Q.28 Explain the theory of peopellers with the help of a diagram.

Q.29 What are the various characteristics of engine oil used?

Q.30 Write a brief note on Fuel Flow Indicator with a diagram.

Q.31 How does a VSI work?

Q.32 What are the various associated control system components with feathered propellers?

Q.33 Differentiate between propeller and Jet Engine.

Q.34 How is run out check of a crank shaft done?

Q.35 How are electrical resistance thermometers used?

SECTION-D

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

Q.36 What are the various faults that can come up in a typical engine system? Mention ways to identify them.

Q.37 (a) What is the principle of operation of Superchargers?
(b) Write note on Mechanical Tachometer.

Q.38 Explain the construction of various parts and accessories of the engine including induction, exhaust and cooling system.

No. of Printed Pages : 4 187745/147745
Roll No.....

4th Sem / Aircraft Maintenance
Subject : Aircraft Reciprocating Engine

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 Which of the following is correct?
a) Bladder tanks can be manufactured self sealing.
b) Bladder is only available fuel tank to be used
c) Lift is same as weight always
d) Nozzle compresses exhaust flow.

Q.2 Turboshaft engines are used primarily for _____.
a) UAVs b) Commercial aircrafts
c) Cars d) Helicopters

Q.3 Propulsive efficiency is defined as _____.
a) Ratio of obtained thrust power to energy expanded.
b) Thrust used by compressed energy?
c) Aerodynamic efficiency
d) Lift required to thrust required at each segment

Q.4 By adding which of the following material to aluminium alloy piston slap can be avoided?
a) Silicon b) Zinc
c) Copper d) Lead

Q.5 Afterburner is used to_____.

a) Increase thrust of engine
b) Increase fuel efficiency
c) Increase lift produced by tail
d) Reduce fuel consumption

Q.6 Fuel system includes_____.

a) Fuel tanks, fuel lines, fuel pump etc.
b) Elevator
c) Rudder
d) High lift device

Q.7 The diameter of piston is called_____.

a) Piston b) Bore
c) Stroke d) None of the mentioned

Q.8 How much amount of fuel must be measured out in a fuel injection system?

a) Very High b) Very small
c) High d) Medium

Q.9 Which among the following is provided on the pistol in a two stroke engine to increase the compression ratio?

a) Flat spot b) Deflector
c) Damper d) Nozzle

Q.10 The clearance volume is the _____ volume formed in cylinder when piston is at TDC.

a) Minimum b) Maximum
c) Average d) None of the mentioned

SECTION-B

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

Q.11 How is the efficiency of piston engine compared to jet engines?

Q.12 Where are fuel flow indicators used?

Q.13 Where are feathering propellers used?

Q.14 How are the faults identified in a typical engine system?

Q.15 Where are tachometers used?

Q.16 What is the use of carburetors?

Q.17 Where are pressure gauges used in instruments?

Q.18 How does magnetos work?

Q.19 What is the use of engine starters?

Q.20 What is the use of fault analysis?

SECTION-C

Note: Short answer type questions. Attempt any Twelve question put of fifteen questions. (12x5=60)

Q.21 How does a propeller based Aircraft work?

Q.22 What are the different types of aviation fuel?

Q.23 Denote the different functioning parts of a propeller with a diagram.

Q.24 What are electrical resistance thermometers?

Q.25 What are the constructional features of super chargers?

Q.26 Explain the working of exhaust and cooling system of engine.

Q.27 What are the common sources of contamination? How are they eradicated?