

Unit 12 - Week 11

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3 Phase Induction Machine: Starting Methods

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Week 12

Solutions for Assignments

Assignment 11

The due date for submitting this assignment has passed. **Due on 2019-10-16, 23:59 IST.**
As per our records you have not submitted this assignment.

1) An autotransformer starter is suitable for

- Delta connected induction motor
- Star connected induction motor
- Both (a) and (b)
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Both (a) and (b)

1 point

2) When stator resistance starter is used, the factor by which stator voltage reduces is x . If $x < 1$, then due to stator resistance starter, the starting torque

- Increases by fraction x
- Reduces by fraction x^2
- Reduces by fraction x
- Increases by fraction x^2

No, the answer is incorrect.
Score: 0

Accepted Answers:
Reduces by fraction x^2

1 point

3) Practically, most of the alternators prefer which type of construction?

- Rotating armature type
- Rotating field type
- Both are equally important
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Rotating field type

1 point

4) Which type of rotor is generally used for high speed alternators or turbo alternators?

- Salient pole type
- Projected pole type
- Smooth cylindrical type
- Both (a) & (b)

No, the answer is incorrect.
Score: 0

Accepted Answers:
Smooth cylindrical type

1 point

For questions 5, 6, 7 & 8

A 3-ph cage induction motor has a short circuit current 5 times that of full load current. Full-load slip is 5%.

5) Calculate the starting torque of the induction motor as a percentage of its full load torque when it is started using direct online (DOL) starting method. 1 point

- 125 %
- 130 %
- 120 %
- None of the above.

No, the answer is incorrect.
Score: 0

Accepted Answers:
125 %

6) Calculate the starting torque of the induction motor as a percentage of its full load torque when it is started using star-delta starter. 1 point

- 41.6%
- 60.3%
- 58.8%
- None of the above.

No, the answer is incorrect.
Score: 0

Accepted Answers:
41.6%

7) Calculate the starting torque of the induction motor as a percentage of its full load torque when it is started with an autotransformer, if the maximum starting current is to be limited to twice the full load current at the input line. 1 point

- 75%
- 73%
- 62%
- None of the above.

No, the answer is incorrect.
Score: 0

Accepted Answers:
None of the above.

8) Calculate the starting torque of the induction motor as a percentage of its full load torque when it is started using impedance starting limiting the supply line current during starting to its full load value. 1 point

- 5%
- 8%
- 3%
- None of the above.

No, the answer is incorrect.
Score: 0

Accepted Answers:
5%

9) A 3 phase, 8 pole alternator has 120 slots in its armature. The distribution factor is equal to 1 point

- 0.796
- 0.836
- 0.957
- None of the above.

No, the answer is incorrect.
Score: 0

Accepted Answers:
0.957