ДОМАШНЕЕ ЗАДАНИЕ № 1 (второй семестр).

ОПЕРАТОРНЫЙ Метод РАСЧЕТА электрическОЙ цепИ.

Рассчитать операторным методом ток или напряжение, обозначенные на схеме стрелкой.

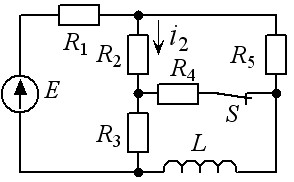
Построить график реакции.

Определить постоянную времени цепи.

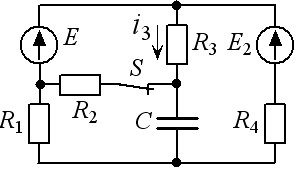
Сделать проверку классическим методом.

Единицы измерения: *e* [В], *i* [А], *R* [Ом], *L* [Гн], *C* [Ф].

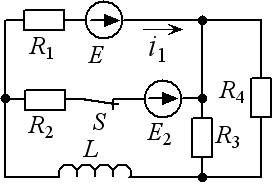
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *R*5 | *S* |
| в | 160 | 0.052632 | 16 | 10 | 50 | 25 | 40 | размык |



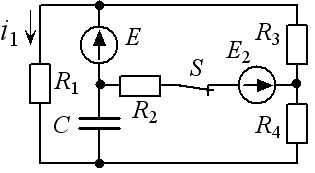
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 |  | *E*2 | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 220 | 50 | 0.05 | 20 | 30 | 14 | 5 | размык |



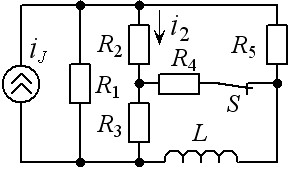
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 |  | *E*2 | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 120 | 60 | 0.5 | 3 | 1.2 | 3 | 1 | размык |



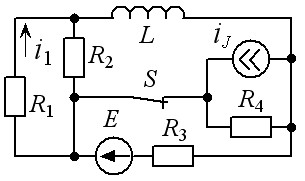
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 |  | *E*2 | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 180 | 60 | 9.524·10-4 | 15 | 60 | 20 | 15 | размык |



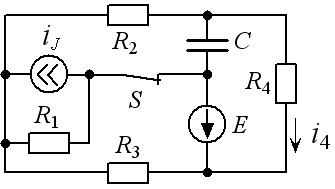
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 |  | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *R*5 | *S* |
| в | 18 | 0.04545 | 3 | 10 | 20 | 20 | 30 | размык |



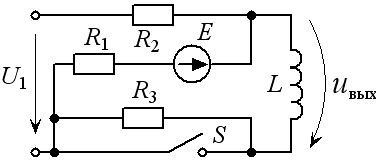
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 |  |  | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 30 | 18 | 0.1 | 10 | 10 | 2.5 | 25 | размык |



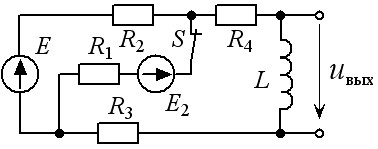
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 |  |  | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 200 | 4.667 | 1.429·10-5 | 30 | 10 | 60 | 10 | размык |



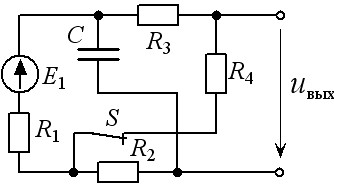
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 8 |  | *U*1 | *L* | *R*1 | *R*2 | *R*3 | *S* |
| в | 80 | 20 | 0.5 | 5 | 5 | 10 | замык |



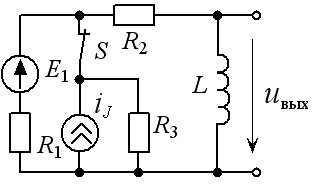
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 |  | *E*2 | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 30 | 90 | 0.25 | 30 | 15 | 3 | 7 | размык |



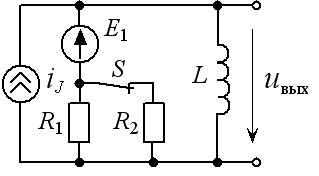
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 |  | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 120 | 4·10-3 | 20 | 5 | 30 | 10 | размык |



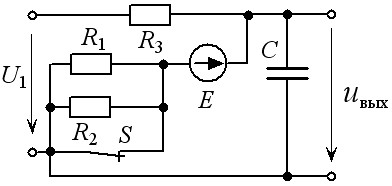
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 11 |  |  | *L* | *R*1 | *R*2 | *R*3 | *S* |
| в | 150 | 5 | 0.5 | 30 | 20 | 60 | размык |



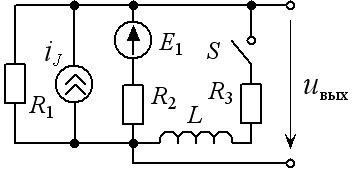
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 12 |  |  | *L* | *R*1 | *R*2 | *S* |
| в | 150 | 5 | 0.01 | 30 | 15 | размык |



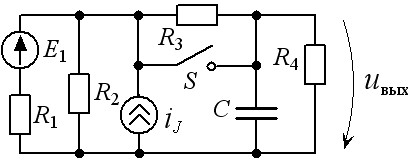
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 13 |  | *U*1 | *C* | *R*1 | *R*2 | *R*3 | *S* |
| в | 300 | 150 | 10-3 | 60 | 10 | 30 | размык |



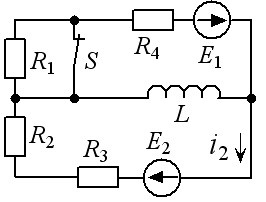
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 14 |  | *E*1 | *L* | *R*1 | *R*2 | *R*3 | *S* |
| в | 1 | 120 | 0.2 | 60 | 30 | 60 | замык |



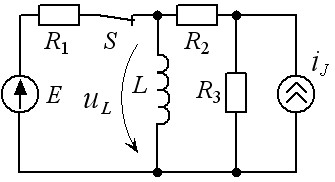
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 |  | *E*1 | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 3 | 30 | 4·10-3 | 15 | 30 | 5 | 5 | замык |



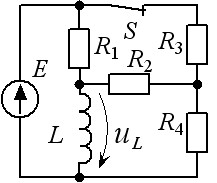
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 |  | *E*2 | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 12 | 8 | 0.3 | 6 | 1 | 3 | 6 | размык |



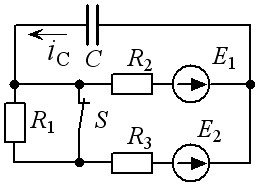
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 17 |  | *E* | *L* | *R*1 | *R*2 | *R*3 | *S* |
| в | 7 | 72 | 0.5 | 12 | 15 | 20 | размык |



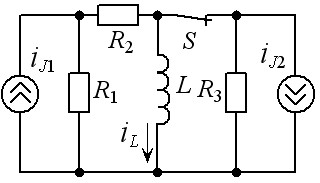
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 18 |  | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 24 | 0.02 | 6 | 3 | 2 | 6 | размык |



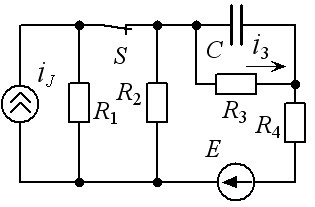
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 19 |  | *E*1 | *C* | *R*1 | *R*2 | *R*3 | *S* |
| в | 9 | 6 | 0.25·10-3 | 9 | 6 | 3 | размык |



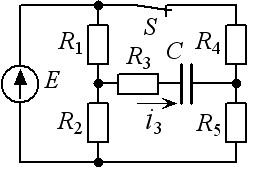
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 20 |  |  | *L* | *R*1 | *R*2 | *R*3 | *S* |
| в | 9 | 12 | 0.1 | 8 | 16 | 24 | размык |



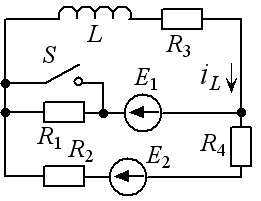
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 |  |  | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 18 | 3 | 7.143·10-5 | 6 | 3 | 2 | 4 | размык |



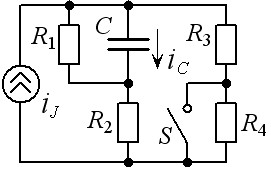
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 |  | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *R*5 | *S* |
| в | 15 | 2.5·10-4 | 3 | 2 | 5.8 | 6 | 3 | размык |



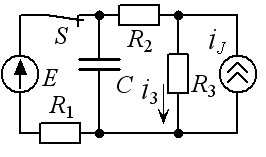
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 |  | *E*2 | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 15 | 64 | 0.25 | 3 | 8 | 3 | 2 | замык |



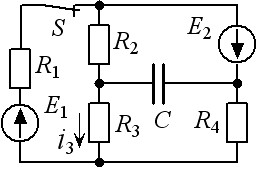
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 24 |  | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 12 | 2.5·10-4 | 2 | 7 | 9 | 6 | замык |



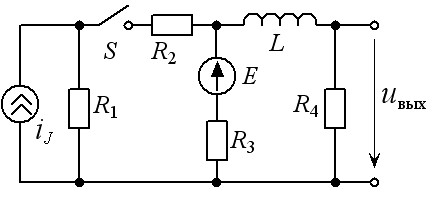
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 25 |  | *E* | *C* | *R*1 | *R*2 | *R*3 | *S* |
| в | 0.5 | 100 | 2.5·10-5 | 20 | 20 | 80 | размык |



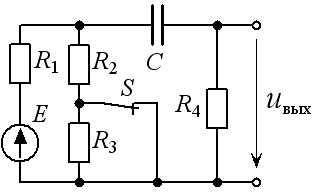
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 |  | *E*1 | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 12 | 16 | 1.25·10-4 | 4 | 4 | 5 | 3 | размык |



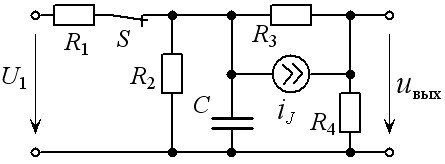
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 |  |  | *L* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 18 | 8 | 0.143 | 9 | 3 | 2 | 4 | замык |



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 28 |  | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 150 | 0.01 | 30 | 20 | 25 | 32 | размык |



|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 |  | *U*1 | *C* | *R*1 | *R*2 | *R*3 | *R*4 | *S* |
| в | 6 | 20 | 0.01667 | 4 | 12 | 6 | 6 | размык |



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 30 |  | *E*1 | *C* | *R*1 | *R*2 | *R*3 | *S* |
| в | 10 | 120 | 0.1 | 1 | 9 | 99 | замык |

