

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

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- 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 works on _____
 a) Horizontal gyro b) vertical gyro
 c) Any of the above d) None of the above
- Q.7 The instrument which measure both the static and total pressure is _____
 a) Dynamic probe b) Static probe
 c) Pitot static probe d) Stagnation probe
- Q.8 Bourdon tube is used in _____
 a) Temperature measurement
 b) Pressure measurement
 c) Distance measurement
 d) Speed measurement
- Q.9 Gyroscope is power by.
 a) Electricity
 b) Pressurized Air
 c) Electricity of Pressurized Air
 d) Hydraulic Power
- Q.10 Gyroscope work on the principle of _____
 a) Rigidity
 b) Precession
 c) Rigidity and precession
 d) None of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

- 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. $(12 \times 5 = 60)$

- 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?