

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

Quiz 4 Sec.: 3 I.D.: Ser#: Name:

Circle the correct answer.

- 1) A duplex, wave, 4-pole DC machine has current paths. (2 Marks)
- a. 16
 - b. 8
 - c. 4
 - d. 2
- 2) In DC motors, if the rotational losses ignored, then (2 Marks)
- a. input-power is same as output-power.
 - b. input-power is same as converted-power.
 - c. converted-power is same as developed-power.
 - d. developed-power is same as output-power.
- 3) In separately excited DC generator, the following is TRUE (2 Marks)
- a. input-current is same as field-current.
 - b. load-current is same as field-current.
 - c. input-current is same as armature-current.
- 4) The generated voltage of a series DC generator with a brush-voltage drop is (2 Marks)
- a. $E_A = V_T - V_{BD} + (R_A + R_S)I_A$.
 - b. $E_A = V_T + V_{BD} + R_A I_A$.
 - c. $V_T = E_A - V_{BD} + (R_A + R_S)I_A$.
 - d. $E_A = V_T + V_{BD} + R_A I_A + R_S I_S$.
- 5) In any type of DC motors, the rotor-speed can be controlled by (2 Marks)
- a. a variable field-resistance only.
 - b. a variable field-resistance and a variable armature-voltage.
 - c. a variable armature-resistance and a variable armature-voltage.
 - d. a variable field-resistance, a variable armature-resistance and a variable armature-voltage.