| **10** | 0.445 | 0.205 | 0.1 | 0.25 | **1** |
| **11** | 0.16 | 0.1 | 0.178 | 0.562 | **1** |

**PERIODO=3**

**Numero de combinaciones**

**Numero de símbolos=4**

**Orden=2**

1. **Probabilidad de estar en 00 y Pasar a 00**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **.8** | | **.8** | | **.8** | | **=0.512** |
| 00 | 0 | (00) | 0 | (00) | 0 | (00) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **.2** | | **.5** | | **.5** | | **=0.05** |
| 00 | 1 | (01) | 0 | (10) | 0 | (00) | Probabilidad total |

Probabilidad total=0.512+0.05=2.45

1. **Probabilidad de estar en 00 y Pasar a 01**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.8** | | **.8** | | **.2** | | **=0.128** |
| 00 | 0 | (00) | 0 | (00) | 1 | (01) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.2** | | **.5** | | **.5** | | **=0.05** |
| 00 | 1 | (01) | 0 | (10) | 1 | (01) | Probabilidad total |

Probabilidad total=0.128+0.05=0.178

1. **Probabilidad de estar en 00 y Pasar a 10**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.8** | | **.2** | | **.5** | | **=0.08** |
| 00 | 0 | (00) | 1 | (01) | 0 | (10) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.2** | | **.5** | | **.2** | | **=0.02** |
| 00 | 1 | (01) | 1 | (11) | 0 | (10) | Probabilidad total |

Probabilidad total=0.08+0.02=0.1

1. **Probabilidad de estar en 00 y Pasar a 11**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.8** | | **.2** | | **.5** | | **=0.08** |
| 00 | 0 | (00) | 1 | (01) | 1 | (11) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.2** | | **.5** | | **.8** | | **=0.08** |
| 00 | 1 | (01) | 1 | (11) | 1 | (11) | Probabilidad total |

Probabilidad total=0.08+0.08=0.16

1. **Probabilidad de estar en 01 y Pasar a 00**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.5** | | **.8** | | **=0.2** |
| 01 | 0 | (10) | 0 | (00) | 0 | (00) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.2** | | **.5** | | **=0.05** |
| 01 | 1 | (11) | 0 | (10) | 0 | (00) | Probabilidad total |

Probabilidad total=0.2+0.05=0.25

1. **Probabilidad de estar en 01 y Pasar a 01**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.5** | | **.2** | | **=0.05** |
| 01 | 0 | (10) | 0 | (00) | 1 | (01) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.2** | | **.5** | | **=0.05** |
| 01 | 1 | (11) | 0 | (10) | 1 | (01) | Probabilidad total |

Probabilidad total=0.05+0.05=0.1

1. **Probabilidad de estar en 01 y Pasar a 10**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.5** | | **.5** | | **=0.125** |
| 01 | 0 | (10) | 1 | (01) | 0 | (10) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.8** | | **.2** | | **=0.08** |
| 01 | 1 | (11) | 1 | (11) | 0 | (10) | Probabilidad total |

Probabilidad total=0.125 +0.08=0.205

1. **Probabilidad de estar en 01 y Pasar a 11**

* Camino 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.5** | | **.5** | | **=0.125** |
| 01 | 0 | (10) | 1 | (01) | 1 | (11) | Probabilidad total |

* Camino 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Probabilidad** | **.5** | | **.8** | | **.8** | | **=0.32** |
| 01 | 1 | (11) | 1 | (11) | 1 | (11) | Probabilidad total |

Probabilidad total=0.125 +0.32=0.445