Q.29 What is the use of APU?

Q.30 Describe the working of a shock absorbed?

Q.31 Name all the secondary control surfaces.

Q.32 Draw a diagram of the loads acting on an aircraft climbing at 45 degree.

Q.33 What do you mean by Aircraft component utility?

Q.34 Write short note on utility of emergency exits.

Q.35 Write a short note on using Plywood in Aircraft Structure.

SECTION-D

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

Q.36 Explain the working of landing gear, brake system and airbrakes.

Q.37 Describe the primary, secondary and auxiliary control systems of an aircraft.

Q.38 Explain the minor and major defects/damages in aircrafts. Explain fail safe and safe fail concept.

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Roll No. .....

4th Sem.

Branch : Aircraft Maintenance

Sub. General Air Frame & Aero Moddling

Time : 3 Hrs. M.M. : 100

SECTION-A

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

Q.1 What type of aircraft is primarily designed for transporting passengers over long distances?

a) Fighter jet b) Cargo plane

c) Commercial airliner d) Helicopter

Q.2 What are the ground loads?

a) Loads acting due to aircraft motion on ground

b) Air Loads

c) Gust Loads

d) Lift and Drag

Q.3 Pure monocoque structure does not have?

a) Spars b) Ribs

c) Stringers d) All of the above

Q.4 What is the main purpose of emergency exits in an aircraft?

a) To allow passengers to boards the aircraft

b) To provide additional ventilation during flight

c) To facilitate rapid evacuation in case of an emergency

d) To allow crew members to enter and exits the aircraft.

Q.5 Which type of fuselage construction method utilizes welded steel tubes to form the framework of the structure?

a) Light metal construction
b) Fabric construction
c) Steel tubular structure
d) Plywood and metal coverage

Q.6 What is a tail dragger?

a) Two main gears in the form and one small under the tail
b) One gear under the nose and two under the wings
c) Three gears under the fuselage in a line
d) No wheel near tail

Q.7 Design load is defined as _____.

a) The Highest possible load that structures is designed to withstand without braking.
b) The highest normal stress when strain in only quarter
c) The lowest load that structure has to withstand
d) Lift and drag only

Q.8 Which of the following tanks used by combat aircraft, which need to discard them after use for performance reasons?

a) Tip Tank b) Internal tank
c) Drop tank d) Attack tank

Q.9 What purpose do tubes serve in aircraft tires?

a) To provide additional traction
b) To maintain tire pressure
c) To reduce friction during landing.
d) To absorb shock

Q.10 Which type of fuel tank is commonly used in small aircraft and consists of flexible bladed-like containers?

a) Integral fuel tank b) We wing fuel tank
c) Rigid fuel tank d) Rubberized fuel tank

SECTION-B

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

Q.11 Why the windows are oval in shape?

Q.12 What part of the airplane is open during emergency exit?

Q.13 What do you mean by safe fail?

Q.14 Give an example of pure monocoque structure.

Q.15 In how many parts the ribs are constructed?

Q.16 Name two primary controls on aircrafts.

Q.17 What is rigging of aircraft?

Q.18 What do you mean by duplicate inspection?

Q.19 How is stressed construction done?

Q.20 Where the brakes are used in airplanes?

SECTION-C

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

Q.21 Explain the types of aircraft constructions?

Q.22 Draw an aircraft monocoque construction.

Q.23 What are the different loads acting on aircraft while climbing?

Q.24 Write a precautionary measure taken to avoid engine failure.

Q.25 What is the benefit of using stressed construction in aircraft?

Q.26 What are the different types of wings plan forms?

Q.27 What are the factors responsible undercarriage performance?

Q.28 Explain Brake system.