Started on	Tuesday, 5 March 2024, 12:54 PM
State	Finished
Completed on	Tuesday, 5 March 2024, 12:54 PM
Time taken	10 secs
Grade	**0.00** out of 10.00 (**0**%)

Question **1**

Not answered

Marked out of 1.00

1. A DC motor converts_____energy to_____energy.

a. (c) chemical, electrical

b. (d) mechanical, electrical

c. (a) electrical, mechanical

d. (b) electrical, electrical

Your answer is incorrect.

The correct answer is:
(a) electrical, mechanical

Question **2**

Not answered

Marked out of 1.00

1. To determine the forces acting on a current carrying conductor within a magnetic field, you would use:

a. (b) Lenz's law

b. (a) Flemming's right hand

c. (d) Flemming's left hand rule

d. (c) right hand conductor rule

Your answer is incorrect.

The correct answer is:

(d) Flemming's left hand rule

Question **3**

Not answered

Marked out of 1.00

1. The torque produced in a DC motor is _____ the main field flux.

and_____to the armature current.

a. (c) Inversely Proportional, Inversely proportional
(c) right hand conductor rule

b. Proportional Proportional

(b) Proportional, proportional

(b) Proportional, proportional

(b) Lenz's law

c. (a) Inversely Proportional, proportional

d. (d) Proportional, Inversely proportional
(d) Flemming's left hand rule

Your answer is incorrect.

The correct answer is:

Proportional Proportional

(b) Proportional, proportional

(b) Proportional, proportional

(b) Lenz's law

Question **4**

Not answered

Marked out of 1.00

1. An increase in the load applied to a DC motor will cause the motor speed to _____ and the motor torque to_____.

a. (d) Increase, decrease

b. (b) Decrease, decrease

c. (c) decrease, increase

d. (a) Increase, increase

Your answer is incorrect.

The correct answer is:
(c) decrease, increase

Question **5**

Not answered

Marked out of 1.00

1. Whilst driving a load, a_____is generated in the armature conductors which _____ the applied motor voltage.

a. (c) Mutual emf, opposes

b. (d) Mutual emf, increases

c. (a) Counter emf, opposes

d. (b) Counter emf, increases

Your answer is incorrect.

The correct answer is:
(a) Counter emf, opposes

Question **6**

Not answered

Marked out of 1.00

A 150mm long conductor carries a current of 40A at right angles to a magnetic field with a flux density of 0.5T. Determine the force acting on the conductor.

a. 3N

b. 2N

c. 1N

Your answer is incorrect.

The correct answer is:
3N

Question **7**

Not answered

Marked out of 1.00

1. An armature has a radius of 125mm, and an effective conductor length of 150mm under the field pole. If the main flux is 0.4T and the armature current is 100A, determine

(a) the force acting on the conductor and

(b) the torque developed on the conductor under the field poles.

- a. 3N, 1.5 N-m
- b. 6N, 0.75 N-m
- c. 3N 0.75N-m

Your answer is incorrect.

The correct answer is:
6N, 0.75 N-m

Question **8**

Not answered

Marked out of 1.00

1. An armature with a radius of 125mm is wound with 4 coils each of 100 turns. If the effective length of one half of a loop under the field poles is 200mm, the current in the conductors is 250A and the flux is 0.2T, determine the torque developed within the armature.

- a. 2000 N-m
- b. 1000 N-m
- c. 500N-m

Your answer is incorrect.

The correct answer is:
1000 N-m

Question **9**

Not answered

Marked out of 1.00

A DC motor has a machine constant of 20, a main flux of 0.015Wb and runs at 750rpm. Determine the emf generated within the armature conductors.

If this motor is connected to a 250V supply and has an armature circuit resistance of 0.15 ohm determine the amount of current flowing in the armature .

a. 450V, 167A

b. 100V, 200A

c. 225V, 167A

Your answer is incorrect.

The correct answer is:
225V, 167A

Question **10**

Not answered

Marked out of 1.00

). The motor shown in figure 12 has a field flux of 0.0125Wb, runs at 250rpm, and hasa machine constant of 8. For these conditions, determine the:

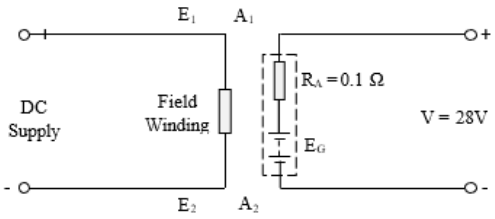

Figure 12.

(a) Back emf;

(b) Armature current;

(c) developed torque;

(d) armature circuit voltage drop.

a. 25V, 3A, 6N-m, 3V

b. 25V, 30A, 3N-m, 3V

c. 15V, 40A, 5N-m, 3V

Your answer is incorrect.

The correct answer is:
25V, 30A, 3N-m, 3V

◄ Week 7 Quiz

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