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

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

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

Q.29 What is the role of trim tab control?

Q.30 What are the different types of undercarriage?

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

Q.32 How is symmetry check done?

Q.33 Ow the balancing of control surface is done?

Q.34 What is the difference between fighter and transport 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 What is an aircraft and its types? Explain the reason for fuel in the wings and retractable undercarriage.

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

Q.38 Explain the different undercarriage used in aircrafts. How does a brake system work?



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**4th Sem / Aircraft Maintenance**
**Subject:- General Air Frame and Aero Moddling**

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 a type of aircraft ?

a) Kite b) Baloon
c) Glider 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 Wing fuel tanks make the wing_____

a) Light b) Heavy
c) Long d) Thick

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) Rubber b) Engines
c) Aileron d) Landing gear

Q.7 What is a tail dragger?

a) Two main gears in the front 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.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 is ruddervator _____

a) Alevon
b) Rudder and Elevator combination
c) Airplane without rudder
d) Vibrating Rudder



## SECTION-B

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

Q.11 What type of undercarriage are used in medium transport airplanes?

Q.12 What is an oleo strut?

Q.13 What is a canard?

Q.14 What direction Lift acts on airplane in climbing?

Q.15 Where is the control for brakes?

Q.16 Which type of aircraft have fixed landing gears?

Q.17 What are the types of fuel tanks?

Q.18 Where are sealants used?

Q.19 What do you mean by stressed construction?

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 Classify different type of aircrafts.

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

Q.23 What are main structural components of an airplane?

Q.24 Why the windows of aircraft are oval in shape?

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