

- Q.30 What is a compact heat exchanger?  
 Q.31 What is the use of a pressure suit?  
 Q.32 What are the demerits of Pneumatic Systems?  
 Q.33 Describe anti-skid system?  
 Q.34 What are the safety precautions taken for seat ejection?  
 Q.35 What are different lubrication systems?

#### SECTION-D

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

- Q.36 What is a servo control system? Describe the working of any one system with force feedback system.  
 Q.37 What is the use of an oxygen system? What are the different components of it? Describe the working with the help of a neat sketch.  
 Q.38 Write in brief about  
 a) Life Rafts  
 b) Fire Detection Systems  
 c) Indicators and warnings

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**5th Sem / Branch : AME**

**Subject:- Aircraft Systems**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 Which of the following is not the type of fuel tank?  
 a) Dependent b) Integral  
 c) Bladder d) Discrete
- Q.2 The air used for pressurization is usually bled off from the engines, at the \_\_\_\_\_ stage  
 a) Intake  
 b) Compressor  
 c) Combustion Chamber  
 d) Turbine
- Q.3 A control system in which the control action is somehow dependent on the output is known as  
 a) Open loop system  
 b) Closed loop system  
 c) Semi closed loop system  
 d) None of the above
- Q.4 Application of control valve in pneumatic system is to  
 a) To store the fluid  
 b) To direct the fluid flow to the system  
 c) Provide fluid pressure to the system  
 d) All of the above

- Q.5 The scientific principle that makes hydraulic systems possible is
- Pascal's principle
  - Boyle's law
  - Bernoulli's principle
  - The fluid flow principle
- Q.6 Hydraulic and pneumatic circuits:
- Perform the same way for all functions
  - Perform differently for all functions
  - Perform the same with some exceptions
  - Does not perform all the functions
- Q.7 \_\_\_\_\_ is used to remove water from the compressed air
- Air filter
  - Drain valve
  - Air dryer
  - Regulator
- Q.8 When a cabin oxygen mask is pulled downwards, the passenger breaths \_\_\_\_\_
- Oxygen
  - A mixture of oxygen and cabin airless expensive to operate
  - Compressor Air
  - On board generated oxygen
- Q.9 Landing gears fold away during the flight to reduce \_\_\_\_
- Drag
  - Thrust
  - Airspeed
  - Altitude
- Q.10 How many times the ejection seat can be used after ejection from the aircraft
- Once
  - Twice

- Anytime
- Can not be reused

### SECTION-B

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

- Q.11 Where is the purpose of an accumulator?
- Q.12 What is the role of valves in Fuel systems?
- Q.13 Deicing works on which system?
- Q.14 In which form the oxygen is used in oxygen system?
- Q.15 Steering system purpose is to \_\_\_\_\_?
- Q.16 Where lubricant is used in aircrafts?
- Q.17 What is an ejection seat?
- Q.18 What is the importance of seat belts?
- Q.19 Which type of detector is used for fire detection?
- Q.20 What is the role of actuators in Hydraulic systems?

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Describe the working of an automatic control.
- Q.22 What is a flow divider and flow integrator?
- Q.23 How does Force feedback work? Explain with loop diagram.
- Q.24 What is the use of air bottles?
- Q.25 What are different types of fire protection systems?
- Q.26 What type of shock absorber is used in landing gears?
- Q.27 Differentiate between Hydraulic Systems and Pneumatic Systems.
- Q.28 What indicator lights are used in oxygen system?
- Q.29 How does anti-icing system work?