KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-360 (142)

Key Solutions

Quize # 3 Sec. 1 – 2 – 3 Serial # Name: I.D.#

Circle the correct answer.

1) The number of current paths in Wave winding DC machine depends on (2 Marks)

a- multiplextity of the field windings.

b- multiplextity of the armature windings.

c- number of poles of in the stator.

d- number of poles in the rotor.

2) The terminal voltage of a shun DC generator can be controlled as follows: (2 Marks)

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

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

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

d- None of above

3) The series field winding of a short-shunt cumulatively compounded DC generator is excited by its (.....) current. (2 Marks)

a- shunt field

b- armature

c- terminal

d- external field

4) The back EMF (i.e., E_A) of a series DC motor is (2 Marks)

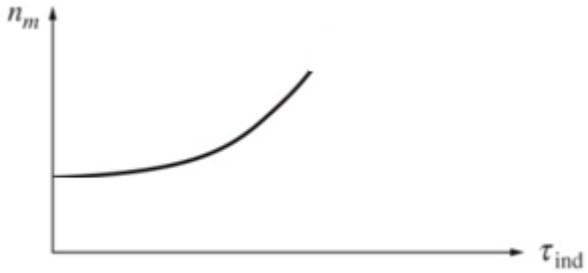
a- $E_A = V_T + I_A (R_A + R_S)$

b- $E_A = V_T + I_A R_A - I_L R_S$

c- $\mathbf{E_A = V_T - I_A R_A - I_L R_S}$

d- $E_A = V_T + I_A R_{A+} I_L R_S$

5) The speed-torque charateristic shown below is for (2 Marks)



a- seperatly excited DC motor.

b- shunt DC generator.

c- series DC motor.

d- long-shunt differential compound DC motor.