

## G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (AT), KURNOOL B.Tech – II-II Semester (R15) MID II Examinations (Objective) Branch: EEE

SET 1

 Sub: EM-II
 Date: 10-05-2017

 Time: 20Min.
 Roll No\_\_\_\_\_\_
 Max Marks: 10M

Note: Answer the ALL Questions. Each Question carry ½ Marks.		
<ol> <li>The slip rings of an induction motor are made of         <ul> <li>(a) Copper</li> <li>(b) carbon</li> <li>(c) phosphor bronze</li> <li>(d) all</li> </ul> </li> </ol>	(	)
2. The speed of rotating field due to rotor current relative to rotor surface is (a) Ns (b) SNs (c) N (d) none	(	)
3. A 3-phase, 400V, 4-pole, induction motor is fed from 50Hz supply mains. It runs at a of 1440 rpm. The rotor current frequency is (a) 2 Hz (b) 50 Hz (c) 48 Hz (d) 4Hz	spee (	ed )
4. In an induction motor, the air gap flux density is usually kept low so as to (a) Improve efficiency (b) Improve power factor (c) reduce machine cost (d) None	(	)
5. If a 3-phase induction motor is running at a slip S, then the rotor cu loss=  (a) (1-S)* rotor input power (b) (1+S)* rotor input power (c) S* rotor input power (c)	( d) no	) one
6. The rotor core losses of induction motor are negligible because of  (a) Rotor current frequency is very high  (C) Rotor current frequency is constant  (B) rotor current frequency is very l  (D) None	( ow	)
7. The frequency of the emf in the stator of a 4-pole induction motor is 50Hz, and that in rotor is 1.5 Hz, then the slip is,  (a) 0.02 (b) 0.01 (c) 0.03 (d) 0.04  8. Deep-bar rotors are used to improve	the (	)
(a) Efficiency (b) power factor (c) starting torque (d) None	(	,
9. The torque developed in induction motor varies as (a) V (b) $V^2$ (c) $1/V$ (d) $\sqrt{V}$	(	)
10. In double cage induction motor, the outer cage winding has  (a) High inductance (b) Low resistance (c) High resistance (d) none of the	( ne ab	) ove
11. A high starting torque can be obtained in a 3-phase induction motor by  (a) Increasing the rotor resistance  (b) decreasing the rotor resistance  (c) Increasing the rotor reactance  (d) none	(	)
12. The starting current of a 3-phase induction motor is about of its full load current (a) Half (b) twice (c) 5 to 7 times (d) 15 to 20 times	(	)
13. In double cage induction motors, the starting torque is produced mainly by the  (a) Inner cage (b) outer cage (c) both (a)&(b) (d) None	(	)

14. Induction generator runs at  (a) Below-synchronous speed (b) synchronous speed currents (c) Above-synchronous speed (d) low speed	(	)
15. Non uniform distribution of current in the deep bar rotors at the time of starting is du (a) Skin effect (b) proximity effect (c) heat effect (d) Both (a) & (b)	ie to	)
16. The speed of a squirrel cage induction motor is changed by  (a) Pole changing  (b) Rheostat control  (c) cascade control  (d) None	(	)
17. star-delta starting is equivalent to auto-transformer starting with tapping (a) 33.3% (b) 50% (c) 57.7% (d) 82%	(	)
<ul><li>18. Which of the following starting method cannot be used for starting a 3-phase squainduction motor?</li><li>(a) star-delta</li><li>(b) Rheostat control</li><li>(c) Auto transformer</li><li>(d) line resistance</li></ul>	irrel	cage
19. The speed of an induction motor depends on (a) No of stator poles (b) Increasing supply frequency (c) Input voltage to stator (d) All of the above	(	)
<ul> <li>20. Rotor resistance speed control used for 3-phase slip ring induction motors has the dr of.</li> <li>(a) Reduced starting torque</li> <li>(b) lower efficiency and poor speed regulation</li> <li>(c) Both (a) and (b)</li> <li>(d) None of these.</li> </ul>	aw b	oacks )



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SET 2

Sub: EM-II
Time: 20Min. Roll No
Date: 10-05-2017
Max Marks: 10M

Note: Answer the ALL Questions. Each Question carry ½ Marks.		
1. The rotor core losses of induction motor are negligible because of  (a) Rotor current frequency is very high  (C) Rotor current frequency is constant  (B) rotor current frequency is very  (D) None	( low	)
2. The frequency of the emf in the stator of a 4-pole induction motor is 50Hz, and that i	n the	
rotor is 1.5 Hz, then the slip is,	(	)
(a) 0.02 (b) 0.01 (c) 0.03 (d) 0.04 3. Deep-bar rotors are used to improve	(	)
(a) Efficiency (b) power factor (c) starting torque (d) None	(	,
4. The torque developed in induction motor varies as (a) V (b) $V^2$ (c) $1/V$ (d) $\sqrt{V}$	(	)
5. In double cage induction motor, the outer cage winding has  (a) High inductance  (b) Low resistance  (c) High resistance  (d) none of the control of the	( he ab	) oove
(a) Increasing the rotor resistance (b) decreasing the rotor resistance (c) Increasing the rotor reactance (d) none	(	)
7. The starting current of a 3-phase induction motor is about of its full load current (a) Half (b) twice (c) 5 to 7 times (d) 15 to 20 times	(	)
8. In double cage induction motors, the starting torque is produced mainly by the (a) Inner cage (b) outer cage (c) both (a)&(b) (d) None	(	)
<ul> <li>9. Induction generator runs at</li> <li>(a) Below-synchronous speed</li> <li>(b) synchronous speed currents</li> <li>(c) Above-synchronous speed</li> <li>(d) low speed</li> </ul>	(	)
10. Non uniform distribution of current in the deep bar rotors at the time of starting is d (a) Skin effect (b) proximity effect (c) heat effect (d) Both (a) & (b)	ue to	)
11. The speed of a squirrel cage induction motor is changed by (a) Pole changing (b) Rheostat control (c) cascade control (d) None	(	)
12. star-delta starting is equivalent to auto-transformer starting with tapping (a) 33.3% (b) 50% (c) 57.7% (d) 82%	(	)

13. Which of the following starting induction motor?	method cannot be used for starting a 3-phase squir	rel c	eage
	ontrol (c) Auto transformer (d) line resistance	(	)
14. The speed of an induction motor		,	
(a) No of stator poles	· · · · · · · · · · · · · · · · · · ·	(	)
(c) Input voltage to stator	(d) All of the above		
15. Rotor resistance speed control us	ed for 3-phase slip ring induction motors has the dra	w ba	ncks
of.	to 101 to printe out 1111g mountain motions into the time	(	)
(a) Reduced starting torque	(b) lower efficiency and poor speed regulation	`	
(c) Both (a) and (b)	(d) None of these.		
16. The slip rings of an induction mo		,	
(a) Copper (b) carbon	(c) phosphor bronze (d) all	(	)
17 The speed of rotating field due to	o rotor current relative to rotor surface is	(	)
(a) Ns (b) SNs (c) N		(	,
<u> </u>	on motor is fed from 50Hz supply mains. It runs at a	spee	ed
of 1440 rpm. The rotor current fre	- · · · ·	(	)
(a) 2 Hz (b) 50 H	Iz (c) 48 Hz (d) 4Hz		
10. In an induction motor, the air con	flux density is usually kept low so as to	(	`
	e power factor (c) reduce machine cost (d) None	(	)
(a) improve efficiency (b) improv	e power ractor (e) reduce machine cost (d) None		
20. If a 3-phase induction motor is ru	nning at a slip S, then the rotor cu loss=	(	)
<u> •</u>	1+S)* rotor input power (c) S* rotor input power (d)	) nor	ie.



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SET 3

Date: 10-05-2017 Sub: EM-II Time: 20Min. Roll No\_ Max Marks: 10M

N	ote: Answer the ALL Questions. Each Question carry ½ Marks.		
1.	A high starting torque can be obtained in a 3-phase induction motor by  (a) Increasing the rotor resistance  (b) decreasing the rotor resistance  (c) Increasing the rotor reactance  (d) none	(	)
2.	The starting current of a 3-phase induction motor is about of its full load current (a) Half (b) twice (c) 5 to 7 times (d) 15 to 20 times	(	)
3.	In double cage induction motors, the starting torque is produced mainly by the (a) Inner cage (b) outer cage (c) both (a)&(b) (d) None	(	)
4.	Induction generator runs at  (a) Below-synchronous speed (b) synchronous speed currents (c) Above-synchronous speed (d) low speed	(	)
5.	Non uniform distribution of current in the deep bar rotors at the time of starting is due (a) Skin effect (b) proximity effect (c) heat effect (d) Both (a) & (b)	e to	)
6.	The speed of a squirrel cage induction motor is changed by (a) Pole changing (b) Rheostat control (c) cascade control (d) None	(	)
7.	star-delta starting is equivalent to auto-transformer starting with tapping (a) 33.3% (b) 50% (c) 57.7% (d) 82%	(	)
8.	Which of the following starting method cannot be used for starting a 3-phase squinduction motor?  (a) star-delta (b) Rheostat control (c) Auto transformer (d) line resistance	irrel (	cage
9.	The speed of an induction motor depends on  (a) No of stator poles (b) Increasing supply frequency (c) Input voltage to stator (d) All of the above	(	)
10	<ul> <li>O. Rotor resistance speed control used for 3-phase slip ring induction motors has the drof.</li> <li>(a) Reduced starting torque</li> <li>(b) lower efficiency and poor speed regulation</li> <li>(c) Both (a) and (b)</li> <li>(d) None of these</li> </ul>	raw l	back )
11	1. The slip rings of an induction motor are made of (a) Copper (b) carbon (c) phosphor bronze (d) all	(	)
12	2. The speed of rotating field due to rotor current relative to rotor surface is (a) Ns (b) SNs (c) N (d) none	(	)

13. A 3-phase, 400V, 4-pole, induction motor is fed from 50Hz supply mains. It runs at a soft 1440 rpm. The rotor current frequency is (a) 2 Hz (b) 50 Hz (c) 48 Hz (d) 4Hz	spee (	;d )
14. In an induction motor, the air gap flux density is usually kept low so as to (a) Improve efficiency (b) Improve power factor (c) reduce machine cost (d) None	(	)
15. If a 3-phase induction motor is running at a slip S, then the rotor cu loss= (a) (1-S)* rotor input power (b) (1+S)* rotor input power (c) S* rotor input power (d)	( non	) ne
16. The rotor core losses of induction motor are negligible because of  (a) Rotor current frequency is very high  (C) Rotor current frequency is constant  (D) None	( w	)
17. The frequency of the emf in the stator of a 4-pole induction motor is 50Hz, and that in rotor is 1.5 Hz, then the slip is,  (a) 0.02 (b) 0.01 (c) 0.03 (d) 0.04	the (	)
18. Deep-bar rotors are used to improve (a) Efficiency (b) power factor (c) starting torque (d) None	(	)
19. The torque developed in induction motor varies as (a) V (b) $V^2$ (c) $1/V$ (d) $\sqrt{V}$	(	)
20. In double cage induction motor, the outer cage winding has  (a) High inductance  (b) Low resistance  (c) High resistance  (d) none of the	( abo	) ove



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SET 4 Date: 10-05-2017

Time: 20Min. Roll No Max Marks: 10M	<u> </u>	
Note: Answer the ALL Questions. Each Question carry ½ Marks.		
1. The speed of a squirrel cage induction motor is changed by		
	(	)
2. star-delta starting is equivalent to auto-transformer starting with tapping (a) 33.3% (b) 50% (c) 57.7% (d) 82%	(	)
3. Which of the following starting method cannot be used for starting a 3-phase squi induction motor?	rrel	cage
(a) star-delta (b) Rheostat control (c) Auto transformer (d) line resistance	(	)
4. The speed of an induction motor depends on		
(a) No of stator poles (b) Increasing supply frequency	(	)
(c) Input voltage to stator (d) All of the above		
5. Rotor resistance speed control used for 3-phase slip ring induction motors has the dra	ıw t	oacks
of.	(	)
(a) Reduced starting torque (b) lower efficiency and poor speed regulation		
<ul><li>(c) Both (a) and (b)</li><li>(d) None of these.</li><li>6. The slip rings of an induction motor are made of</li></ul>		
(a) Copper (b) carbon (c) phosphor bronze (d) all	(	)
7. The smood of notating field due to note a summent relative to note a sumface is	(	\
7. The speed of rotating field due to rotor current relative to rotor surface is  (a) Ns (b) SNs (c) N (d) none	(	)
8. A 3-phase, 400V, 4-pole, induction motor is fed from 50Hz supply mains. It runs at a	spec	ed
of 1440 rpm. The rotor current frequency is (a) 2 Hz (b) 50 Hz (c) 48 Hz (d) 4Hz	(	)
(a) 2 112 (b) 30 112 (c) 40 112 (d) 4112		
9. In an induction motor, the air gap flux density is usually kept low so as to	(	)
(a) Improve efficiency (b) Improve power factor (c) reduce machine cost (d) None		
10. If a 3-phase induction motor is running at a slip S, then the rotor cu loss=	(	)
(a) (1-S)* rotor input power (b) (1+S)* rotor input power (c) S* rotor input power (d)	l) no	one
11. The reter age lesses of industion mater are negligible because of	(	,
11. The rotor core losses of induction motor are negligible because of  (a) Rotor current frequency is very high  (B) rotor current frequency is very lo	) WC	,
(C) Rotor current frequency is constant (D) None		
12. The frequency of the emf in the states of a 4 pole induction motor is 50Hz, and that i	n th	0
12. The frequency of the emf in the stator of a 4-pole induction motor is 50Hz, and that i rotor is 1.5 Hz, then the slip is,	11 U1 (	e )
(a) 0.02 (b) 0.01 (c) 0.03 (d) 0.04	`	,
13. Deep-bar rotors are used to improve	(	)
(a) Efficiency (b) power factor (c) starting torque (d) None		

14. The torque developed in induction motor varies as	(	)
(a) V (b) $V^2$ (c) $1/V$ (d) $\sqrt{V}$		
15. In double cage induction motor, the outer cage winding has  (a) High inductance (b) Low resistance (c) High resistance (d) none of the state of	( he ab	) ove
16. A high starting torque can be obtained in a 3-phase induction motor by		
(a) Increasing the rotor resistance (b) decreasing the rotor resistance		
(c) Increasing the rotor reactance (d) none	(	)
17. The starting current of a 3-phase induction motor is about of its full load current		
(a) Half (b) twice (c) 5 to 7 times (d) 15 to 20 times	(	)
18. In double cage induction motors, the starting torque is produced mainly by the		
(a) Inner cage (b) outer cage (c) both (a)&(b) (d) None	(	)
(a) times eage (b) outer eage (c) out (a) ex(b)	(	,
19. Induction generator runs at		
(a) Below-synchronous speed (b) synchronous speed currents	(	)
(c) Above-synchronous speed (d) low speed		
20. Non uniform distribution of current in the deep bar rotors at the time of starting is d	ua to	
		)
(a) Skill effect (b) proximity effect (c) fleat effect (d) Both (a) $\propto$ (b)	(	)