1.The ability of a metal to resist deformation is called its yield strength.

金属抵抗变形的能力称为屈服强度。

2.Fatigue strength is the maximum load that a material can withstand without failure during a large number of reversals of load.

疲劳强度是材料能够承受的最大载荷在大量负载反转期间不会出现故障。

3 Malleability of a material is its ability to be bent, formed, or shaped without cracking or breaking.材料的延展性是指其弯曲、成形或塑形的能力而不会破裂或断裂。

4 Aluminium has a density of 2.7; therefore, a cubic centimetre weighs 2.7 grams.铝的密度为2.7；因此，一个立方体厘米重2.7克。

5 Extrusion is the process of forcing metal through a die which imparts a

required cross-section to the metal.

挤压是迫使金属通过模具的过程，该模具赋予金属金属所需的横截面。

6 The greater the carbon content, there is better response to the heat treatment and it results in the higher tensile strength and hardness

越大碳含量，对热处理有更好的反应导致更高的抗拉强度和硬度。

7 increasing nickel content improves corrosion resistant

增加镍含量可提高耐腐蚀性

8 These stresses are relieved in ferrous metals by a process known as normalizing.

这些压力在黑色金属通过称为正火的过程。

9 Tempering//

uniformly heated to a level considerably below its critical temperature and then allowed to cool to room temperature in still air.

均匀加热到远低于其温度的水平临界温度，然后冷却至室温静止的空气。

10 // Alloys within the 2xxx series contain copper as the principle-alloying

element.2xxx系列合金以铜为主要合金成分元素。 It is used for tension applications such as lower wing skin and upper surface of the horizontal stabilizer.它被使用用于张力应用，如机翼下蒙皮和机翼上表面水平稳定器

11 7xxx series aluminium alloys contain zinc as the principal alloying

element.7xxx系列铝合金以锌为主要合金成分元素。

12 Alclad aluminium包铝

Clad aluminium sheets are made by a process in which pure aluminium coating is rolled on to the surface of heat-treated aluminium alloy during manufacture.复合铝板由将纯铝涂层滚压到表面的过程在制造过程中对铝合金进行热处理。

13 Some alloys, such as 2017 and 2024, develop their full properties by solution heat treatment 一些合金，如2017和2024，发展了它们的固溶热处理的全部性能

through anneling,alloys achieve formability characteristics通过退火，合金实现了可成形性特征

14 Copper tubing was once used extensively in aircraft fluid lines. It has

been almost entirely replaced by aluminium alloy because of its higher

weight and tendency to fracture due to brittleness when subjected to

vibration.铜管曾广泛用于飞机流体管路。它有由于其较高的硬度，几乎完全被铝合金所取代重量和脆性断裂倾向振动。

15 Composites have excellent corrosion resistance as compared to the metal

structure.与金属相比，复合材料具有优异的耐腐蚀性结构。

16 The strength of the composite build-up is the highest along the lay of the fiber as compared to the sheet metal component,

与金属板部件相比，复合材料堆积的强度沿纤维层最高，

17 Thermoplastic resins can be reheated again to change their shape.

热塑性树脂可以再次重新加热以改变其形状。

18 foam adhesive is primarily used in the repair of components with honeycomb core segments.泡沫粘合剂主要用于修复具有蜂窝芯段的部件。

19 Pre-pregs are fabrics that have the resin system saturated into the fabric at the time of manufacture.

预浸料是将树脂系统饱和到织物中的织物制造时间。

20 There are 3 categories of damages: negligible, repairable and non-repairable.有三类损坏：可忽略不计、可修复和不可修复。

21 ULTRASONIC INSPECTION 超声波探伤 --Delaminations, 分层，

22 Aluminum Alloys

Corrosion of the aluminum alloy surface is usually indicated by

white/light gray powdery deposits with dulling of the surface on

unpainted parts.

铝合金--铝合金表面的腐蚀通常表示为白色/浅灰色粉末沉积物，表面变暗

未上漆的部件。

23 Fretting corrosion is a form of corrosive attack caused by two mating

surfaces having very slight relative motion.

微动腐蚀是由两个配合引起的腐蚀腐蚀的一种形式具有非常轻微的相对运动的表面。

24 **I**NTERGRANULAR CORROSION晶间腐蚀；粒间腐蚀

occurs along the grain boundaries of an alloy and penetrates into the core of the material.沿着合金的晶界发生，并渗透到材料的核心。

25 Exfoliation results in delamination of the material 剥落导致材料分层

26 GALVANIC CORROSION 镀锌腐蚀

This form of corrosion occurs between two dissimilar metals in the presence of an electrolyte

镀锌腐蚀这种形式的腐蚀发生在两种不同的金属之间有电解质存在

protective coatings 保护涂层；涂料；防护涂层

27 Microbial (microbiological) corrosion occurs in integral fuel tanks and is

caused by the presence of bacteria and fungus in aviation kerosene.

微生物（微生物）腐蚀发生在整体式燃料箱中由航煤中的细菌和真菌引起的。

28 corrosion control 腐蚀控制；腐蚀防止法

inspection检查；视察 maintains 保养；removal 清除；消除

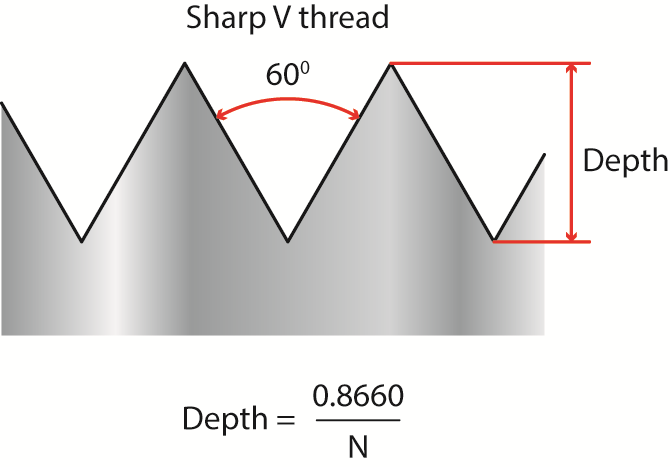
after wrrosion remol exposed areas to be covered with primer and inhibitok

磨光后，拆除待涂覆底漆和抑制剂的外露区域

29 A screw with finepitch thread has higher strength, tighter grip and finer adjustment.具有细螺距螺纹的螺钉具有更高的强度、更紧密的握持和更精细的调整。

30 A right hand thread is one in which the part must be rotated clockwise to advance一个右手边螺纹是一种必须顺时针旋转零件才能向前推进的螺纹

31 Most fastening threads have a basic V-form.

大多数紧固螺纹具有基本的V形。

32 Metric or System International (S.I.)公制或国际单位制（S.I.）

The thread angle is 60°,螺纹角度为60°，

33 American screw thread series are available in five classes of fits ranging from Class 1 - loose fit to class 5 - close fit.

美国螺纹系列有五种配合等级，从1级松配合到5级紧配合。

34 Some of these standards are AN (Air Force and Navy),

其中一些标准是AN（空军和海军），

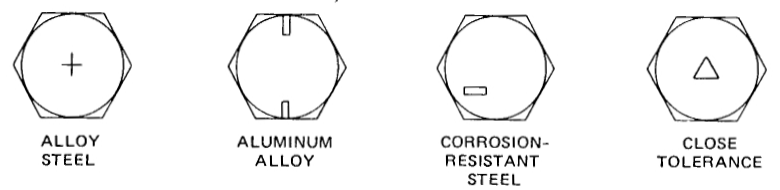
1. Military specifications are identified by MIL followed by a letter and a number. For example, the specification for hydraulic oil used in some aircraft is MIL-H-5606.军用规格由MIL标识，后面是字母和数字。例如，某些飞机使用的液压油规格为MIL-H-5606。

36 whether the bolt is AN-type or special purpose bolt. Alloy-steel bolts will have a cross (or asterisk)

无论螺栓是AN型还是专用螺栓。合金钢螺栓将有一个十字架（或星号），

37 Closed tolerance NAS bolts are marked with a raised or recessed triangle.

闭合公差NAS螺栓标有凸起或凹陷的三角形。



38 Fiber or nylon locknuts纤维或尼龙锁紧螺母

These nuts should not be used in high temperature areas above 250 degrees F这些螺母不应用于250华氏度以上的高温区域

39 Missed cotter pins in safety-critical installations can result in serious

consequences.安全关键装置中的开口销丢失可能导致严重后果后果。

40 Corrosion resisting steel and heat resisting nickel alloy are the materials normally recommended for wire locking.

通常推荐使用耐腐蚀钢和耐热镍合金进行锁线。

41 Locking plates may be used repeatedly provided they remain a good fit

around the hexagon of the nut or bolt head.

锁定板可以重复使用，只要它们保持良好的配合围绕螺母或螺栓头的六角形。

42 The length of a countersunk rivet (AN426) is measured from the top of the

manufactured head to the end of the shank.

沉头铆钉（AN426）的长度从铆钉顶部开始测量从制造的头部到柄部的末端。

43 Lines containing physically dangerous materials, such as oxygen,nitrogen, or Freon, are marked PHDAN.

含有物理危险物质（如氧气、氮气或氟利昂）的管线标有PHDAN。

44 **EXTRA-HIGH-PRESSURE HOSES 超高压软管**

reinforcement of spiral stainless-steel wire layers with a high-temperature elastomer cushion between layers.

螺旋不锈钢钢丝层的加强，各层之间有高温弹性体衬垫。

**45** The size of a hose is indicated by the inner diameter of the hose

软管的内径表示软管的尺寸

46 burst pressure is at least 4 times the maximum operating pressure

爆破压力至少为最大工作压力的4倍

47 Ball test can be used to detect internal bulges and flaps.

球测试可用于检测内部凸起和襟翼。

48 Bend radius of the hose in the hose usually should be at least 12 times

the ID of the hose for normal installation.

软管中软管的弯曲半径通常应至少为12倍正常安装时软管的ID。

49 Teflon tends to take a permanent set after being in service. They must not be bent against this set and thus the length of wire is attached between the end fittings to prevent the hose from straightening

特氟龙在使用后往往会永久变形。它们不得弯曲，因此端部配件之间会连接一段电线，以防止软管变直

50 Generally, aluminium alloy or corrosion-resistant steel tubing has replaced copper tubing.一般来说，铝合金或耐腐蚀钢管已经取代了铜管。

51 High strength thin walled CRS tubing provide weight savings over thicker-wall aluminium alloy tubing.高强度薄壁CRS管比厚壁铝合金管减轻了重量。

52 High-pressure hydraulic systems carrying pressures more than 1500

psi utilize corrosion-resistant steel tubing.--or stainless steel

压力超过1500的高压液压系统psi采用耐腐蚀钢管。--或不锈钢

53 Size of the metal tubing is given by its outside diameter, expressed in

sixteenths of an inch金属管的尺寸由其外径给出，表示为十六分之一英寸

Hoses--ID=1/8 INCH 软管

Tubing--ID=1/16 inch 油管

54 In aviation roll-type flaring tools are commonly used.

在航空中，通常使用滚转式扩口工具。

impact type flare tool 冲击式工具

55 **QUICK-DISCONNECT COUPLINGS快速断开接头**

Each half incorporates a valve that is held open when the coupling is connected, allowing fluid to flow through the coupling in either direction

每一半都包含一个阀门，当联轴节处于打开状态时，该阀门保持打开状态

连接，允许流体以任何方向流过接头

56 Except at start-up there is no contact between the shaft and the bearing material.除启动时外，轴和轴承材料之间没有接触。

57 ‘Roller bearings’ can carry greater loads because they have more

contact area to take up the load than ball bearings

“滚柱轴承”可以承载更大的载荷，因为它们具有更多比滚珠轴承承受载荷的接触面积

58 any damage to the large end of the rollers大端的任何损坏滚轮

discoloration of the rollers, or of dry operation滚轮变色，或干式操作

59 Rack and pinion gears transmit motion between a rotating spur gear

and a linear-moving toothed rack.

齿条齿轮和小齿轮在旋转的正齿轮之间传递运动和线性移动齿条

jack screw rotary to liner motion螺旋千斤顶旋转到衬垫运动

60 *Bevel gears* are generally conical in form and are used to connect

shafts, which intersect in a common plane,

锥齿轮通常呈锥形，用于连接相交于公共平面的轴，

61 IDLER GEARS 惰轮

to make an output gear rotate in the same direction as the input gear or

使输出齿轮沿与输入齿轮相同的方向旋转

62 central gear中心齿轮

The central gear is the sun,中央齿轮是太阳，

63 Planetary gear systems are used to reduce the propeller shaft speed.

行星齿轮系统用于降低螺旋桨轴速度。

increase propellr efflciency提高螺旋桨效率

64 If the extension is in excess of 2% on any section of the chain the

whole run of chain should be replaced

如果链的任何部分的延伸超过2%，则应更换整个链条

65 Aircraft control cables are manufactured from carbon steel or corrosion resistant steel wires,

飞机控制电缆由碳素钢或耐腐蚀钢丝制成，

66 Cables are normally made up from either 7 x 7 (seven strands each

having seven wires or from 7 x 19 (seven strands each having nineteen

wires.电缆通常由7×7（每根7股）组成具有7根电线或来自7×19（7股，每股19根电线。

67 Lock-clad cables are used in location where control system cable has a

long straight run.锁定包层电缆用于控制系统电缆具有长距离直线跑。

68 The cable slack is less pronounced in lock-clad cables than in bare

与裸电缆相比，锁芯电缆的电缆松弛不太明显

### ****1. Tempering heat treatment of steel (钢的回火热处理)****

**A. Always follows quench hardening. (始终遵循淬火硬化)**  
**B. Is done to increase hardness. (这样做是为了增加硬度)**  
**C. Requires material to be heated below the upper critical temperature. (需要将材料加热到临界温度上限以下)**

* **答案/Answer:** **C. Requires material to be heated below the upper critical temperature.**
* **解释/Explanation:** 回火通常在淬火后进行，以减少脆性并改善韧性。这需要在低于临界温度的范围内加热。

### ****2. Yield Strength (屈服强度)****

**A. It is the ability of the material to resist deformation. (这是材料抵抗变形的能力)**  
**B. It is the ability of the material to withstand pulling force. (它是材料承受拉力的能力)**  
**C. It is the ability of the material to resist opposed and parallel forces. (这是材料抵抗相反和平行力的能力)**

* **答案/Answer:** **A. It is the ability of the material to resist deformation.**
* **解释/Explanation:** 屈服强度指材料开始塑性变形的应力。

### ****3. Property of material to be bent without breaking (材料能够弯曲而不开裂的特性)****

**A. Ductility (韧性；延性)**  
**B. Malleability (可塑性；可锻性)**

* **答案/Answer:** **B. Malleability.**
* **解释/Explanation:** Malleability 是材料在不破裂的情况下被成型的能力，而 Ductility 主要描述延展性。

### ****4. Extrusion (挤压工艺)****

**A. A process to form intricate shapes in metals by either hammering or pressing. (通过锤击或压制形成复杂形状的过程)**  
**B. A process of rolling metal at room temperature to its approximate size. (在室温下将金属轧制到近似尺寸的过程)**  
**C. A process of forcing metal through a die to impart a required cross-section. (迫使金属通过模具以赋予所需横截面的过程)**

* **答案/Answer:** **C. A process of forcing metal through a die to impart a required cross-section.**
* **解释/Explanation:** 挤压是通过模具成型的主要金属加工方法。

### ****5. Artificial aging of aluminum alloy (铝合金的人工时效)****

**A. Cold work. (冷加工)**  
**B. Heat treated twice. (热处理两次)**  
**C. Stored at elevated temperature. (高温储存)**

* **答案/Answer:** **C. Stored at elevated temperature.**
* **解释/Explanation:** 人工时效是通过加热加速金属析出硬化的过程。

### ****6. Copper is replaced by aluminum alloy as aircraft fluid tubing lines because:****

**6. 铜被铝合金取代作为飞机流体管路，因为：**  
**A. Of its lower cost to mass produce as other industries also switched to using aluminum. (随着其他行业也转向使用铝，其大规模生产的成本较低)**  
**B. Of its higher weight and brittleness tendency to fracture. (由于其较高的重量和易碎的断裂倾向)**  
**C. Of its higher cost manufacture as worldwide material shortage from over demand. (由于需求过剩导致全球材料短缺，其制造成本较高)**

* **答案/Answer:** **B. Of its higher weight and brittleness tendency to fracture.**
* **解释/Explanation:** 铝合金比铜轻且更具延展性，因此在航空中更适合作为流体管路材料。铜的高重量和脆性倾向限制了其使用。

### ****7. Which type of aluminum alloy series is used on the upper surface of horizontal stabilizer and lower wing skin?****

**7. 水平稳定器上表面和下机翼蒙皮上使用的铝合金系列是哪种？**  
**A. 2024 series aluminum alloy (2024系列铝合金)**  
**B. 3003 series aluminum alloy (3003系列铝合金)**  
**C. 7075 series aluminum alloy (7075系列铝合金)**

* **答案/Answer:** **A. 2024 series aluminum alloy.**
* **解释/Explanation:** 2024铝合金具有高强度和抗疲劳性，常用于飞机结构中如水平稳定器和下机翼蒙皮。

### ****8. To achieve formability characteristics of aluminum alloy 2024, so that riveting can be carried out, which treatment is suitable?****

**8. 为了实现2024铝合金的可成形性特性，从而进行铆接，哪种处理方法合适？**  
**A. Cold hardening process. (冷硬化工艺)**  
**B. Refrigeration. No heat treatment required. (制冷，无需热处理)**  
**C. Solution heat treatment (Annealing). (固溶热处理/退火)**

* **答案/Answer:** **C. Solution heat treatment (Annealing).**
* **解释/Explanation:** 固溶热处理（退火）改善材料的可成形性，使其适合进行铆接操作。

### ****9. How are the fibers in Plain Weave fabric arranged?****

**9. 平纹织物中的纤维是如何排列的？**  
**A. Warp and fill fibers alternately pass over and under each other. (经纱和纬纱纤维交替地上下交织通过)**  
**B. Warp and fill fibers pass over 2 or more units of each other. (经纱和纬纱纤维相互穿过2个或多个单位)**  
**C. The fibers are concentrated in the warp direction only. (纤维仅在经纱方向上集中)**

* **答案/Answer:** **A. Warp and fill fibers alternately pass over and under each other.**
* **解释/Explanation:** 平纹织物中，纤维按简单的交替方式排列，上下交织，形成耐用且均匀的结构。

### ****10. Which type of adhesive is primarily used in the repair of components with honeycomb core segments?****

**10. 哪种粘合剂主要用于修复具有蜂窝芯段的部件？**  
**A. Foam adhesive. (发泡胶)**  
**B. Resin adhesive. (树脂粘合剂)**  
**C. Epoxy adhesive. (环氧粘合剂)**

* **答案/Answer:** **C. Epoxy adhesive.**
* **解释/Explanation:** 环氧粘合剂因其强大的粘附性能和耐久性，常用于修复蜂窝结构部件。

### ****11. Choose the statement that best describes composites.****

**11. 选择最能描述复合材料的语句。**  
**A. Only cosmetic defects on the outer surface of non-structural composites can be repaired.**  
**(只有非结构复合材料外表面的外观缺陷才能修复)**  
**B. There are 2 categories of damages, Repairable and Non-repairable.**  
**(损坏分为两类，可修复和不可修复)**  
**C. There are 3 categories of damages: Negligible, Repairable and Non-repairable.**  
**(损坏分为3类：可忽略、可修复和不可修复)**

* **答案/Answer:** **C. There are 3 categories of damages: Negligible, Repairable and Non-repairable.**
* **解释/Explanation:** 复合材料的损坏通常分为三个类别，以便正确评估修复的可行性。

### ****12. Pre-impregnated materials have:****

**12. 预浸渍材料具有：**  
**A. Resin system saturated into the fabric. (树脂体系渗透到织物中)**  
**B. Fabrics impregnated with steel fibers to provide additional strength. (浸渍有钢纤维的织物以提供额外的强度)**  
**C. To be stored horizontally on the ground. (需水平存放在地面上)**

* **答案/Answer:** **A. Resin system saturated into the fabric.**
* **解释/Explanation:** 预浸渍材料指的是在织物中已经预先浸透树脂体系的材料，便于成型和固化。

### ****13. The strength of the composite buildup is:****

**13. 复合材料的强度为：**  
**A. Independent of the direction of the fiber. (与纤维的方向无关)**  
**B. Highest along the lay of the fiber. (沿纤维层方向最高)**  
**C. Lowest along the lay of the fiber. (沿纤维层方向最低)**

* **答案/Answer:** **B. Highest along the lay of the fiber.**
* **解释/Explanation:** 复合材料的强度最大程度上取决于纤维方向，因为纤维承载主要的载荷。

### ****14. Alclad is a metal consisting of:****

**14. 包铝是一种由以下成分组成的金属：**  
**A. Aluminium alloy surface layers and a pure aluminium core. (铝合金表层和纯铝芯)**  
**B. Pure aluminium surface layers on an aluminium alloy core. (铝合金芯上的纯铝表面层)**  
**C. Alternating layers of pure aluminium and aluminium alloy. (纯铝和铝合金的交替层)**

* **答案/Answer:** **B. Pure aluminium surface layers on an aluminium alloy core.**
* **解释/Explanation:** 包铝是一种复合材料，使用纯铝覆盖层保护铝合金芯免受腐蚀。

### ****15. Colour of corrosion product for aluminium alloy is:****

**15. 铝合金腐蚀产物的颜色是：**  
**A. Green (绿色)**  
**B. White or grey. (白色或灰色)**  
**C. Red. (红色)**

* **答案/Answer:** **B. White or grey.**
* **解释/Explanation:** 铝合金腐蚀后会生成白色或灰色粉末状的腐蚀产物。

### ****16. Which type of corrosion will be formed when two dissimilar metals are installed together without any protection barrier in between them?****

**16. 当两个异种金属安装在一起且之间没有任何保护层时，会形成哪种类型的腐蚀？**  
**A. Crevice Corrosion. (缝隙腐蚀)**  
**B. Exfoliation Corrosion. (层状腐蚀)**  
**C. Galvanic Corrosion. (电偶腐蚀)**

* **答案/Answer:** **C. Galvanic Corrosion.**
* **解释/Explanation:** 异种金属之间因电化学反应会发生电偶腐蚀。

### ****17. After removal of corrosion, the exposed metal reworked areas must be:****

**17. 在去除腐蚀后，暴露的金属重加工区域必须：**  
**A. Covered with a primer and corrosion inhibitor. (涂上底漆和防腐蚀剂)**  
**B. Left clean and dry. (保持清洁和干燥)**  
**C. Fully covered with grease. (完全涂上润滑脂)**

* **答案/Answer:** **A. Covered with a primer and corrosion inhibitor.**
* **解释/Explanation:** 去除腐蚀后，需要涂防腐涂层以防止进一步腐蚀。

### ****18. Which type of corrosion tends to occur along the grain boundaries of a metal and penetrates into the core of the material?****

**18. 哪种类型的腐蚀通常沿金属的晶界发生并渗透到材料核心？**  
**A. Microbial Corrosion. (微生物腐蚀)**  
**B. Intergranular Corrosion. (晶间腐蚀)**  
**C. Galvanic Corrosion. (电偶腐蚀)**

* **答案/Answer:** **B. Intergranular Corrosion.**
* **解释/Explanation:** 晶间腐蚀会沿着晶界侵蚀，导致结构完整性下降。

### ****19. A corrosive attack caused by two mating surfaces is identified as:****

**19. 由两个接合表面引起的腐蚀攻击被称为：**  
**A. Fretting. (磨损腐蚀)**  
**B. Exfoliation. (层状腐蚀)**  
**C. Pitting. (点蚀)**

* **答案/Answer:** **A. Fretting.**
* **解释/Explanation:** 磨损腐蚀是由于接触表面微动引起的腐蚀和机械损坏的综合效应。

### ****20. Torque loading is determined by multiplying the tangential force of the spanner:****

**20. 扭矩负载是通过将扳手的切向力乘以：**  
**A. The distance of the applied force from the axis of the bolt. (施加力到螺栓轴的距离)**  
**B. The distance moved by the applied force. (施加力移动的距离)**  
**C. The circumference of the bolt and the distance of the applied force. (螺栓的周长和施加力的距离)**

* **答案/Answer:** **A. The distance of the applied force from the axis of the bolt.**
* **解释/Explanation:** 扭矩的计算公式为力乘以力臂，即施加力到旋转轴的垂直距离。

### ****20. Torque loading is determined by multiplying the tangential force of the spanner:****

**20. 扭矩负载是通过将扳手的切向力乘以：**  
**A. The distance of the applied force from the axis of the bolt. (施加力到螺栓轴的距离)**  
**B. The distance moved by the applied force. (施加力移动的距离)**  
**C. The circumference of the bolt and the distance of the applied force. (螺栓的周长和施加力的距离)**

* **答案/Answer:** **A. The distance of the applied force from the axis of the bolt.**
* **解释/Explanation:** 扭矩的公式为力乘以力臂，力臂是施加力到轴心的垂直距离。

### ****21. What is the identification mark on 'AN' bolt's head?****

**21. “AN” 螺栓头部的标识是什么？**  
**A. Asterisk (星号)**  
**B. Dimpled dash (凹点划线)**  
**C. Raised triangle (凸起三角形)**

* **答案/Answer:** **A. Asterisk.**
* **解释/Explanation:** AN（Airforce-Navy标准）螺栓的头部通常标有星号作为标识。

### ****22. American Aircraft use AN 430-AD5-12 rivet. The designation AN indicates:****

**22. 美国飞机使用 AN 430-AD5-12 铆钉。“AN” 表示：**  
**A. Airforce Navy standards. (空军和海军标准)**  
**B. Material specifications. (材料规格)**  
**C. Diameter. (直径)**

* **答案/Answer:** **A. Airforce Navy standards.**
* **解释/Explanation:** AN 是 Airforce Navy 的缩写，表示符合空军和海军的标准。

### ****23. Most fastening threads have a basic:****

**23. 大多数紧固件螺纹的基本形式是：**  
**A. V form. (V形)**  
**B. U form. (U形)**  
**C. Square form. (方形)**

* **答案/Answer:** **A. V form.**
* **解释/Explanation:** V 形螺纹是最常用的螺纹形式，具有较好的紧固性能和自锁性能。

### ****24. The thread angle used in metric threads is:****

**24. 公制螺纹的螺纹角度是：**  
**A. 55 deg. (55度)**  
**B. 47.5 deg. (47.5度)**  
**C. 60 deg. (60度)**

* **答案/Answer:** **C. 60 deg.**
* **解释/Explanation:** 公制螺纹的标准螺纹角为 60 度。

### ****25. MIL-H-5606 indicates a product that is specified under:****

**25. MIL-H-5606 表示根据以下标准指定的产品：**  
**A. Industry Standards. (行业标准)**  
**B. Military Specifications. (军事规范)**  
**C. FAA Specifications. (FAA规范)**

* **答案/Answer:** **B. Military Specifications.**
* **解释/Explanation:** MIL-H-5606 是一种符合军事规范的航空液压油。

### ****26. What kind of marking is found on the head of a close tolerance bolt?****

**26. 高精度螺栓头部的标记是什么？**  
**A. A cross (十字标记)**  
**B. Two raised dashes (两个凸起的短划线)**  
**C. A triangle (三角形)**

* **答案/Answer:** **B. Two raised dashes.**
* **解释/Explanation:** 高精度螺栓通常在螺栓头部标有两个凸起的短划线以区分。

### ****27. Which of the following materials is not generally used for wire locking in the aerospace industry?****

**27. 以下哪种材料通常不用于航空工业中的钢丝锁？**  
**A. Carbon steel. (碳钢)**  
**B. Corrosion resistant steel. (耐腐蚀钢)**  
**C. Heat resistant nickel alloy. (耐热镍合金)**

* **答案/Answer:** **A. Carbon steel.**
* **解释/Explanation:** 碳钢容易腐蚀，通常不适合用于航空工业的钢丝锁。

### ****28. The dimension of an AN470AD-5-6 rivet is:****

**28. AN470AD-5-6 铆钉的尺寸是：**  
**A. 5/16 inch diameter, 6/8 inch long. (直径5/16英寸，长度6/8英寸)**  
**B. 5/32 inch diameter, 6/16 inch long. (直径5/32英寸，长度6/16英寸)**  
**C. 5/16 inch diameter, 6/32 inch long. (直径5/16英寸，长度6/32英寸)**

* **答案/Answer:** **B. 5/32 inch diameter, 6/16 inch long.**
* **解释/Explanation:** AN470AD-5-6 表示铆钉直径为 5/32 英寸，长度为 6/16 英寸。

### ****29. What are the advantages of thin-walled corrosion-resistant steel tubing?****

**29. 薄壁耐腐蚀钢管的优点是什么？**  
（问题没有完整答案选项）

* **答案/Answer:** 薄壁耐腐蚀钢管具有重量轻、耐腐蚀性强和高强度等优点，广泛用于航空和其他工业。

### ****30. What kind of tool is not used to form a flared tube?****

**30. 哪种工具不能用于制造喇叭形管？**  
**A. Expansion-type flaring tool. (膨胀型喇叭管工具)**  
**B. Impact-type flaring tool. (冲击型喇叭管工具)**  
**C. Rotary flaring tool. (旋转喇叭管工具)**

* **答案/Answer:** **B. Impact-type flaring tool.**
* **解释/Explanation:** 冲击型工具可能会对管道造成损伤，因此不用于喇叭形管的成型。

### ****31. What is the advantage of thin-walled corrosion-resistant steel tubing?****

**31. 薄壁耐腐蚀钢管的优点是什么？**  
**A. High strength with reduced weight. (高强度且重量更轻)**  
**B. Low cost for manufacturing. (制造成本低)**  
**C. Easy to fabricate. (易于制造)**

* **答案/Answer:** **A. High strength with reduced weight.**
* **解释/Explanation:** 薄壁耐腐蚀钢管具有较高的强度，同时重量更轻，非常适合航空领域。

### ****32. Which of the following tools is not used to form a flared tube?****

**32. 以下哪种工具不能用于制造喇叭形管？**  
**A. Expansion-type flaring tool. (膨胀型喇叭工具)**  
**B. Impact-type flaring tool. (冲击型喇叭工具)**  
**C. Rotary flaring tool. (旋转喇叭工具)**

* **答案/Answer:** **B. Impact-type flaring tool.**
* **解释/Explanation:** 冲击型工具可能会对管壁造成损坏，因此不用于制造喇叭形管。

### ****33. Needle roller bearings are designed to:****

**33. 滚针轴承的设计目的是：**  
**A. Reduce space. (减少空间)**  
**B. Increase torque. (增加扭矩)**  
**C. Increase friction. (增加摩擦)**

* **答案/Answer:** **A. Reduce space.**
* **解释/Explanation:** 滚针轴承的优点是其紧凑的设计，可减少所需的安装空间。

### ****34. Screw jacks are used to:****

**34. 螺旋千斤顶用于：**  
**A. Convert linear motion into rotational motion. (将直线运动转化为旋转运动)**  
**B. Convert rotational motion into linear motion. (将旋转运动转化为直线运动)**  
**C. Reduce the input drive rotational speed. (减少输入驱动的旋转速度)**

* **答案/Answer:** **B. Convert rotational motion into linear motion.**
* **解释/Explanation:** 螺旋千斤顶通过螺纹将旋转运动转化为直线运动，用于提升或施加载荷。

### ****35. The mating gears always turn in opposite directions. To have both the driving gear and driven gear turning in the same direction, what is used?****

**35. 啮合的齿轮始终以相反的方向旋转。如果希望主动齿轮和从动齿轮以相同方向旋转，应使用什么？**  
**A. An idler. (惰轮)**  
**B. A bevel gear. (斜齿轮)**  
**C. A worm gear. (蜗轮)**

* **答案/Answer:** **A. An idler.**
* **解释/Explanation:** 惰轮是位于两个齿轮之间的中间齿轮，用于改变旋转方向。

### ****36. Which of the following components is not part of the planetary gear train?****

**36. 以下哪种组件不属于行星齿轮系统的一部分？**  
**A. Sun gear. (太阳齿轮)**  
**B. Ring gear. (齿圈)**  
**C. Moon gear. (月齿轮)**

* **答案/Answer:** **C. Moon gear.**
* **解释/Explanation:** 行星齿轮系统由太阳齿轮、行星齿轮和齿圈组成，没有所谓的“月齿轮”。

### ****37. Which of the following transmission devices is used for high power transmission without slippage over distances of several meters?****

**37. 以下哪种传动装置用于在几米距离内实现无滑动的高功率传输？**  
**A. Gears. (齿轮)**  
**B. Belts. (皮带)**  
**C. Chains. (链条)**

* **答案/Answer:** **C. Chains.**
* **解释/Explanation:** 链条传动具有高效、无滑动的特点，适用于长距离高功率传动。

### ****38. 7 x 19 control cable indicates that its construction consists of:****

**38. 7 x 19 控制电缆的结构表示它由以下组成：**  
**A. 19 strands, 7 wires per strand. (19股，每股7根线)**  
**B. 7 strands, 19 wires per strand. (7股，每股19根线)**  
**C. 7 strands, 7 x 19 wires per strand. (7股，每股由7 x 19根线组成)**

* **答案/Answer:** **B. 7 strands, 19 wires per strand.**
* **解释/Explanation:** “7 x 19” 表示电缆由 7 股组成，每股包含 19 根线。

### ****39. One of the advantages of cable systems over push-pull systems is that:****

**39. 电缆系统相较于推拉系统的一个优势是：**  
**A. Cables are stronger than the push-pull rods of the same diameter. (电缆比相同直径的推拉杆更强)**  
**B. Cables can be used to apply pull only. (电缆仅可用于施加拉力)**  
**C. There is very little play in the cable system. (电缆系统中的间隙很小)**

* **答案/Answer:** **A. Cables are stronger than the push-pull rods of the same diameter.**
* **解释/Explanation:** 电缆比相同直径的推拉杆更灵活，强度也更高。

### ****40. A cable assembly has the same diameter strength as compared to a steel rod or tube of the same diameter:****

**40. 电缆组件的强度与相同直径的钢棒或钢管相比如何？**  
**A. Higher. (更高)**  
**B. Lower. (更低)**  
**C. Equal. (相等)**

* **答案/Answer:** **B. Lower.**
* **解释/Explanation:** 电缆由于结构特性，其强度通常低于相同直径的实心钢棒或钢管。

### ****41. Which of the following components is not part of the planetary gear train?****

**41. 以下哪种组件不属于行星齿轮系统的一部分？**  
**A. Sun gear. (太阳齿轮)**  
**B. Ring gear. (齿圈)**  
**C. Moon gear. (月齿轮)**

* **答案/Answer:** **C. Moon gear.**
* **解释/Explanation:** 行星齿轮系统由太阳齿轮、行星齿轮和齿圈组成，没有“月齿轮”。

### ****42. Which of the following transmission devices is used for high power transmission without slippage over distances of several meters?****

**42. 以下哪种传动装置用于在几米距离内实现无滑动的高功率传输？**  
**A. Gears. (齿轮)**  
**B. Belts. (皮带)**  
**C. Chains. (链条)**

* **答案/Answer:** **C. Chains.**
* **解释/Explanation:** 链条传动具有高效和无滑动的特点，非常适合长距离的高功率传动。

### ****43. 7 x 19 control cable indicates that its construction consists of:****

**43. 7 x 19 控制电缆的结构表示它由以下组成：**  
**A. 19 strands, 7 wires per strand. (19股，每股7根线)**  
**B. 7 strands, 19 wires per strand. (7股，每股19根线)**  
**C. 7 strands, 7 x 19 wires per strand. (7股，每股由7 x 19根线组成)**

* **答案/Answer:** **B. 7 strands, 19 wires per strand.**
* **解释/Explanation:** "7 x 19" 表示电缆有 7 股，每股由 19 根线构成。

### ****44. One of the advantages of cable systems over push-pull systems is that:****

**44. 电缆系统相比推拉系统的一个优点是：**  
**A. Cables are stronger than the push-pull rods of the same diameter. (电缆比相同直径的推拉杆更强)**  
**B. Cables can be used to apply pull only. (电缆仅能用于拉力传递)**  
**C. There is very little play in the cable system. (电缆系统中的间隙很小)**

* **答案/Answer:** **A. Cables are stronger than the push-pull rods of the same diameter.**
* **解释/Explanation:** 电缆相较于推拉杆，在相同直径下更为灵活且强度更高。

### ****45. A cable assembly has the same diameter strength as compared to a steel rod or tube of the same diameter:****

**45. 电缆组件与相同直径的钢棒或钢管相比，强度如何？**  
**A. Higher. (更高)**  
**B. Lower. (更低)**  
**C. Equal. (相等)**

* **答案/Answer:** **B. Lower.**
* **解释/Explanation:** 电缆强度通常低于同直径的钢棒或钢管，因为其内部是由股线组成，而非实心结构。

### ****46. Electrical cables that are exposed to the highest temperature on an aircraft are found in the:****

**46. 飞机上暴露于最高温度的电缆位于：**  
**A. Wings. (机翼)**  
**B. Engine. (发动机)**  
**C. Fuselage. (机身)**

* **答案/Answer:** **B. Engine.**
* **解释/Explanation:** 发动机区域温度最高，因此电缆需要具备更高的耐热性能。

### ****47. What are some of the advantages of the crimping method?****

**47. 压接方法的一些优点是什么？**  
**A. When formed properly, a seal against ingress of air is provided at the joint obtained. (正确成型时，可在接头处提供防止空气渗入的密封性)**  
**B. Provides electromagnetic wave protection. (提供电磁波保护)**  
**C. Reduces the overall weight of the aircraft. (降低飞机的整体重量)**

* **答案/Answer:** **A. When formed properly, a seal against ingress of air is provided at the joint obtained.**
* **解释/Explanation:** 压接连接可以有效密封防止空气或液体渗入，提高接头的可靠性。

### ****48. Threaded connectors are connected by:****

**48. 螺纹连接器通过以下方式连接：**  
**A. Joining the plug and socket in any position and hand tightening. (在任何位置将插头和插座连接，然后用手拧紧)**  
**B. Aligning the keyway between plug and socket and hand tightening till a "click" is noticeable. (对齐插头和插座之间的键槽，用手拧紧，直到听到“咔哒”声)**  
**C. Aligning the keyway between plug and socket, hand tightening followed by 1/8 maximum turn with a tool. (对齐插头和插座之间的键槽，用手拧紧后，用工具最多旋转1/8圈)**

* **答案/Answer:** **C. Aligning the keyway between plug and socket, hand tightening followed by 1/8 maximum turn with a tool.**
* **解释/Explanation:** 正确对齐键槽并拧紧，可以确保螺纹连接器安全可靠。

### ****49. Wires are manufactured in accordance with AWG (American Wire Gauge) standard. The wire diameter is larger, the gauge number is:****

**49. 按照AWG（美国线规）标准制造的导线，导线直径越大，线规号越：**  
**A. Smaller. (更小)**  
**B. Larger. (更大)**  
**C. No change. (不变)**

* **答案/Answer:** **A. Smaller.**
* **解释/Explanation:** 在AWG标准中，线规号与导线直径成反比，直径越大，线规号越小。

### ****50. Dielectric strength:****

**50. 介电强度是：**  
**A. Consist of 19 strands of fine copper wire covered with a rubber sheath. (由19股细铜线组成，外包橡胶护套)**  
**B. Is the ability of the insulator to withstand potential difference. (绝缘体承受电势差的能力)**  
**C. Is the resistance to current leakage through and over the surface insulation materials. (绝缘材料表面和内部对电流泄漏的抵抗能力)**

* **答案/Answer:** **B. Is the ability of the insulator to withstand potential difference.**
* **解释/Explanation:** 介电强度是衡量绝缘材料在电场中不被击穿的能力。

### ****51. Polarizing keys and keyways are provided to:****

**51. 极化键和键槽的作用是：**  
**A. Ensure plugs, sockets, and corresponding contacts mate correctly. (确保插头、插座和相应触点正确匹配)**  
**B. Prevent relative movement between contacts when the coupling nuts are being tightened. (防止拧紧联接螺母时触点之间的相对移动)**  
**C. Both the above. (以上两者)**

* **答案/Answer:** **C. Both the above.**
* **解释/Explanation:** 极化键和键槽同时确保正确对接和防止相对移动。

### ****52. To prevent damage to connector backshell hardware and coupling rings, use:****

**52. 为防止连接器后壳硬件和联接环损坏，应使用：**  
**A. Pliers of the right size for better grip to tighten securely. (尺寸合适的钳子，用于更好地抓紧并安全拧紧)**  
**B. Any pliers to tighten until slip is felt to indicate positive locking. (任何钳子拧紧，直到感到滑动，表示锁定到位)**  
**C. Special padded pliers with semi-hard rubber or plastic on the inboard face of the jaws. (带有半硬橡胶或塑料内面的特殊垫钳)**

* **答案/Answer:** **C. Special padded pliers with semi-hard rubber or plastic on the inboard face of the jaws.**
* **解释/Explanation:** 使用专门设计的钳子可防止损坏敏感硬件。