

# School of Aeronautics (Neemrana)

Practical Question Paper For Internal / External Assessment / Back / Re-Back Examination -  
Credit 1 or 50 marks / Credit 1.5 or 75 marks / Credit 2 or 100 marks / Credit 2.5 or 125 marks /  
Old Scheme / AME

## Guidelines for Practical Examination

### 1. (Credit-1 / 50 marks)

University Practical Examination of 50 marks, is divided into two parts of assessment i.e. Internal Assessment (30 marks) and External Assessment (20 marks). Internal Assessment (30 marks) are further sub divided into two parts i.e. Project Assessment (10 marks) and Internal Practical Assessment (20 marks). These 20 marks are further divided into three Mid Terms, i.e. Mid Term I (5 marks), Mid Term II (7 marks) and Mid Term III (8 marks). For the sake of convenience in assessment, multiplication factor of 10 is used to design the grading sheets, i.e. of 50, 70 and 80 marks respectively for Mid Term I, II and III.

### 2. (Credit-1.5 / 75 marks)

University Practical Examination of 75 marks, is divided into two parts of assessment i.e. Internal Assessment (45 marks) and External Assessment (30 marks). Internal Assessment (45 marks) are further sub divided into two parts i.e. Project Assessment (15 marks) and Internal Practical Assessment (30 marks). These 30 marks are further divided into three Mid Terms, i.e. Mid Term I (7.5 marks), Mid Term II (10.5 marks) and Mid Term III (12 marks). For the sake of convenience in assessment, multiplication factor of 10 is used to design the grading sheets, i.e. of 75, 105 and 120 marks respectively for Mid Term I, II and III.

### 3. (Credit-2 / 100 marks)

University Practical Examination of 100 marks, is divided into two parts of assessment i.e. Internal Assessment (60 marks) and External Assessment (40 marks). Internal Assessment (60 marks) are further sub divided into two parts i.e. Project Assessment (20 marks) and Internal Practical Assessment (40 marks). These 40 marks are further divided into three mid terms, i.e. Mid Term I (10 marks), Mid Term II (14 marks) and Mid Term III (16 marks). For the sake of convenience in assessment, multiplication factor of 10 is used to design the grading sheets, i.e. of 100, 140 and 160 marks respectively for Mid Term I, II and III.

### 4. (Credit-2.5 / 125 marks)

University Practical Examination of 125 marks, is divided into two parts of assessment i.e. Internal Assessment (75 marks) and External Assessment (50 marks). Internal Assessment (75 marks) are further sub divided into two parts i.e. Project Assessment (25 marks) and Internal Practical Assessment (50 marks). These 50 marks are further divided into three mid terms, i.e. Mid Term I (12.5 marks), Mid Term II (17.5 marks) and Mid Term III (20 marks). For the sake of convenience in assessment, multiplication factor of 10 is used to design the grading sheets, i.e. of 125, 175 and 200 marks respectively for Mid Term I, II and III.

### 5. AME Fortnightly / Cumulative Fortnightly Practical Examination (30 Marks)

AME Fortnightly / Cumulative Fortnightly Practical Examination will be of 30 marks for each practical examination. Out of these 30 marks, 10 marks are for skill test, 4 marks for procedure writing, 10 marks for viva questions, 3 marks for practical record and 3 marks for log book writing. For practicals without skill marks division will be, 4 marks for procedure writing, 20 marks for viva questions, 3 marks for practical record and 3 marks for log book writing.

### 6. AME Semester Examination (70 Marks, Sem 1 to 3 for Practicals with skill and Sem 1 to 4 without skill)

AME Semester Practical Examination will be of 70 marks for each practical examination. Out of these 70 marks, 20 marks are for skill test, 10 marks for procedure writing, 9 marks for basic viva questions, 9 marks for advance viva questions, 6 marks for practical record, 6 marks for log book writing and 10 marks for project. For practicals without skill marks division will be, 20 marks for procedure writing, 30 marks for viva questions, 5 marks for practical record, 5 marks for log book writing and 10 marks for project.

### 7. AME Semester Examination (70 Marks, Sem 4 for Practicals)

AME Semester Practical Examination will be of 70 marks for each practical examination. Out of these 70 marks, 20 marks are for skill test, 5 marks for procedure writing, 15 marks for layover viva questions, 10 marks for laboratory viva questions, 5 marks for practical record, 5 marks for log book writing and 10 marks for project.

### 8. Special Practical Examination (12.5 Marks in SODECA For Credit System and 25 Marks in DECA For Old Scheme)

## NOTE

- FACULTY MEMBERS, PLEASE ENSURE TO WRITE VIVA QUESTIONS OF EACH PRACTICALS SEPARATELY. MIN NUMBER OF VIVA QUESTIONS PER PRACTICAL IS 20 DIFFERENT QUESTIONS.
- PLEASE ATTACH A SEPERATE SHEET IN DESIRED EXEL FORMAT FOR VIVA QUESTIONS. FORMAT OF EXCEL CAN BE DOWNLOADED FROM [www.soapalam.com](http://www.soapalam.com).

FOR EXTERNAL EXAMINATION THERE IS NO MULTIPLICATION FACTOR.

## Question Paper & Student Details

Mid Term / Fortnightly / Sem*	Back / Re-Back Examination	Date of Submission of QP	13/12/2020
Name of Faculty*	Deepak Tomar	Date of Examination*	16/12/2020
Subject*	1FY3 - 26 - Basic Electrical Engineering Lab (New) (Cr...	Course*	B.Tech (Aeronautical Engineering)
Batch*	Combined Batches 15, 16, 17, SF 1	Semester*	Semester : 1
Email Id of Faculty:*	Deepaktomar@soaneemrana.org	Phone Number of Faculty*	965 454 4096

Student Name		Student Reg No.	
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## Practical Questions

Question : 1*	Basic safety precautions. Introduction and use of measuring instruments –voltmeter, ammeter, multi-meter, oscilloscope. Real-life resistors, capacitors, and inductors.				
Lesson Plan*	1	Topic*	Basic safety precautions	Source*	BASIC ELECTRICAL ENGI

Question : 2	Transformers: Observation of the no-load current waveform on an oscilloscope. Loading of a transformer: measurement of primary and secondary voltages and currents, and power.				
Lesson Plan	2	Topic	Transformers	Source	BASIC ELECTRICAL ENGI

Question : 3	Three-phase transformers: Star and Delta connections. Voltage and Current relationships (line-line voltage, phase-to-neutral voltage, line, and phase currents).Phase-shifts between the primary and secondary side				
Lesson Plan	3	Topic	Three-phase transformers	Source	BASIC ELECTRICAL ENGI

Question : 4

Demonstration of cut-out sections of machines: dc machines(commutator brush arrangement), induction machine (squirrel cage rotor), synchronous machine and single-phase induction machine.

Lesson Plan

4

Topic

Single-phase induction machin

Source

BASIC ELECTRICAL ENGI

Question : 5

Torque Speed Characteristic of separately excited dc motor.

Lesson Plan

5

Topic

DC motor

Source

BASIC ELECTRICAL ENGI

Question : 6

Demonstration of (a) dc-dc converters (b) dc-ac converters – PWM waveform (c) the use of dc-ac converter for speed control of an induction motor and (d) Components of LT switchgear.

Lesson Plan

6

Topic

DC-AC converters

Source

BASIC ELECTRICAL ENGI

Question : 7

Lesson Plan

Question : 8

Lesson Plan

Question : 9

Lesson Plan

Question : 10

Lesson Plan