

- Q.27 What do you mean by Transformer Ratio? Give examples.
- Q.28 How and why do we cool transformers?
- Q.29 Describe carbon pile?
- Q.30 What are the different types of measuring Instruments?
- Q.31 What is Static Discharge Wick?
- Q.32 Explain any landing light circuit?
- Q.33 What are revolving field type AC generators?
- Q.34 What are the different types of Connectors?
- Q.35 Draw one aircraft electrical circuit.

#### **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain the principle and types of DC motors, how do you differentiate the AC and DC motor? What are their relative fields of application?
- Q.37 Describe the important aircraft electric circuits with specifications.
- Q.38 What is a filter and various types of filters? Demonstrate one filter and its use and requirement.

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**5th Sem / Branch : AME**  
**Sub.: Aircraft Electrical systems**

Time : 3Hrs.

M.M. : 100

#### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 A piezoelectric transducer has a \_\_\_\_\_.  
 a) Strain Gauge      b) Thermistor  
 c) Quartz Crystal    d) None of the above
- Q.2 Ammeter is connected in series to allow \_\_\_\_\_.  
 a) Limited current pass through it  
 b) Full current pass through it  
 c) Zero current  
 d) No voltage drop
- Q.3 What is the minimum number of conductor strands required in aircraft quality wire?  
 a) 19 Strands      b) One stand  
 c) 7 Strands        d) 14 Strands
- Q.4 EMF and torque produced in a DC machine are proportional to \_\_\_\_\_ and \_\_\_\_\_ respectively.  
 a) Armature speed and armature emf  
 b) Armature emf and armature speed  
 c) Armature current and armature emf  
 d) Armature speed and armature current

- Q.5 Which one of the following breakdowns occurs in the thin region?
- Avalanche
  - Zener
  - Both A and B
  - None of the above
- Q.6 The armature of a DC generator is laminated to
- Reduce the bulk
  - Provide the bulk
  - Insulate Thakur
  - Reduce the eddy current loss
- Q.7 Reason behind the rapid wear of brushes is \_\_\_\_\_.  
 a) Abrasion from dust  
 b) Excessive spring pressure  
 c) Rough commutator bars  
 d) Abrasion from dust, excessive spring pressure and rough commutator bars
- Q.8 ESD is common terminology refers to \_\_\_\_\_.  
 a) Electrostatic discharge  
 b) Electric discharge  
 c) Electronic discharge  
 d) Elastic
- Q.9 An induction motor works with
- DC only
  - AC only
  - Both AC & DC
  - None of these
- Q.10 Active materials of a lead acid cell are
- Spongy lead
  - Led peroxide
  - Dilute H<sub>2</sub>SO<sub>4</sub>
  - All of the above

## SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Where is measured by a dynamometer?  
 Q.12 What do you mean by lacing?  
 Q.13 What is ELCB?  
 Q.14 How static charge is removed?  
 Q.15 What is a current limiter?  
 Q.16 Which type of voltage regulator used in DC generator.  
 Q.17 What is a Static inverter?  
 Q.18 What is a CHT circuit?  
 Q.19 How battery is rated?  
 Q.20 Where is the purpose of a rectifier?

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Describe the working of reverse current breaker.  
 Q.22 What is the purpose of twisting of wires?  
 Q.23 Explain the working of DC Generator.  
 Q.24 What are the differences between a Voltmeter and a Wattmeter?  
 Q.25 How and where static discharge wickis used?  
 Q.26 How is Paralleling of Generators done?