



Benha University

Faculty of Engineering at Shobra

Electrical Engineering Department

A-Basic Information

Course Title: Tests (5)		Code: EPE 323	
Lecture:	Tutorial:	Practical: 4	Total: 4
Program on which the cours	e is given:	B.Sc. Electrical Engineering (Power)	
Major or minor element of p	rogram:	Major	
Department offering the pro	gram:	Electrical Engineering Department	
Department offering the cou	rse:	Electrical Engineering Department	
Academic year / level:		Third Year / Second Semester	
Date of specifications approv	v al: 10/	/5/2006	

B- Professional Information

1- Overall aims of course:

- Study of Three-phase induction machines: winding resistance measurement, no load test, locked rotor test, parameters calculations, determining friction losses and iron losses, direct load test using electro-induction locking, direct load test using loading, slipping measurement, methods of starting, induction generators, single and three phase uncontrolled rectifiers, three phase reversals, ac voltage regulators,
- Introduces the characteristics of current transformers, characteristics of reversed time stabilizer in over-current protection (scale, adjusting, undetermined minimum point), characteristic and adjusting the differential protection, characteristics of different types of distance protections, direct current analysis to represent the symmetrical components, alternating current analysis to connect between symmetrical circuits, alternating current analysis for symmetrical studies of load flow.

2- Intended learning outcomes of course (ILOs)

By completion of the course, the student should be able to:

a- Knowledge and Understanding

a.3) Characteristics of engineering materials related to discipline.





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a.18) Theories and techniques for calculating short circuit, motor starting and voltage drop.

a.19) Diverse applications of electrical equipment.

b- Intellectual Skills

b.13) Identify and formulate engineering problems to solve problems in the field of electrical power and machines engineering.

b.14) Analyze design problems and interpret numerical data and test and examine components, equipment and systems of electrical power and machines.

c- Professional and Practical Skills

c.2) Professionally merge the engineering knowledge, understanding, and feedback to improve design, product and/or services.

c.11) Exchange knowledge and skills with engineering community and industry.

d- General and Transferable Skills

d.3) Communicate effectively

d.9) Refer to relevant literatures.

3- Contents

No.	Торіс	No. of hours	ILO's	Teaching / learning methods and strategies	Assessment method
1	Characteristics of current transformers	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
2	Characteristics of reversed time stabilizer in over-current protection (scale, adjusting, undetermined minimum point)	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
3	Characteristic and adjusting the differential protection, characteristics of different types of distance protections	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training





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4	Characteristic and adjusting the differential protection, characteristics of different types of distance protections	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
5	Direct current analysis to represent the symmetrical components.	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
6	Alternating current analysis to connect between symmetrical circuits	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
7	Alternating current analysis for symmetrical studies of load flow.	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
8			Mid-Term Exam		
9	short- circuit , block-rotor and load tests for induction motors	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
10	short- circuit , block-rotor and load tests for induction motors	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
11	load tests for synchronous generatos	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
12	load tests for synchronous generatos	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
13	charatrastics for thyrastores and UJT	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training





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	14	charatrastics for thyrastores and UJT	4	a3, a18, a19, b13, b14, c2, c11, d3, d9	Practical training / laboratory, Assignments / homework	Home Assignments, Quizzes, Oral Exam, Practical training
	15 16	160		Final Exam		

4- Teaching and Learning Methods

Practical training / laboratory

5- Student Assessment Methods

Assignments to assess knowledge and intellectual skills. Quiz to assess knowledge, intellectual and professional skills. Mid-term exam to assess knowledge, intellectual, professional and general skills. Oral exam to assess knowledge and intellectual skills. Final exam to assess knowledge, intellectual, professional and general skills.

Assessment Schedule

Assessment 1 on weeks 2, 5, 9, 11 Assessment 2 Quizzes on weeks 4, 6, 10, 12 Assessment 3 Mid-term exam on week 8 Assessment 4 Oral Exam on week 14 Assessment 5 Final exam on week 15

Weighting of Assessments

05% Home assignments 05% Quizzes 10% Mid-term examination 20% Oral examination





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60% Final-term example	mination		
100% Total			
6- List of References			
Course notes			
Course notes pre	pared by instructor.		
Essential books			
Recommended book	S		
7- Facilities required for	or teaching and learning		
Lecture room equipp	bed with overhead projector		
Presentation board, o	computer and data show		
Laboratory			
Course coordinator:	Prof. Dr. Hassan Abd El-	Aziz Mansour	
Course instructor:	Prof. Dr. Hassan Abd El-	Aziz Mansour	
Head of Department:	Prof. Dr. Mousa Abd-All	ah Date: 1/1/2012	