Q.26 Explain with the help of a diagram the monocoque construction.

Q.27 What are the different loads acting on aircraft while climb?

Q.28 Differentiate between fail-safe and safe-fail concepts

Q.29 What is the benefit of using stressed construction in aircraft?

Q.30 What are the factors responsible for the design and development of undercarriage?

Q.31 Explain the use of sealants in fuel tanks.

Q.32 How is symmetry check done?

Q.33 Classify aircrafts based on wing size.

Q.34 What is the difference between fighter and passenger aircraft?

Q.35 What is the importance of duplicate inspection?

SECTION-D

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

Q.36 Define the structural layout and configuration of aircraft.

Q.37 Explain the primary, secondary and auxiliary control system of aircraft

Q.38 Explain with the help of a diagram the construction of a fuselage

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4th Sem / Aircraft Maintenance
Subject:- General Airframe and Aero Modelling

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Which of the following is not the type of fuel tank?

a) Flap b) Integral
c) Bladder d) Discrete

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 Which of the following is an example of air load?

a) Gust b) Taxi
c) Wheel stress d) Landing

Q.4 Integral tanks are _____

a) cavities withing the aircraft's airframe itself
b) external tanks needs to be fabricated
c) external tanks required to put in the airframe
d) there is no such type of fuel tank

Q.5 Aviation fuel is also called as_____

a) Engine fuel b) Jet fuel

c) Gasoline d) Air fuel

Q.6 Which of the following supports an aircraft on the ground?

a) Rudder b) Engines

c) Aileron d) Landing gears

Q.7 Few single-engine aircraft use_____ probes in the fuel tanks.

a) Capacitive b) Inductive

c) Resistive d) Radiative

Q.8 Design load is defined as _____

a) the Highest possible load that structure is designed to withstand without braking

b) the highest normal stress when strain is only quarter

c) the lowest load that structure has to withstand

d) lift and drag only

Q.9 The earliest aircraft were constructed primarily of_____

a) Steel b) Aluminum

c) Steel d) Wood

Q.10 The combination of ailerons and elevators is called

a) Alevon b) Spoiler

c) Elevon d) Rudder

SECTION-B

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

Q.11 How is repair of fuel tanks done?

Q.12 What are shock absorbers?

Q.13 Give an example of a steel tabular structure.

Q.14 What is metal coverage in an aircraft ?

Q.15 What are the loads acting on an aircraft while gliding?

Q.16 Give an example of aircraft with maximum percentage of composites used.

Q.17 Where is plywood used in aircraft construction?

Q.18 Where are sealants used?

Q.19 How is stressed construction done?

Q.20 What are auxiliary control systems?

SECTION-C

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

Q.21 How is light metal construction beneficial for an aircraft? Support your statement with examples.

Q.22 Write the benefits of using composites in an aircraft structure?

Q.23 Write a short note on emergency brakes used in an aircraft

Q.24 How can controls be rigged?

Q.25 How is an aircraft constructed ? Mention the various structural components in a wing.