**ДКА [010]-серий (Пример РК-заданий)**

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Построить **ДКА** с минимальным множеством состояний S={Si}, который допускает кодовые строки из двоичных разрядов B={0,1} формального языка:

**D135 = { 0n1m0k; n > 0, m > 0, k > 0 }**

и возвращается в исходное состояние Sо из заключительного состояния S# в конце (EOL) любой из них. Он должен быть формально задан таблицей переходов (SxB−>S) и матрицей соединений (SxS−>B). Их должен иллюстрировать автоматный граф G=(S,B) переходов по правилам соответствующей A-грамматики формального языка.

----------------------------------------------------------------------------------------------------------------

|  |
| --- |
| 0  0  E  0  #  0  0  1  1  2  1 |
| G=(S, B) |

|  |  |  |  |
| --- | --- | --- | --- |
| SxB−>S | 0 | 1 | E |
| S0 | S1 |  |  |
| S1 | S1 | S2 |  |
| S2 | S# | S2 |  |
| S# | S# |  | S0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SxS−>B | S0 | S1 | S2 | S# |
| S0 |  | 0 |  |  |
| S1 |  | 0 | 1 |  |
| S2 |  |  | 1 | 0 |
| S# | E |  |  | 0 |

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**HКА [101]-серий (Пример РК-заданий )**

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Построить **НКА** с минимальным множеством состояний S={Si}, который допускает кодовые строки из двоичных разрядов B={0,1} формального языка:

**N642 = { 1n0m1k; n > 0, m > 0, k > 0 }**

и возвращается в исходное состояние Sо из заключительного состояния S# в конце (EOL) любой из них. Он должен быть формально задан таблицей переходов (SxB−>S) и матрицей соединений (SxS−>B). Их должен иллюстрировать автоматный граф G=(S,B) переходов по правилам соответствующей A-грамматики формального языка.

-------------------------------------------------------------------------------------------------------------

|  |
| --- |
| 1  E  1  1  2  #  0  0  0  1  1 |
| G=(S, B) |

|  |  |  |  |
| --- | --- | --- | --- |
| SxB−>S | 0 | 1 | E |
| S0 |  | {S0,S1} |  |
| S1 | {S1,S2} |  |  |
| S2 |  | {S2,S#} |  |
| S# |  |  | {S0} |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SxS−>B | S0 | S1 | S2 | S# |
| S0 | 1 | 1 |  |  |
| S1 |  | 0 | 0 |  |
| S2 |  |  | 1 | 1 |
| S# | E |  |  |  |

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**{0N(n)1M(m)0K(k); n, m, k > 0}** варианты **D**КАзаданий

|  |  |  |  |
| --- | --- | --- | --- |
|  | РК6−3**1** Вариант **D**КА | РК6−3**3** Вариант **D**КА | РК6−3**5** Вариант **D**КА |
| **1** | **D101={0n+112m−102k}** | **D301={0n+112m+103k−2}** | **D501={0n+113m−203k+1}** |
| **2** | **D102={0n+112m−102k+1}** | **D302={0n+112m+103k−1}** | **D502={0n+113m−203k+2}** |
| **3** | **D103={0n+112m−103k−2}** | **D303={0n+112m+103k}** | **D503={0n+113m−204k−3}** |
| **4** | **D104={0n+112m−103k−1}** | **D304={0n+112m+103k+1}** | **D504={0n+113m−204k−2}** |
| **5** | **D105={0n+112m−103k}** | **D305={0n+112m+103k+2}** | **D505={0n+113m−204k−1}** |
| **6** | **D106={0n+112m−103k+1}** | **D306={0n+112m+104k−3}** | **D506={0n+113m−204k}** |
| **7** | **D107={0n+112m−103k+2}** | **D307={0n+112m+104k−2}** | **D507={0n+113m−204k+1}** |
| **8** | **D108={0n+112m−104k−3}** | **D308={0n+112m+104k−1}** | **D508={0n+113m−204k+2}** |
| **9** | **D109={0n+112m−104k−2}** | **D309={0n+112m+104k}** | **D509={0n+113m−103k}** |
| **10** | **D110={0n+112m−104k−1}** | **D310={0n+112m+104k+1}** | **D510={0n+113m−103k+1}** |
| **11** | **D111={0n+112m−104k}** | **D311={0n+112m+104k+2}** | **D511={0n+113m−103k+2}** |
| **12** | **D112={0n+112m−104k+1}** | **D312={0n+113m−203k−1}** | **D512={0n+113m−104k−3}** |
| **13** | **D113={0n+112m−104k+2}** | **D313={0n+113m−203k}** | **D513={0n+113m−104k−2}** |
| **14** | **D114={0n+112m02k+1}** | **D314={0n+113m−203k+1}** | **D514={0n+113m−104k−1}** |
| **15** | **D115={0n+112m03k−2}** | **D315={0n+113m−203k+2}** | **D515={0n+113m−104k}** |
| **16** | **D116={0n+112m03k−1}** | **D316={0n+113m−204k−3}** | **D516={0n+113m−104k+1}** |
| **17** | **D117={0n+112m03k}** | **D317={0n+113m−204k−2}** | **D517={0n+113m−104k+2}** |
| **18** | **D118={0n+112m03k+1}** | **D318={0n+113m−204k−1}** | **D518={0n+113m03k+1}** |
| **19** | **D119={0n+112m03k+2}** | **D319={0n+113m−204k}** | **D519={0n+113m03k+2}** |
| **20** | **D120={0n+112m04k−3}** | **D320={0n+113m−204k+1}** | **D520={0n+113m04k−3}** |
| **21** | **D121={0n+112m04k−2}** | **D321={0n+113m−204k+2}** | **D521={0n+113m04k−2}** |
| **22** | **D122={0n+112m04k−1}** | **D322={0n+113m−103k}** | **D522={0n+113m04k−1}** |
| **23** | **D123={0n+112m04k}** | **D323={0n+113m−103k+1}** | **D523={0n+113m04k}** |
| **24** | **D124={0n+112m04k+1}** | **D324={0n+113m−103k+2}** | **D524={0n+113m04k+1}** |
| **25** | **D125={0n+112m04k+2}** | **D325={0n+113m−104k−3}** | **D525={0n+113m04k+2}** |
| **26** |  | **D326={0n+113m−104k−2}** |  |
| **27** |  | **D327={0n+113m−104k−1}** |  |
| **28** |  | **D328={0n+113m−104k}** |  |
| **29** |  | **D329={0n+113m−104k+1}** |  |
| **30** |  | **D330={0n+113m−104k+2}** |  |

**{1N(n)0M(m)1K(k); n, m, k > 0}** варианты **H**КАзаданий

|  |  |  |
| --- | --- | --- |
| РК6−3**6** Вариант **H**КА | РК6−3**4** Вариант **H**КА | РК6−3**2** Вариант **H**КА |
| **H601={1n+102m−112k}** | **H401={1n+102m+113k−2}** | **H201={1n+103m−213k+1}** |
| **H602={1n+102m−112k+1}** | **H402={1n+102m+113k−1}** | **H202={1n+103m−213k+2}** |
| **H603={1n+102m−113k−2}** | **H403={1n+102m+113k}** | **H203={1n+103m−214k−3}** |
| **H604={1n+102m−113k−1}** | **H404={1n+102m+113k+1}** | **H204={1n+103m−214k−2}** |
| **H605={1n+102m−113k}** | **H405={1n+102m+113k+2}** | **H205={1n+103m−214k−1}** |
| **H606={1n+102m−113k+1}** | **H406={1n+102m+114k−3}** | **H206={1n+103m−214k}** |
| **H607={1n+102m−113k+2}** | **H407={1n+102m+114k−2}** | **H207={1n+103m−204k+1}** |
| **H608={1n+102m−114k−3}** | **H408={1n+102m+114k−1}** | **H208={1n+103m−214k+2}** |
| **H609={1n+102m−114k−2}** | **H409={1n+102m+114k}** | **H209={1n+103m−113k}** |
| **H610={1n+102m−114k−1}** | **H410={1n+102m+114k+1}** | **H210={1n+103m−113k+1}** |
| **H611={1n+102m−114k}** | **H411={1n+102m+114k+2}** | **H211={1n+103m−113k+2}** |
| **H612={1n+102m−114k+1}** | **H412={1n+103m−213k−1}** | **H212={1n+103m−114k−3}** |
| **H613={1n+102m−114k+2}** | **H413={1n+103m−213k}** | **H213={1n+103m−114k−2}** |
| **H614={1n+102m12k+1}** | **H414={1n+103m−213k+1}** | **H214={1n+103m−114k−1}** |
| **H615={1n+102m13k−2}** | **H415={1n+103m−213k+2}** | **H215={1n+113m−114k}** |
| **H616={1n+102m13k−1}** | **H416={1n+103m−214k−3}** | **H216={1n+103m−114k+1}** |
| **H617={1n+102m13k}** | **H417={1n+103m−214k−2}** | **H217={1n+103m−114k+2}** |
| **H618={1n+102m13k+1}** | **H418={1n+103m−214k−1}** | **H218={1n+103m13k+1}** |
| **H619={1n+102m13k+2}** | **H419={1n+103m−214k}** | **H219={1n+113m13k+2}** |
| **H620={1n+102m14k−3}** | **H420={1n+103m−214k+1}** | **H220={1n+103m14k−3}** |
| **H621={1n+102m14k−2}** | **H421={1n+103m−214k+2}** | **H221={1n+103m14k−2}** |
| **H622={1n+102m14k−1}** | **H422={1n+103m−113k}** | **H222={1n+103m14k−1}** |
| **H623={1n+102m14k}** | **H423={1n+103m−113k+1}** | **H223={1n+103m14k}** |
| **H624={1n+102m14k+1}** | **H424={1n+103m−113k+2}** | **H224={1n+103m14k+1}** |
| **H625={1n+102m14k+2}** | **H425={1n+103m−114k−3}** | **H225={1n+103m14k+2}** |
|  | **H426={1n+103m−114k−2}** |  |
|  | **H427={1n+103m−114k−1}** |  |
|  | **H428={1n+103m−114k}** |  |
|  | **H429={1n+103m−114k+1}** |  |
|  | **H430={1n+103m−114k+2}** |  |