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JAYA GROUP OF INSTITUTIONS-THIRUNINRAVUR
4th SEM – B.E. / B.Tech
INTERNAL ASSESSMENT-II(MODEL EXAM-II)

Sub. Name: Aircraft Systems and Instrumentation
Sub. Code: AE 6402
Duration: 180 minutes

Date: 07/07 -2015
Branch: Aeronautical
Max.Marks: 100

PART-A (10 x 2 =20)

- 1.What do you understand by anti-icing and de icing?
- 2.How will you identify fire and smoke in an aircraft system?
- 3.List out requirement of an ignition system
- 4.What are the types of carburettor used for aircraft piston engine?
- 5.What are the essential requirements of engine lubricant system of a high performance airplane?
- 6.What are the advantages of air turbine starters?
- 7.Write the working principle of ignition system?
- 8.List out the types of overheat detectors used in fire protection system
- 9.What are the merits and demerits of boot strap air cycle system?
- 10.Write short notes on filter and its types?

PART-B (5 x 16 =80)

- 11.a)Briefly explain the multi engine fuel system with neat sketch?
(Or)
b)Explain following fuel system
 - i)gravity feed
 - ii)Pressure feed
- 12.a)Explain the engine lubricating system of piston engine with a block diagram indicating the functions of components?
(or)
b)What is the function starting system explain different types of starting system used in aircraft?
- 13.a)Briefly explain the different type of magneto ignition system?(16)
(or)
b)i)Explain battery ignition system with neat sketch(8)
ii)Differentiate between battery and magneto ignition system(8)
- 14.a)Explain the methods used in pressurizing cabin of aircraft?(16)
(or)
b.Explain different types of fire extinguishment system used in aircraft?
 - i)Thermal anti icing system
 - ii)Pneumatic deicing system
- 15.a)With a neat sketch, describe fire protection and smoke detection system?(16)
(or)
b)Explain with neat sketches, explain ignition system used in gas turbine engine?