

- Q.23 Explain the working of rate of climb indicator.
- Q.24 How the periodical inspection of pressure gauge is done?
- Q.25 What is a mechanical calculator in Airspeed Indicator?
- Q.26 Explain the function of a gyro wheel.
- Q.27 What are the different Quality standards?
- Q.28 What is the importance of periodical inspection of instruments?
- Q.29 How is lead test done?
- Q.30 What is cylinder head temperature gauge?
- Q.31 Describe a hydraulic failure.
- Q.32 Describe working of manifold pressure gauge.
- Q.33 Describe the replacement of an instrument.
- Q.34 How maintenance of gyro instruments is done?
- Q.35 Explain the calibration of fuel gauges?

## SECTION-D

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

- Q.36 What is the principle of a thermocouple? Explain the different types pitot based instruments used in aircrafts.
- Q.37 Describe principle of operation of heading indicator, turn and bank indicator, roll and yaw measuring instruments?
- Q.38 Explain the Total Quality Management (TQM) as applicable to aviation industry. Explain ISO 14000.

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Roll No. ....

**4th Sem.**

**Branch : Aircraft Maintenance**

## Sub. Aircraft Instruments

**Time : 3 Hrs.**

**M.M. : 100**

## SECTION-A

**Note: Multiple type Questions. All Questions are compulsory. (10x1=10)**

- Q.1 Which of the following is not an aircraft instrument?
- a) Altimeter
  - b) Air speed indicator
  - b) Compass
  - d) Barommeter
- Q.2 What is the equivalent airspeed?
- a) Implied airspeed
  - b) Indicated airspeed corrected with altitude
  - c) Equivalent to speed of sound
  - d) Air speed equivalent at ground
- Q.3 What is the difference between the stagnation pressure and the static pressure called?
- a) Atmospheric Pressure
  - b) Dynamic Pressure
  - c) Air Pressure
  - d) Cabin Pressure

- Q.4 The inputs for vertical speed indicator are \_\_\_\_\_.  
 a) Static and stagnation pressure  
 b) Static and calibrated static pressure  
 c) Stagnation pressure only  
 d) None of the above
- Q.5 The compass instrument shows the aircraft's heading relative to magnetic \_\_\_\_\_.  
 a) West                                      b) North  
 c) South                                      d) East
- Q.6 The Turn indicator indicates shows the rotation about the \_\_\_\_\_.  
 a) Horizontal axis                      b) Vertical axis  
 c) Longitudinal axis                      d) Diagonal axis
- Q.7 Which is not pressure gauge \_\_\_\_\_.  
 a) Diaphragm                              b) Bellows  
 c) Burdon Tube                              d) Pyrometer
- Q.8 TS shows airspeed in \_\_\_\_\_.  
 a) Miles per hour                      b) Knots  
 c) Nautical miles                      d) Kilometer per hour
- Q.9 Which instrument measures RPM.  
 a) RMP meter                              b) Potentiometer  
 c) Tachometer                              d) Barometer

- Q.10 Artificial horizon is operated by  
 a) Pilot                                      b) Electrical motor  
 c) Gyroscope                              d) None of the above

### SECTION-B

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

- Q.11 Name the basic aircraft instruments?  
 Q.12 What is a rate of climb indicator?  
 Q.13 Which pressure gauge is used in altimeter?  
 Q.14 What is the principal of RPM indicator?  
 Q.15 What is the principle of operation of Altimeter?  
 Q.16 What is the use of Turn and Bank indicator?  
 Q.17 How does suction gauge work?  
 Q.18 What is the importance of content gauge?  
 Q.19 Name two temperature gauges?  
 Q.20 What does VSI measure?

### SECTION-C

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

- Q.21 Describe the gyro instruments used in aircrafts.  
 Q.22 What is position error and leak in altimeters?