

20 Multiple choice questions

1. a projectile powered by onboard chemical fuels
 - a. rocket
 - b. ramjet
 - c. rudder
 - d. lift

2. this consists of both static and dynamic pressure
 - a. stress raiser
 - b. pitot/total pressure
 - c. hydrostatic pressure
 - d. static pressure

3. the primary control surface in yaw (sideways movement), usually hinged and attached to the trailing edge of the vertical stabiliser on the aircraft's tail
 - a. ramjet
 - b. rudder
 - c. rocket
 - d. Kevlar

4. a faster supersonic variant of the ramjet engine
 - a. thrust
 - b. ramjet
 - c. rocket
 - d. scramjet

5. procedures that gather information remotely (such as thermography and vibration monitoring) or by surface-based examination techniques (such as radiography, ultrasonics, eddy current, dye penetrant and magnetic particle inspection)
 - a. hydrostatic pressure
 - b. static pressure
 - c. non-destructive testing
 - d. jet engine

6. turboprop aircraft use a gas turbine engine to drive a propeller; reduction gearing is used to reduce the top speed of the propeller to improve efficiency and reduce noise
 - a. rudder
 - b. rocket
 - c. turboprop
 - d. thrust

7. speed of the aircraft relative to the Earth's surface
 - a. rudder
 - b. rocket
 - c. ramjet
 - d. ground speed

8. the driving force propelling an aircraft forward
 - a. rocket
 - b. thrust
 - c. lift
 - d. ramjet

9. nickel-chromium-iron, nickel-chromium-molybdenum-iron and nickel-chromium-cobalt alloys selected for their high temperature strength, creep and corrosion resistance
 - a. superalloy
 - b. turboprop
 - c. Kevlar
 - d. scramjet

10. pressure produced by the weight of all the molecules in the air at a particular height
 - a. stress raiser
 - b. hydrostatic pressure
 - c. static pressure
 - d. pitot/total pressure

11. measured through the use of static vent, static pressure is the pressure of the atmosphere without any relative movement
 - a. hydrostatic pressure
 - b. stress raiser
 - c. pitot/total pressure
 - d. static pressure

12. the upward force perpendicular to the aircraft's flight path
 - a. lift
 - b. ramjet
 - c. thrust
 - d. rocket

13. engine using the forward motion of the craft to compress incoming air before combustion
 - a. rudder
 - b. scramjet
 - c. rocket
 - d. ramjet

14. stress raisers can be scratches, grooves, machining marks, design faults or any structural discontinuity causing concentration of stress
 - a. stress raiser
 - b. scramjet
 - c. static pressure
 - d. superalloy

15. an engine that develops thrust by ejecting an exhaust of gaseous combustion products
 - a. rudder
 - b. rocket
 - c. rotary wing
 - d. jet engine

16. (also known as concurrent engineering) a team-based, collaborative approach to new product design and development aimed at reducing design cycle time
 - a. precipitation hardening
 - b. simultaneous engineering
 - c. stress raiser
 - d. jet engine

17. increasing the hardness of a supersaturated solid solution by heat treating it to cause a second phase to precipitate out
 - a. rotary wing
 - b. jet engine
 - c. transition piece
 - d. precipitation hardening

18. transition pieces are three-dimensional objects required to connect two different sections of different shapes or varying sizes
- jet engine
 - transition piece
 - static pressure
 - rotary wing
19. a type of aircraft that is supported in the air wholly by wings or blades rotating about a central vertical axis
- rotary wing
 - ramjet
 - jet engine
 - rocket
20. a synthetic aramid fibre of high tensile strength and heat resistance used as a reinforcing agent in many composites
- Kevlar
 - rudder
 - thrust
 - rocket