

- Q.29 What types of switches are used in electrical system? How will you decide their rating?
- Q.30 What are different types of circuits used in aircraft electrical system also give the reason?
- Q.31 Why protection is necessary in electrical system?
- Q.32 Explain static charge static discharge for an aircraft.

SECTION-D

Note: Attempt any three questions out of four questions. Each questions carrying 10 marks. (3x10=30)

- Q.33 Draw and explain a typical electrical system for an aircraft. Describe about all the components.
- Q.34 (a) Explain about Induction motors.
(b) Give differences between the lead acid and Nickle Cadmium Batteries. Which Battery is used mostly in aircraft? Why is it used? Also give advantages and disadvantages of each.
- Q.35 Write short notes on:- current Limiter, Shielding, Voltage regulators, Wattmeter.
- Q.36 (a) What are the different characterises of DC motor? Draw the speed Vs armature current characteristic in case of series motor.
(b) Explain briefly about Induction motors.
- (**Note:** Course outcome/CO is for office use only)

No. of Printed Pages : 4
Roll No.

147755

5th Sem. / AME

Subject : Aircraft Electrical System

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.1 Step up Transformer Increases-
(a) voltage (b) current
(c) power (d) frequency
- Q.2 Galvanometer measures-
(a) power (b) frequency
(c) voltage (d) current
- Q.3 Open circuit test of transformers is used-
(a) Cu loss (b) core loss
(b) total loss (d) no loss
- Q.4 Which of the following motors is self- started-
(a) 3-phase IM (b) 1-phase IM
(b) both (d) none
- Q.5 Phenomena of creeping occurs in-
(a) Ammeters (b) Voltmeters
(b) Watt meters (d) Energy meters
- Q.6 Batteries used in aircraft-

(60)

(4)

147755

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147755

- (a) Ni-Cd (b) Li-ion
(c) lead acid (d) all
- Q.7 Arc quenching media used in electrical Relays-
(a) SF6 (b) vacuum
(c) Air (d) all
- Q.8 All pass filter is used to allow-
(a) all frequency (b) low frequency only
(c) High frequency only (d) none
- Q.9 Energy meter is a instrument of which type-
(a) Integrating (b) differentiating
(c) dividing (d) absolute
- Q.10 Rectifier is used to convert-
(a) AC to DC (b) DC to AC
(c) AC to AC (d) DC to DC

SECTION-B

Note: Attempt ten questions out of twelve questions
.Each questions carrying 2 marks (10x2=20)

- Q.11 Describe briefly about Ammeters.
- Q.12 Give the transformation ratio of transformer with definition.
- Q.13 How will you increase the range of Voltmeter?
- Q.14 Give the names of any 5 measuring devices in electrical system.
- Q.15 What is the method of charging lead acid batteries?
- Q.16 What do the filters do ? Give different Examples of filters.

(2)

147755

- Q.17 What is the basic difference between Rectifier and Inverter.
- Q.18 Shed some light on Landing gear circuits.
- Q.19 What are the necessary points to use parallel operation of AC machines?
- Q.20 What do you mean by Corona effect?
- Q.21 Can we use DC series motor from AC supply?
- Q.22 Give mathematical formula and definition of voltage regulation?

SECTION-C

Note: Attempt any eight questions out of ten questions
Each questions carrying 5 marks (8x5=40)

- Q.23 What do you mean by commutator in DC machine? Explain the commutation process with supporting Diagram.
- Q.24 Explain the operation and principle of a Transformer.
- Q.25 What is the need of starters in case of DC motors? Explain the operation of a starter with a neat sketch.
- Q.26 What do you mean by auto transformer? Explain in detail.
- Q.27 What do you understand by the use of filters? Give example of one filters along with transfer function.
- Q.28 What is the difference between moving iron and moving coil type instruments? Differentiate them with their supporting diagram.

(3)

147755