

- Q.28 How do you measure cylinder head temperature?
- Q.29 How is position error leak test done?
- Q.30 What is the principle of gyro wheel?
- Q.31 What does hydraulic failure mean?
- Q.32 What do you mean by TQM, how it is ensured?
- Q.33 What are the conditions for replacement of instruments?
- Q.34 Describe artificial horizon.
- Q.35 Explain the working of manifold pressure gauge?

#### SECTION-D

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

- Q.36 Classify all the instruments of aircraft. Describe electrically operated instruments.
- Q.37 What is the principle of operation of Altimeter and sideslip measurement?
- Q.38 Explain the Total Quality Management (TQM) as applicable to aviation, how it is used in maintenance of instruments.

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#### 4th Sem / Aircraft Maintenance Subject : Aircraft Instruments

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 Where are the pitot instruments?
- ASI, VSI, Altimeter
  - ASI, Altimeter Turn indicator
  - Altimeter, AOA indicator
  - Air speed indicator only
- Q.2 What is the full form of IAS?
- Implied airspeed
  - Indicated airspeed
  - Incident airspeed
  - immediate airspeed
- Q.3 VSI has following pressure inputs?
- Stagnation and static pressure
  - dynamic Pressure
  - Only one Static
  - One static and one restricted static
- Q.4 Temperature inside engine cylinder can be measured by \_\_\_\_\_
- Pyrometer
  - Thermocouple
  - Mercury thermometer
  - None of the above

- Q.5 The compass instrument shows the aircraft's heading relative to magnetic \_\_\_\_\_
- West
  - North
  - South
  - East
- Q.6 The turn indicator works on \_\_\_\_\_
- Horizontal gyro
  - vertical gyro
  - Any of the above
  - None of the above
- Q.7 The instrument which measure both the static and total pressure is \_\_\_\_\_
- Dynamic probe
  - Static probe
  - Pitot static probe
  - Stagnation probe
- Q.8 Bourdon tube is used in \_\_\_\_\_
- Temperature measurement
  - Pressure measurement
  - Distance measurement
  - Speed measurement
- Q.9 Gyroscope is power by.
- Electricity
  - Pressurized Air
  - Electricity of Pressurized Air
  - Hydraulic Power
- Q.10 Gyroscope work on the principle of \_\_\_\_\_
- Rigidity
  - Precession
  - Rigidity and precession
  - None of the above

## SECTION-B

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

- Q.11 Where is the static port located?
- Q.12 What is the use of pitot static tube?
- Q.13 How is position error calculated?
- Q.14 What is the function of ROC indicator?
- Q.15 What is the altitude equivalent in airplane cabin?
- Q.16 For a turning a/c, the ball of turn & bank indicator in the center means?
- Q.17 What is a lead test?
- Q.18 What does fuel content gauge measure?
- Q.19 Name two temperature measuring instruments?
- Q.20 What is a tachometer?

## SECTION-C

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

- Q.21 Name the instruments of aircraft?
- Q.22 How the position error is estimated?
- Q.23 Give a few examples of gyroscopic instruments.
- Q.24 How is the periodical inspection of temperature gauge done?
- Q.25 How many types of air speeds are used?
- Q.26 Draw a simple diagram of VSI and label it?
- Q.27 What are the different Quality System standards?