Домашнее Задание №2

Определить законы изменения во времени токов и напряжений, указанных на схеме стрелками. Построить временные зависимости рассчитанных токов и напряжений. Определить постоянную времени цепи.

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

ВАРИАНТ 1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №1 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 100 | 1 | 25 | 50 | 100 | 160 |



ВАРИАНТ 2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №2 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 52 | 1.04 | 25 | 2 | 4 | 40 |



ВАРИАНТ 3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №3 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 30 | 3 | 7 | 8 | 10 | 1250 |



ВАРИАНТ 4

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №4 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 60 | 4 | 10 | 15 | 50 | 500 |



ВАРИАНТ 5

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №5 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 52 | 1 | 50 | 2 | 5 | 50 |



ВАРИАНТ 6

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №6 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 48 | 1 | 4 | 16 | 20 | 625 |



ВАРИАНТ 7

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №7 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 180 | 4.5 | 10 | 80 | 200 | 500 |



ВАРИАНТ 8

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №8 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 510 | 2.55 | 125 | 5 | 12.5 | 20 |



ВАРИАНТ 9

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №9 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 70 | 7 | 15 | 10 | 20 | 1000/3 |



ВАРИАНТ 10

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №10 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 98 | 4.9 | 25 | 24 | 70 | 700 |



ВАРИАНТ 11

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №11 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 404 | 2 | 200 | 2 | 10 | 25 |



ВАРИАНТ 12

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №12 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 32 | 4.2 | 5 | 16 | 20 | 1000 |



ВАРИАНТ 13

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №13 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 225 | 1 | 25 | 75 | 125 | 200 |



ВАРИАНТ 14

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №14 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 104 | 1.04 | 2 | 50 | 4 | 40 |



ВАРИАНТ 15

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №15 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 160 | 1 | 40 | 80 | 70 | 250/7 |



ВАРИАНТ 16

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №16 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 100 | 3 | 100 | 200 | 200 | 20 |



ВАРИАНТ 17

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №17 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 100 | 2 | 200 | 100 | 160 | 4 |



ВАРИАНТ 18

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №18 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 40 | 1 | 20 | 10 | 50 | 250 |



ВАРИАНТ 19

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №19 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 10 | 10 | 1 | 24 | 4 | 250 |



ВАРИАНТ 20

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №20 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 60 | 2 | 30 | 30 | 8 | 50 |



ВАРИАНТ 21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №21 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 192 | 6 | 32 | 48 | 12 | 62.5 |



ВАРИАНТ 22

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №22 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 60 | 6 | 5 | 120 | 10 | 25 |



ВАРИАНТ 23

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №23 | *E*1В | *E*2В | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 144 | 32 | 72 | 4 | 9 | 62.5 |



ВАРИАНТ 24

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №24 | *E*В | *J*А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 216 | 4 | 36 | 44 | 9 | 62.5 |



ВАРИАНТ 25

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №25 | *J*A | *J*1А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 6 | 4 | 1 | 24 | 8 | 500 |



ВАРИАНТ 26

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №26 | *J*1А | *J*2А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 1.04 | 26 | 50 | 4 | 8 | 20 |



ВАРИАНТ 27

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №27 | *J*1А | *J*2А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 4.2 | 2.1 | 5 | 16 | 80 | 250 |



ВАРИАНТ 28

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| №28 | *J*1А | *J*2А | *R*1Ом | *R*2Ом | *L*мГн | *C*мкФ |
| а |  |  |  |  |  |  |
| б |  |  |  |  |  |  |
| в |  |  |  |  |  |  |
| г | 18 | 1.8 | 10 | 80 | 200 | 500 |

