

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

Quiz 4 Sec.: 5 I.D.: Ser#: Name:

Q.1 At no-load, the excited voltage of a separately excited DC generator is same as the terminal voltage. (2 Marks)

True False

Q.2 The terminal voltage of a series DC generator can be controlled as follows: (3 Marks)

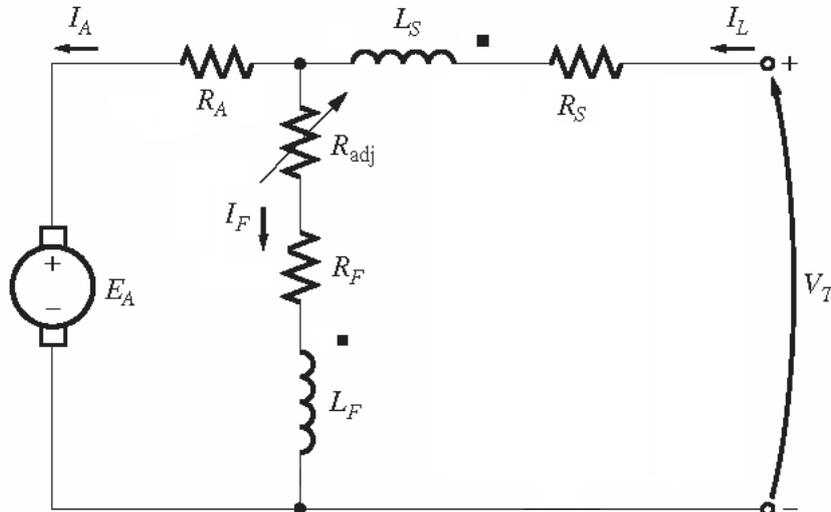
a- $n \uparrow \Rightarrow E_A \uparrow \Rightarrow V_T \uparrow$

b- $n \uparrow \Rightarrow E_A \uparrow \Rightarrow V_T \downarrow$

c- $R_F \uparrow \Rightarrow I_F \downarrow \Rightarrow E_A \downarrow \Rightarrow V_T \downarrow$

d- $R_F \downarrow \Rightarrow I_F \uparrow \Rightarrow E_A \downarrow \Rightarrow V_T \uparrow$

Q.3 The equivalent circuit shown below is for (3 Marks)



- a. a long-shunt cumulative compound dc motor.
- b. a short-shunt cumulative compound dc motor.**
- c. a long-shunt differential compound dc motor.
- d. a short-shunt differential compound dc motor.

Q.4 An important factor in self-excited DC machines is the existing of some leakage flux.

(2 Marks)

True False