

Code No: 58013

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

EHV AC TRANSMISSION

Objective Exam

Name: \_\_\_\_\_ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I. Choose the correct alternative:**

1. The Pulse of corona gives interference to radio broadcast in a range of \_\_\_\_\_ MHz [      ]  
(a) 1 to 2      (b) 1.2 to 2.5      (c) 0.5 to 1.6      (d) 2.5 to 4.5
2. The RF energy received at a P which is at a distance of (y-x) from the source of corona S is \_\_\_\_\_ [      ]  
(a)  $E/2a$       (b)  $E/2a^2$       (c)  $E/2$       (d)  $E/4a$
3. The line has surge impedance  $Z_0$  so that R-F power generated per unit length of line is [      ]  
(a)  $E=I^2Z_0$       (b)  $E=IZ_0^2$       (c)  $E=I^2Z_0^2$       (d)  $E=IZ_0$
4. The minimum clearance required for 400KV line is \_\_\_\_\_ vehicles like cars. [      ]  
(a) 15m      (b) 17m      (c) 20m      (d) 25m
5. The relation between  $r, l, g \& c$  is \_\_\_\_\_ for distortion less line [      ]  
(a)  $rg=lc$       (b)  $rc=gl$       (c)  $rl=gc$       (d) none of these
6. In finding the junction voltages in the short circuit terminal condition the value of  $K_t$  is \_\_\_\_ Given  $Z_t=0, K_r=-1, j_t=+2, j_r=+1$  [      ]  
(a) 1      (b) -1      (c) 2      (d) 0
7. The surge impedance loading for a 750KV lines, with  $250\Omega$  surge impedance is \_\_\_\_\_ MVA [      ]  
(a) 225      (b) 2250      (c) 2520      (d) 2550
8. Shunt compensation in an EHV line is used to improve [      ]  
(a) Stability and fault level      (b) fault level and voltage profile  
(c) Voltage profile only      (d) stability fault and voltage profile
9. The current flow is governed mainly by \_\_\_\_\_ in power transmission. [      ]  
(a) Surge impedance      (b) load impedance      (c) source impedance      (d) none of these
10. A overhead line has inductance of  $0.22mH$  per Km and capacitance of  $0.202\mu F$  per Km .The surge impedance of the overhead line. [      ]  
(a)  $28\Omega$       (b)  $33\Omega$       (c)  $42\Omega$       (d)  $50\Omega$

Cont.....2

**II Fill in the Blanks:**

11. The charge is found in terms of the excitation function, velocity & attenuation factor .then  $RI = \underline{\hspace{2cm}}$
12. An overhead line, the velocity of propagation, capacitance & surge impedance are related by  $V = \underline{\hspace{2cm}}$
13.  $\underline{\hspace{2cm}}$  parameters are used to study the EHV lines.
14. Electric field ( $E_G$ ) reduces inverse proportion to the  $\underline{\hspace{2cm}}$  from line conductor.
15. The ratio of reflected voltage to incident voltage is called  $\underline{\hspace{2cm}}$  coefficient.
16.  $\underline{\hspace{2cm}}$  provides both types MVARs lagging or leading for the voltage control.
17. In the power circle diagram the radius of the circle is given as  $\underline{\hspace{2cm}}$
18. The unit of phase shift constant is  $\underline{\hspace{2cm}}$
19. The minimum rms value of electro static field which causes electric shock to humans is  $\underline{\hspace{2cm}}$  KV/m.
20. The relation between reflection and refraction coefficient in a travelling wave is  $\underline{\hspace{2cm}}$

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Set No. 2

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IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

EHV AC TRANSMISSION

Objective Exam

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I. Choose the correct alternative:**

1. The minimum clearance required for 400KV line is \_\_\_\_\_ vehicles like cars. [      ]  
(a) 15m      (b) 17m      (c) 20m      (d) 25m
2. The relation between  $r, l, g \& c$  is \_\_\_\_\_ for distortion less line [      ]  
(a)  $rg=lc$       (b)  $rc=gl$       (c)  $rl=gc$       (d) none of these
3. In finding the junction voltages in the short circuit terminal condition the value of  $K_t$  is \_\_\_\_ Given  $Z_t=0, K_r=-1, j_t=+2, j_r=+1$  [      ]  
(a) 1      (b) -1      (c) 2      (d) 0
4. The surge impedance loading for a 750KV lines, with  $250\Omega$  surge impedance is \_\_\_\_\_ MVA [      ]  
(a) 225      (b) 2250      (c) 2520      (d) 2550
5. Shunt compensation in an EHV line is used to improve [      ]  
(a) Stability and fault level      (b) fault level and voltage profile  
(c) Voltage profile only      (d) stability fault and voltage profile
6. The current flow is governed mainly by \_\_\_\_\_ in power transmission. [      ]  
(a) Surge impedance      (b) load impedance      (c) source impedance      (d) none of these
7. A overhead line has inductance of  $0.22mH$  per Km and capacitance of  $0.202\mu F$  per Km .The surge impedance of the overhead line. [      ]  
(a)  $28\Omega$       (b)  $33\Omega$       (c)  $42\Omega$       (d)  $50\Omega$
8. The Pulse of corona gives interference to radio broadcast in a range of \_\_\_\_\_ MHz [      ]  
(a) 1 to 2      (b) 1.2 to 2.5      (c) 0.5 to 1.6      (d) 2.5 to 4.5
9. The RF energy received at a P which is at a distance of  $(y-x)$  from the source of corona S is \_\_\_\_ [      ]  
(a)  $E/2a$       (b)  $E/2a^2$       (c)  $E/2$       (d)  $E/4a$
10. The line has surge impedance  $Z_o$  so that R-F power generated per unit length of line is [      ]  
(a)  $E=I^2 Z_o$       (b)  $E=I Z_o^2$       (c)  $E=I^2 Z_o^2$       (d)  $E=I Z_o$

Cont.....2

**II Fill in the Blanks:**

11. Electric field ( $E_G$ ) reduces inverse proportion to the \_\_\_\_\_ from line conductor.
12. The ratio of reflected voltage to incident voltage is called \_\_\_\_\_ coefficient.
13. \_\_\_\_\_ provides both types MVARs lagging or leading for the voltage control.
14. In the power circle diagram the radius of the circle is given as \_\_\_\_\_
15. The unit of phase shift constant is \_\_\_\_\_
16. The minimum rms value of electro static field which causes electric shock to humans is \_\_\_\_\_ KV/m.
17. The relation between reflection and refraction coefficient in a travelling wave is \_\_\_\_\_
18. The charge is found in terms of the excitation function, velocity & attenuation factor .then  $RI =$  \_\_\_\_\_
19. An overhead line, the velocity of propagation, capacitance & surge impedance are related by  $V =$  \_\_\_\_\_
20. \_\_\_\_\_ parameters are used to study the EHV lines.

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Set No. 3

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

EHV AC TRANSMISSION

Objective Exam

Name: \_\_\_\_\_ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I. Choose the correct alternative:**

1. In finding the junction voltages in the short circuit terminal condition the value of  $K_t$  is \_\_\_\_ Given  $Z_t=0, K_r=-1, j_t=+2, j_r=+1$  [     ]  
(a) 1                      (b) -1                      (c) 2                      (d) 0
2. The surge impedance loading for a 750KV lines, with  $250\Omega$  surge impedance is \_\_\_\_ MVA [     ]  
(a) 225                      (b) 2250                      (c) 2520                      (d) 2550
3. Shunt compensation in an EHV line is used to improve [     ]  
(a) Stability and fault level                      (b) fault level and voltage profile  
(c) Voltage profile only                      (d) stability fault and voltage profile
4. The current flow is governed mainly by \_\_\_\_\_ in power transmission. [     ]  
(a) Surge impedance    (b) load impedance    (c) source impedance    (d) none of these
5. A overhead line has inductance of  $0.22\text{mH}$  per Km and capacitance of  $0.202\mu\text{F}$  per Km .The surge impedance of the overhead line. [     ]  
(a)  $28\Omega$                       (b)  $33\Omega$                       (c)  $42\Omega$                       (d)  $50\Omega$
6. The Pulse of corona gives interference to radio broadcast in a range of \_\_\_\_ MHz [     ]  
(a) 1 to 2                      (b) 1.2 to 2.5                      (c) 0.5 to 1.6                      (d) 2.5 to 4.5
7. The RF energy received at a P which is at a distance of  $(y-x)$  from the source of corona S is \_\_\_\_ [     ]  
(a)  $E/2a$                       (b)  $E/2a^2$                       (c)  $E/2$                       (d)  $E/4a$
8. The line has surge impedance  $Z_o$  so that R-F power generated per unit length of line is [     ]  
(a)  $E=I^2Z_o$                       (b)  $E=IZ_o^2$                       (c)  $E=I^2Z_o^2$                       (d)  $E=IZ_o$
9. The minimum clearance required for 400KV line is \_\_\_\_\_ vehicles like cars. [     ]  
(a) 15m                      (b) 17m                      (c) 20m                      (d) 25m
10. The relation between  $r, l, g \& c$  is \_\_\_\_\_ for distortion less line [     ]  
(a)  $rg=lc$                       (b)  $rc=gl$                       (c)  $rl=gc$                       (d) none of these

Cont.....2

**II Fill in the Blanks:**

11. \_\_\_\_\_ provides both types MVARs lagging or leading for the voltage control.
12. In the power circle diagram the radius of the circle is given as \_\_\_\_\_
13. The unit of phase shift constant is \_\_\_\_\_
14. The minimum rms value of electro static field which causes electric shock to humans is \_\_\_\_\_ KV/m.
15. The relation between reflection and refraction coefficient in a travelling wave is \_\_\_\_\_
16. The charge is found in terms of the excitation function, velocity & attenuation factor .then  $RI =$  \_\_\_\_\_
17. An overhead line, the velocity of propagation, capacitance & surge impedance are related by  $V =$  \_\_\_\_\_
18. \_\_\_\_\_ parameters are used to study the EHV lines.
19. Electric field ( $E_G$ ) reduces inverse proportion to the \_\_\_\_\_ from line conductor.
20. The ratio of reflected voltage to incident voltage is called \_\_\_\_\_ coefficient.

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Set No. 4

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I. Choose the correct alternative:**

1. Shunt compensation in an EHV line is used to improve [      ]  
(a) Stability and fault level      (b) fault level and voltage profile  
(c) Voltage profile only      (d) stability fault and voltage profile
2. The current flow is governed mainly by \_\_\_\_\_ in power transmission. [      ]  
(a) Surge impedance    (b) load impedance    (c) source impedance    (d) none of these
3. A overhead line has inductance of 0.22mH per Km and capacitance of 0.202 $\mu$ F per Km .The surge impedance of the overhead line. [      ]  
(a) 28 $\Omega$       (b) 33 $\Omega$       (c) 42 $\Omega$       (d) 50 $\Omega$
4. The Pulse of corona gives interference to radio broadcast in a range of \_\_\_\_\_ MHz [      ]  
(a) 1 to 2      (b) 1.2 to 2.5      (c) 0.5 to 1.6      (d) 2.5 to 4.5
5. The RF energy received at a P which is at a distance of (y-x) from the source of corona S is \_\_\_\_\_ [      ]  
(a) E/2a      (b) E/2a<sup>2</sup>      (c) E/2      (d) E/4a
6. The line has surge impedance Zo so that R-F power generated per unit length of line is [      ]  
(a) E=I<sup>2</sup>Zo      (b) E=IZo<sup>2</sup>      (c) E=I<sup>2</sup>Zo<sup>2</sup>      (d) E=IZo
7. The minimum clearance required for 400KV line is \_\_\_\_\_ vehicles like cars. [      ]  
(a) 15m      (b) 17m      (c) 20m      (d) 25m
8. The relation between r,l,g&c is \_\_\_\_\_ for distortion less line [      ]  
(a) rg=lc      (b) rc=gl      (c) rl=gc      (d) none of these
9. In finding the junction voltages in the short circuit terminal condition the value of Kt is \_\_\_\_ Given Zt=0, Kr=-1, jt=+2, jr=+1 [      ]  
(a) 1      (b) -1      (c) 2      (d) 0
10. The surge impedance loading for a 750KV lines, with 250 $\Omega$  surge impedance is \_\_\_\_\_ MVA [      ]  
(a) 225      (b) 2250      (c) 2520      (d) 2550

Cont.....2

**II Fill in the Blanks:**

11. The unit of phase shift constant is \_\_\_\_\_
12. The minimum rms value of electro static field which causes electric shock to humans is \_\_\_\_\_ KV/m.
13. The relation between reflection and refraction coefficient in a travelling wave is \_\_\_\_\_
14. The charge is found in terms of the excitation function, velocity & attenuation factor .then  $RI =$  \_\_\_\_\_
15. An overhead line, the velocity of propagation, capacitance & surge impedance are related by  $V =$  \_\_\_\_\_
16. \_\_\_\_\_ parameters are used to study the EHV lines.
17. Electric field ( $E_G$ ) reduces inverse proportion to the \_\_\_\_\_ from line conductor.
18. The ratio of reflected voltage to incident voltage is called \_\_\_\_\_ coefficient.
19. \_\_\_\_\_ provides both types MVARs lagging or leading for the voltage control.
20. In the power circle diagram the radius of the circle is given as \_\_\_\_\_

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