

(A57) ATPL直昇機一般維護

最近更新日期：無；更新題號：無

原始題號:0015210 題組:0 難易度:中

- (A) 1. 往復式測知磁電機初級搭地導線是否斷損之方法為
(A)發動機慢車時將點火開關瞬間置於off (B)加速至全油門，踏緊剎車並瞬間將點火開關置於off (C)單磁電機試車將混合比移向貧油檢視歧管壓力是否上升

原始題號:0015211 題組:0 難易度:易

- (C) 2. 活塞式點火開關置於off位置後發動機繼續運轉，其主要原因為
(A)點火塞電嘴積碳續燃 (B)磁電機搭地線觸及發動機外殼 (C)磁電機搭地線斷損

原始題號:0015212 題組:0 難易度:中

- (B) 3. 主旋翼葉片上翹角係由下列何種因素所形成？
(A)阻力、重力及並進升力 (B)升力及離心力 (C)蹣動及離心力

原始題號:0015213 題組:0 難易度:易

- (B) 4. 旋翼機向前飛行速度主要受限於右列何種因素？
(A)升力不對稱 (B)橫向氣流影響 (C)高頻率震動

原始題號:0015214 題組:0 難易度:中

- (B) 5. 滯空時，直升機有向尾旋翼推力方向移動之趨勢，
(A)是；此一移動稱之為橫向趨勢 (B)是；此一移動稱之為並進趨勢 (C)否；移動方向與尾旋翼推力方向相反，稱之為並進趨勢

原始題號:0015215 題組:0 難易度:易

- (C) 6. 前進葉片及後退葉片間之升力差，係由下列那一因素所形成？
(A)高力奧利斯效應 (B)共進升力 (C)升力不對稱

原始題號:0015216 題組:0 難易度:中

- (C) 7. 在設計上大多數直升機在無風狀況下滯空時，均有向右飄移之趨勢，何一敘述正確？
(A)錯；直升機無飄移趨勢，但會向右方旋轉 (B)對；大多數直升機之主承桿及迴旋螺矩均係向前校配藉由陀螺運動可克服此一趨勢 (C)對；大多數直升機之主承桿及迴旋螺矩均係向左較配以克服此一趨勢

原始題號:0015217 題組:0 難易度:易

- (A) 8. 在三葉片全關節式旋翼系直升機上，安裝阻力鉸鏈之目的在補償下列何種因素？
(A)高力奧利斯效應 (B)升力不對稱 (C)葉片蹣動趨勢

原始題號:0015218 題組:0 難易度:中

- (A) 9. 在下述何一狀況下發動機電嘴最易汙結？
(A)獲得高度後未行調整混合比操縱 (B)自巡航高度下降時未調整混合比 (C)快速推加油門

原始題號:0015219 題組:0 難易度:易

- (C) 10. 如果磁電機及點火開關間之搭地線斷開，發動機將？
(A)僅有一具磁電機產生作用 (B)磁電機開關置於雙開位置時無法起動 (C)汽缸內如有燃油攀動螺旋槳時仍可起動

原始題號:0015220 題組:0 難易度:中

(C) 11. 燃油及空氣混合比係下列何者之間之比例?

(A)進入汽缸內之燃油量及空氣量 (B)進入汽缸內之燃油及空氣重量比 (C)進入汽化器內之燃油及空氣重量比

原始題號:0015221 題組:0 難易度:易

(A) 12. 混合比調控柄(桿)可以調整混合比其目的為?

(A)防止在較高高度飛行時混合比變為富油 (B)經由汽化器文氏管限制空氣流量 (C)防止在飛機爬升時混合比變為貧油

原始題號:0015222 題組:0 難易度:中

(A) 13. 最佳動力混合比係指下列何一狀況下之油汽混合比?

(A)汽缸頭溫度指示最低時 (B)油門設定在任何位置均可獲致最佳動力時 (C)歧管壓力指示最高或燃油設定狀況下均可得所須馬力時

原始題號:0015223 題組:0 難易度:易

(C) 14. 飛行高度增加時如果將混合比調向貧油，將可發生何種狀況?

(A)進入汽化器之空氣量降低及燃油量降低 (B)進入汽化器之空氣密度降低及燃油量降低 (C)進入汽化器之空氣密度降低，燃油量不變

原始題號:0015224 題組:0 難易度:中

(C) 15. 飛機高度增加後，除非將混合比適當調整，發動機會變為富油，係肇因於下述何種燃油量變化?

(A)空氣減少，油量減少。(B)空氣減少，油量未變。(C)空氣密度減少，油量未變。

原始題號:0015225 題組:0 難易度:易

(A) 16. 在飛行高度上調整油氣混合比之主要目的為

(A)降低燃油流量，以補償空氣密度之降低 (B)減低混合比中之燃油量，以補償增加之空氣密度 (C)增加混合比中之燃油量以補償壓力及空氣密度之增加

原始題號:0015226 題組:0 難易度:中

(B) 17. 在高高度中，混合比過度富油會造成下述那種狀況?

(A)發動機超溫 (B)電嘴汙結 (C)即使在高燃油消耗狀況下，可以使發動機運作更加順暢

原始題號:0015227 題組:0 難易度:易

(A) 18. 下列相關汽化器加溫之說明何者正確?

(A)使油氣混合比富油 (B)使油氣混合比貧油 (C)油氣混合比無影響

原始題號:0015228 題組:0 難易度:中

(C) 19. 電嘴正常點火之意外提前點火，乃眾所週知之

(A)瞬間燃燒 (B)爆震 (C)提前點火

原始題號:0015229 題組:0 難易度:易

(C) 20. 活塞式飛機發動機之爆震多發生於何時?

(A)混合比過於富油 (B)因電線短路而使電嘴接受電子閃動 (C)汽缸內未燃之餘燼乃形成瞬間燃燒之主因

原始題號:0015230 題組:0 難易度:中

- (B) 21. 活塞式飛機發動機之內部冷卻，多仰賴於下述何種因素？
(A)散熱蓋罩作用正常 (B)潤滑油循環良好 (C)適當之壓縮冷媒輸出

原始題號:0015231 題組:0 難易度:易

- (C) 22. 尾旋翼可以產生向左推力嗎？
(A)否，僅可降低向右推力，導致尾部左轉 (B)是，使直升機滯空時，完成右轉動作 (C)是，主要在抵消自動旋轉時，傳動箱產生之阻力。

原始題號:0015232 題組:0 難易度:中

- (A) 23. 高密度高度如何影響直升機性能？
(A)發動機及旋翼效能降低 (B)發動機及旋翼效能增加 (C)增加旋翼阻力使正常飛行耗用更多馬力

原始題號:0015233 題組:0 難易度:易

- (C) 24. 下述何種操縱動作，可以使飛機快速停止？
(A)推迴旋桿提集體桿上右舵 (B)迴旋桿向後拉提集體桿上左舵 (C)迴旋桿向後拉，放低集體桿上右舵

原始題號:0015234 題組:0 難易度:中

- (C) 25. 旋翼轉數加速期間，遇有地面共震時，應立即採行何種措施？
(A)將飛機滑行至平坦區域 (B)立即採行正常起飛 (C)關閉油門，並緩緩提升集體桿

原始題號:0015235 題組:0 難易度:易

- (B) 26. 有關渦流散佈，下列說明何者正確？
(A)直升機僅會產生下射陣風 (B)重型直升機慢速飛行，飛機所產之渦流旋力最強 (C)渦流下沉進入地面效應時，會迅速消散不致產生危險

原始題號:0015236 題組:0 難易度:中

- (B) 27. 有關磁羅盤之磁差，下述何者正確？
(A)無偏差線轉移時有所差異 (B)同一飛機航向轉移時有所差異 (C)在同一位置對所有飛機相同

原始題號:0015237 題組:0 難易度:易

- (C) 28. 在航空圖上由藍色虛線圈繞之機場，係表示下列何者之分界線？
(A)特別目視飛行空域 (B)B級空域 (C)D級空域

原始題號:0015238 題組:0 難易度:中

- (A) 29. 使用VHF / DF 協尋自己位置時，機上必須裝有作用良好之VHF
(A)發射機及接收機 (B)發射機及接收機及作用良好之A D F接收機 (C)發射機及接收機及作用良好之V O R接收機

原始題號:0015239 題組:0 難易度:易

- (B) 30. 關於高壓或低壓系統，下列各說明何者正確？
(A)高壓區即空氣上升區 (B)低壓區或低壓槽即空氣上升區 (C)高壓及低壓二者均具有下降空氣特性

原始題號:0015240 題組:0 難易度:中

- (B) 31. 當飛機飛入北半球之低壓區時，風向及風速將可何形成？
(A)自左方並降低風速 (B)自左方並升高風速 (C)自右側並降低風速

原始題號:0015241 題組:0 難易度:易

(A) 32. 下列何項可以降低空氣團之穩定度?

(A)向上蒸發之暖空氣 (B)向上升起之冷空氣 (C)水分降低

原始題號:0015242 題組:0 難易度:中

(B) 33. 下列何者可以增加氣團之穩定?

(A)向上蒸發之暖空氣 (B)向上升起之冷空氣 (C)水分降低

原始題號:0015243 題組:0 難易度:易

(C) 34. 集雨雲形成之必要條件為上升作用加下列何一條件?

(A)不穩定之乾空氣 (B)穩定之溫空氣 (C)不穩定之溫空氣

原始題號:0015244 題組:0 難易度:中

(C) 35. 下列何項為冷氣團移向高溫表面上之特有現象?

(A)集雲，陣風及低能見度 (B)集雲，陣風及能見度良好 (C)層雲，無風及能見度低

原始題號:0015245 題組:0 難易度:易

(B) 36. 設重量A 155磅位於基線之後45吋處，重量B 165磅位於基線之後145吋處，重量C 95磅位於基線之後185吋處，依據上述資料算出基線之後之重心位置?

(A)86.0吋 (B)116.8吋 (C)125.2吋

原始題號:0015246 題組:0 難易度:中

(B) 37. 對直升機裝載時，將重力中心置於重力中心容許限制之前，下列何種說明較為正確?

(A)如果飛機燃油箱在主承桿之後燃油消耗後較無危險發生 (B)發動機失效後自動旋轉迴轉桿操縱量不足無法使飛機平飄落地 (C)巡航飛行中遭遇陣風迴旋桿向前操縱量不足無法放低機頭

原始題號:0015247 題組:0 難易度:易

(B) 38. 在強風及陣風狀況下，峰頂落地時應採用之進場方式為何?

(A)正常進場 (B)大坡度進場 (C)小坡度進場

原始題號:0015248 題組:0 難易度:中

(C) 39. 直昇機上的大型組件通常提供了什麼裝置來方便拆裝組件

(A)頂點 (B)支撐點 (C)吊升點 (D)不需要

原始題號:0015249 題組:0 難易度:易

(B) 40. 何者最可能是決定軸承壽命長短的因素?

(A)軸承的材質 (B)軸承的潤滑 (C)軸承的型別 (D)軸承在直昇機上的位置

原始題號:0015250 題組:0 難易度:中

(C) 41. 軸承的變色通常是超溫的現象，其導致的原因是

(A)超速 (B)安裝不當 (C)缺乏潤滑 (D)不正常的高頻振動

原始題號:0015251 題組:0 難易度:易

(D) 42. 齒輪可用來：

a) 傳輸動力

b) 改變方向

c) 改變速度

(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015252 題組:0 難易度:中

- (D) 43. 主旋翼系統在操作時會承受一些應力。其應力為：
a) 離心力 b) 振動力
c) 扭力 d) 屈曲力
(A)僅a, b和c正確 (B)僅b, c和d正確 (C)僅a, c和d正確 (D)a, b, c和d全正確

原始題號:0015253 題組:0 難易度:易

- (B) 44. 裝置了蹺板軸(Seesaw axis)或撲動軸(Flapping axis)的旋翼系屬於
(A)硬式旋翼 (B)半硬式旋翼 (C)全關節式旋翼 (D)硬式與全關節式旋翼

原始題號:0015254 題組:0 難易度:中

- (C) 45. 趨前(Lead)與趨後(Lag)動作的控制主要是藉由何者來完成
(A)致動器 (B)彈簧連桿 (C)緩衝器 (D)趨前-趨後鉸鏈

原始題號:0015255 題組:0 難易度:易

- (C) 46. 當旋翼葉片重新噴漆後, 旋翼系的哪個程序是必須要執行的?
(A)動力微調 (B)變距微調 (C)重新平衡 (D)不需要執行任何程序

原始題號:0015256 題組:0 難易度:中

- (A) 47. 試比較旋翼葉片在翼根與葉片外部損傷的嚴重性。
(A)在接近翼根部位的損傷嚴重性比葉片外部來得嚴重。 (B)在接近葉片外部的損傷嚴重性比翼根部位來得嚴重。 (C)在接近翼根部位的損傷嚴重性和葉片外部一樣嚴重。 (D)在接近翼根部位的損傷嚴重性比葉片外部來得輕微。

原始題號:0015257 題組:0 難易度:易

- (B) 48. 旋翼頭是高應力集中的組件, 通常包含了哪類零件?
(A)高價件 (B)定更件 (C)平衡件 (D)修護件

原始題號:0015258 題組:0 難易度:中

- (D) 49. 旋翼系在何者情況下要執行特殊檢查?
a) 超速 b) 突然停止 c) 重落地
(A)僅 c 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015259 題組:0 難易度:易

- (B) 50. 當拆除旋翼頭時, 變距組件有個步驟要執行, 以避免拆除過程中損傷到。試問此步驟為何?
(A)使用特殊保護套保護。 (B)使用特殊固定架固定。 (C)使用特殊潤滑劑潤滑。 (D)不需要執行任何程序

原始題號:0015260 題組:0 難易度:中

- (A) 51. 葉片校準(Blade alignment)主要是要確定何者之間的正確關係。
(A)重心與中心壓力 (B)重心與葉片翼展中心 (C)重心與葉片翼張中心 (D)沒有一個答案正確

原始題號:0015261 題組:0 難易度:易

- (B) 52. 在一些旋翼系中, 翼張平衡的獲得, 可藉由移動一片葉片上的校準點往哪個方向?
(A)往前 (B)往後 (C)向內 (D)向外

原始題號:0015262 題組:0 難易度:中

- (C) 53. 何項因素是導致組件變形的主因?
(A)超速 (B)超載 (C)過度振動 (D)不平衡

原始題號:0015263 題組:0 難易度:易

- (D) 54. 導致旋轉組件產生振動的情況為何?
(A)超速 (B)超載 (C)不當安裝 (D)不平衡

原始題號:0015264 題組:0 難易度:中

- (C) 55. 橫向振動的產生通常與旋翼系的哪個情況有關?
(A)超速 (B)超載 (C)不平衡 (D)缺乏潤滑

原始題號:0015265 題組:0 難易度:易

- (D) 56. 旋翼系定軌的方法可為: a) 標竿法 b)
旗幟法 c) 光反射法
d) 預先定軌法 e) 電子閃光法
(A)a, b和c正確 (B)a, b, c和d正確 (C)a, b, c和e正確 (D)a, b, c, d和e都正確

原始題號:0015266 題組:0 難易度:中

- (C) 57. 大多數的全關節式旋翼使用緩衝器來調節旋翼葉片的哪一軸向的動作?
(A)垂直軸向 (B)水平軸向 (C)趨前趨後軸向 (D)縱軸向

原始題號:0015267 題組:0 難易度:易

- (B) 58. 自動旋轉的轉速受何者影響? a) 直昇機的總重量 b) 動力轉速 c) 高度密度 d)
高度溫度
(A)a 和 b 正確 (B)a 和 c 正確 (C)b 和 c 正確 (D)c 和 d 正確

原始題號:0015268 題組:0 難易度:中

- (B) 59. a) 在更換過濾器之前，過濾系要在有壓力的狀況下來檢查過濾器的洩漏。 b) 過濾
器更換後，過濾系要在有壓力的狀況下來檢查過濾器的洩漏。 c) 過濾器更換後，過
濾系要在無壓力的狀況下來檢查過濾器的洩漏。 何項敘述正確?
(A)a 正確 (B)b 正確 (C)c 正確 (D)沒有一個答案正確

原始題號:0015269 題組:0 難易度:易

- (B) 60. 旋翼不能如同引擎在高轉速下操作的原因為何: a) 旋翼的材質, b) 旋翼的翼尖速度, c)
後退葉片的失速
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全正確

原始題號:0015270 題組:0 難易度:中

- (B) 61. 在啟動引擎時，哪個裝置是用來消除引擎因轉動旋翼所需的動力負載。
(A)空轉器(Free wheeling unit) (B)離合器 (C)變距件 (D)變向盤組

原始題號:0015271 題組:0 難易度:易

- (B) 62. a) 空轉器(Free wheeling unit)可允許傳動箱驅動旋翼但能避免旋翼驅動引擎。
b) 空轉器(Free wheeling unit)可允許引擎驅動傳動箱但能避免旋翼驅動引擎。
c) 空轉器(Free wheeling unit)可允許旋翼驅動傳動箱但能避免旋翼驅動引擎。
d) 空轉器(Free wheeling unit)可允許引擎驅動傳動箱但能避免傳動箱驅動旋翼。
何項說明正確?
(A)a 正確 (B)b 正確 (C)c 正確 (D)d 正確

原始題號:0015272 題組:0 難易度:中

- (C) 63. 在液壓機械式的離合器中，哪個組件是當旋翼轉速到達時，作為機械耦合用的？
(A)傳動箱 (Transmission unit) (B)驅動組件(Drive unit) (C)空轉器(Free wheeling unit) (D)沒有一個答案正確

原始題號:0015273 題組:0 難易度:易

- (C) 64. a) 止輪組件(Sprag unit)是現今最通用的空轉器(Free wheeling unit)。
b) 止輪組件(Sprag unit)可雙向傳動。 c) 止輪組件(Sprag unit)的潤滑油來自於傳動箱。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015274 題組:0 難易度:中

- (A) 65. 有些直昇機裝有旋翼煞車(Rotor brake)，此裝置裝在哪兩個組件之間？
(A)引擎與傳動箱 (B)傳動箱與主旋翼 (C)傳動箱與尾旋翼 (D)引擎與旋翼

原始題號:0015275 題組:0 難易度:易

- (B) 66. 大多數的操作員會限制旋翼煞車(Rotor brake)的使用，是因為煞車組件的什麼因素所致？
(A)溫度 (B)磨損 (C)材質 (D)以上答案皆正確

原始題號:0015276 題組:0 難易度:中

- (B) 67. a) 當沒有旋翼煞車時，主旋翼的慣性會使主旋翼於引擎開車後繼續的旋轉。
b) 煞車組件通常安裝在到傳動箱的輸入位置。
c) 煞車可以是液壓或是手動操作。 何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015277 題組:0 難易度:易

- (A) 68. a) 啟動時，引擎轉速會超前旋翼轉速直到離合器完全接合時。
b) 啟動時，旋翼轉速會超前引擎轉速直到離合器完全接合時。
c) 啟動時，引擎轉速會超前旋翼轉速直到離合器完全脫離時。
d) 啟動時，旋翼轉速會超前引擎轉速直到離合器完全脫離時。
何項說明正確？
(A)a 正確 (B)b 正確 (C)c 正確 (D)d 正確

原始題號:0015278 題組:0 難易度:中

- (D) 69. a) 空轉器(Free wheeling unit)故障時，直昇機將有自動旋轉失效的問題。
b) 空轉器(Free wheeling unit)於起飛前的啟動檢查是藉由轉速表得知的。
c) 有些空轉器(Free wheeling unit)自備滑油供給系，此滑油供給系需要保養。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015279 題組:0 難易度:易

- (A) 70. a) 止輪基座(Sprag mount)上的螺牙式連桿末端是用來校準主軸承的。
b) 止輪系(Sprag system)的不當調整會影響直昇機的地面操作性能，同時會造成不正常的振動。
何項說明正確？
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015280 題組:0 難易度:中

- (D) 71. a) 空轉器(Free wheeling unit)的內側環圈，在引擎正在驅動旋翼的過程，其作用為自由旋轉齒輪。
b) 若當旋翼在轉動時，內側環圈的作用改為固定齒輪。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015281 題組:0 難易度:易

- (C) 72. a) 從壓力泵出來的滑油會流入滑油冷卻器。
b) 當滑油溫度過高時，進入滑油冷卻器的滑油會被旁通掉。
c) 滑油冷卻器的鼓風器是由主傳動軸帶動的。
何項說明正確?
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015282 題組:0 難易度:中

- (D) 73. a) 增加最大速度是增加馬力的方法之一。
b) 所有的往復式引擎都需要使用風扇來作為冷卻的裝置。
c) 主旋翼通常都在恆定的轉速下操作。
何項說明正確?
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015283 題組:0 難易度:易

- (C) 74. a) 集體桿(Collective)上的扭轉握柄(Twist grip)很相似於摩托車上所使用的油門，除了他們的動作方向相反外。
b) 扭轉握柄(Twist grip)減速的位置是在手握握柄時朝拇指的方向。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015284 題組:0 難易度:中

- (A) 75. a) 自由式渦輪(Free turbine)的動力傳動來自於渦輪，而不連接於壓縮器。
b) 直軸式渦輪引擎(Direct drive turbine)的轉速與渦輪一樣，是因為他們共用同一轉軸。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015285 題組:0 難易度:易

- (A) 76. a) 現今大多數的直昇機渦輪所使用的壓縮器，是一種軸式(Axial)與離心式(Centrifugal)壓縮器組合成一體的壓縮器。
b) 此壓縮器的第一部份屬於離心式，後級則為軸式。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015286 題組:0 難易度:中

- (C) 77. a) 往復式引擎的動力是藉由歧管壓力表量測得知的。
b) 軸式渦輪引擎的引擎輸出動力是藉由扭力表量測得知的。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015287 題組:0 難易度:易

(D) 78. 引擎尾溫表在什麼時候要很謹慎地監視：

a) 引

擎啟動時

b) 以高承載情況起飛時

c) 外圍溫度很高時

(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015288 題組:0 難易度:中

(B) 79. 多數的直昇機在渦輪引擎的進氣口處都需要裝置粉塵分離器(Particle seprator)。收集的粉塵是以何種力量排出過濾器的？

(A)慣性力 (B)離心力 (C)加速力 (D)扭力

原始題號:0015289 題組:0 難易度:易

(A) 80. a) 粉塵分離器(Particle seprator)通常都是打開的。

b) 粉塵分離器(Particle seprator)自動關閉的時機是當N1轉速增高到某一轉速時及滅火器手柄拉開時。

何項說明正確？

(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015290 題組:0 難易度:中

(C) 81. a) 為了加快引擎啟動時的加速時間，多數的軸式渦輪引擎使用了洩放瓣、洩放口或可調式定子組系統。

b) 這些系統於引擎加速時移除了渦輪的負載。

c) 所有的這些系統的操作，通常都是藉由燃油的調控與空氣壓力比值的方式來完成。

何項說明正確？

(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015291 題組:0 難易度:易

(B) 82. 何項說明正確？

(A)注氣與注油在燃燒室開始點火之前就已經開始動作了。(B)注氣與點火在燃燒室開始注油之前就已經開始動作了。(C)點火與注油在燃燒室開始注氣之前就已經開始動作了。(D)沒有一個答案正確

原始題號:0015292 題組:0 難易度:中

(B) 83. a) 當集體桿拉高時，調速器(Governor)會感應到低速的情況，進而需要較少的燃油。

b) 當集體桿拉高時，調速器(Governor)會感應到低速的情況，進而需要較多的燃油。

c) 當集體桿拉高時，調速器(Governor)會感應到超速的情況，進而需要較多的燃油。

何項說明正確？

(A)a 正確 (B)b 正確 (C)c 正確 (D)沒有一個答案正確

原始題號:0015293 題組:0 難易度:易

(C) 84. a) 手動的燃油控制件(FCU)是由動力控制桿操控的。

b) 自動燃油控制的燃油行程設定，是根據動力需求的量來建立的。

何項說明正確？

(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015294 題組:0 難易度:中

- (C) 85. a) 多數以渦輪驅動的直昇機都裝有引擎失效警告系統，這個系統於N1轉速失去作用時，會有指示燈與警告聲提供警示。
b) 渦輪的使用壽命是根據引擎的使用時間與引擎的使用次數作依準的。
何項說明正確？
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015295 題組:0 難易度:易

- (C) 86. a) 引擎與傳動箱之間的校準若不正確時，會減短兩者之間傳動軸的使用壽命。
b) 校準的方法通常是藉由調整引擎支架點的墊片厚度來完成的。
何項說明正確？
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015296 題組:0 難易度:中

- (C) 87. a) 使用手柄來做為調節N1轉速的直昇機，正常的情況下會有三種操作位置，此三種操作位置為: Ground idle, Flight idle and Full N1.
b) 在直軸式渦輪的直昇機，其集體桿與燃油控制之間並沒有連桿連結。
何項說明正確？
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015297 題組:0 難易度:易

- () 88. a) 直昇機方向的控制是藉由腳踏板的動作來改變尾旋翼葉片的傾斜角而達成的。
b) 直昇機尾旋翼的動力傳動是經由傳動箱來完成的。
c) 當引擎沒有在傳動時，尾旋翼是由主旋翼傳動的。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015298 題組:0 難易度:中

- (A) 89. a) 由於振動的因素，尾旋翼傳動軸的校準是很重要的。
b) 尾旋翼齒輪箱可以用來增加或降低尾旋翼的轉速。
c) 主旋翼的轉速比尾旋翼來得快。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015299 題組:0 難易度:易

- (C) 90. a) 一個快要失效的軸承，其軸承組件總是會有溫度升高的現象。
b) 尾旋翼系的軸承失效，總是會有低頻振動的產生。
c) 密封式的傳動軸常使用溫度偵測條來作為警告的裝置。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015300 題組:0 難易度:中

- (A) 91. a) 在做檢查時，傳動軸的末端要特別留意插銷、鉚釘與接合的情況。
b) 尾旋翼傳動軸的失準將會使振動的情形降低。
c) 尾旋翼傳動軸的脫位檢查，要於傳動軸折離直昇機時執行。
何項說明正確？
(A)僅a 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015301 題組:0 難易度:易

- (C) 92. a) 在機場上運作的尾旋翼需要執行靜態與動態的平衡。
b) 在尾旋翼上未經核可的位置，改變了原有位置的重量時，將會危及尾旋翼。
何項說明正確？
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015302 題組:0 難易度:中

- (A) 93. 輪式與滑橇式起落架都各有優缺點，其優缺點為：
a) 輪式起落架比較難維修
b) 輪式起落架比較難於地面上執行操作 c) 滑
橇式起落架比較複雜
d) 滑橇式起落架比較容易於地面上執行操作
何項說明正確？
(A)僅 a 正確 (B)a 和 b 都正確 (C)a, b, c 和 d 全都正確 (D)a, b, c 和 d 全都不正確

原始題號:0015303 題組:0 難易度:易

- (C) 94. a) 昇力會隨著攻角的角度增加而增加，直到失速角度到達為止。
b) 昇力不會隨著空氣的密度狀況而改變。 c) 空
氣密度受溫度、高度與溼度影響。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015304 題組:0 難易度:中

- (C) 95. a) 直昇機可以在海平面高度滯空但不能在高高度滯空。
b) 冷天氣時用來維持昇力所需要的動力比熱天氣時要來得多。
c) 直昇機愈重在滯空時所需的
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015305 題組:0 難易度:易

- (B) 96. a) 變距的動作是藉由操作迴旋控制來完成的。
b) 變距操作時，會使每片旋翼葉片的變距量都一致。
c) 每個單獨葉片的動作是藉由操作集體控制來完成的。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015306 題組:0 難易度:中

- (D) 97. a) 旋翼轉動時穿過空氣的速度在旋翼的所有部位都不一樣。
b) 旋翼轉動時最快速的位置在旋翼葉片的尖端，最慢速的位置在根部。
c) 葉片上愈慢速的部位，其攻角的角度配置會比愈快速的部位來得大。
何項說明正確？
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015307 題組:0 難易度:易

- (D) 98. a) 旋翼盤所產生的不同昇力被定義為不對稱的昇力(Dissymmetry of lift)。
b) 為了能改善不同昇力所造成的影響，有些旋翼系裝置了蹣動鉸鏈(Flapping Hinge)。
c) 配有兩片葉片的旋翼，總是使用蹣板式(Seesaw)旋翼系來改正不對稱的昇力問題。
何項說明正確?
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015308 題組:0 難易度:中

- (A) 99. a) 地面效應(Ground effect)的發生是在當直昇機距離地面的範圍在旋翼直徑一半以內的距離時。
b) 發生地面效應(Ground effect)時，空氣密度會減少，同時會在直昇機下方形成一種空氣墊狀物(Air Cushion)的現象。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015309 題組:0 難易度:易

- (C) 100. 翼面的失速是因為:
a) 不足的速度
b) 攻角角度太小
c) 機翼負載太重
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015310 題組:0 難易度:中

- (C) 101. 當發生失速時要如何處置:
a) 減低前進速度
b) 增加旋翼的傾斜角
c) 增加旋翼的轉速
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015311 題組:0 難易度:易

- (C) 102. a) 在正常的操作情形下，流經旋翼的氣流是往下的方向。
b) 在自動旋轉的情形下，流經旋翼的氣流是往上的方向。
何項說明正確?
(A)僅 a 正確 (B)僅 b 正確 (C)a 和 b 都正確 (D)a 和 b 都不正確

原始題號:0015312 題組:0 難易度:中

- (B) 103. a) 反扭力踏板改變的是尾旋翼的轉速。
b) 起飛時，尾旋翼要有最大的正向傾斜角。
c) 尾旋翼的傾斜(Pitch)除了有扭力改正的功用外，還可用來做為方向的控制。
何項說明正確?
(A)a 和 b 正確 (B)b 和 c 正確 (C)a 和 c 正確 (D)a, b 和 c 全都正確

原始題號:0015210 題組:0 難易度:中

- (A) 104. A way to detect a broken magneto primary grounding lead is to
(A)idle the engine and momentarily turn the ignition off. (B)add full power, while holding the brakes, and momentarily turn off the ignition. (C)run on one magneto, lean the mixture, and look for a rise in manifold pressure.

原始題號:0015211 題組:0 難易度:易

- (C) 105. The most probable reason an engine continues to run after the ignition switch has been turned off is
(A)carbon deposits glowing on the spark plugs. (B)a magneto ground wire is in contact with the engine casing. (C)a broken magneto ground wire.

原始題號:0015212 題組:0 難易度:中

- (B) 106. Coning is caused by the combined forces of
(A)drag, weight, and translational lift. (B)lift and centrifugal force.
(C)flapping and centrifugal force.

原始題號:0015213 題組:0 難易度:易

- (B) 107. The forward speed of a rotorcraft is restricted primarily by
(A)dissymmetry of lift. (B)transverse flow effect. (C)high-frequency vibrations.

原始題號:0015214 題組:0 難易度:中

- (B) 108. When hovering, a helicopter tends to move in the direction of tail rotor thrust. this statement is
(A)True;the movement is called transverse tendency. (B>true;the movement is called translating tendency. (C>false; the movement is opposite the direction of tail rotor thrust, and is called translating tendency.

原始題號:0015215 題組:0 難易度:易

- (C) 109. The lift differential that exists between the advancing blade and the retreating blade is known as
(A)Coriolis effect. (B)translational lift. (C)dissymmetry of lift.

原始題號:0015216 題組:0 難易度:中

- (C) 110. Most helicopters, by design tend to drift to the right when hovering in a no-wind condition. this statement is
(A>false;helicopters have no tendency to drift, but will rotate in that direction
(B>true; the mast or cyclic pitch system of most helicopters is rigged forward, this with gyroscopic precession will overcome this tendency. (C>true; the mast or cyclic pitch system of most helicopters is rigged to the left to overcome this tendency.

原始題號:0015217 題組:0 難易度:易

- (A) 111. The purpose of lead-lag(drag) hinges in a three-bladed, full articulated helicopter rotor system is to compensate for
(A)Coriolis effect. (B)dissymmetry of lift. (C)blade flapping tendency.

原始題號:0015218 題組:0 難易度:中

- (A) 112. Fouling of spark plugs is more apt to occur if the aircraft
(A)gains altitude with no mixture adjustment. (B)descends from altitude with no mixture adjustment. (C)throttle is advanced very abruptly.

原始題號:0015219 題組:0 難易度:易

- (C) 113. If the ground wire between the magneto and the ignition switch becomes disconnected, the engine
(A)will not operate on one magneto. (B)cannot be started with the switch in the BOTH position. (C)could accidentally start if the propeller is moved with fuel in the cylinder.

原始題號:0015220 題組:0 難易度:中

- (C) 114. Fuel/air ratio is the ratio between the
(A)volume of fuel and volume of air entering the cylinder. (B)weight of fuel and weight of air entering the cylinder. (C)weight of fuel and weight of air entering the carburetor.

原始題號:0015221 題組:0 難易度:易

- (A) 115. The mixture control can be adjusted, which
(A)prevents the fuel/air combination from becoming too rich at higher altitudes. (B)weight of fuel and weight of air entering the cylinder. (C)prevents the fuel/air combination from becoming lean as the airplane climbs.

原始題號:0015222 題組:0 難易度:中

- (A) 116. The best power mixture is that fuel/air ratio at which
(A)cylinder head temperatures are the coolest. (B)the most power can be obtained for any given throttle setting. (C)a given power can be obtained with the highest manifold pressure or throttle setting.

原始題號:0015223 題組:0 難易度:易

- (C) 117. What will occur if no leaning is made with the mixture control as the flight altitude increases?
(A)The volume of air entering the carburetor decreases and the amount of fuel decreases. (B)The density of air entering the carburetor decreases and the amount of fuel increases. (C)The density of air entering the carburetor decreases and the amount of fuel remains constant.

原始題號:0015224 題組:0 難易度:中

- (C) 118. Unless adjusted, the fuel/air mixtture becomes richer with an increase in altitude because the amount of fuel
(A)decreases while the volume of air decreases. (B)remains constant while the volume of air decreases. (C)remains constant while the density of air decreases.

原始題號:0015225 題組:0 難易度:易

- (A) 119. The basic purpose of adjusting the fuel/air mixture control at altitude is to
(A)decrease the fuel flow to compensate for decreased air density. (B)decrease the amount of fuel in the mixture to compensate for increased air density.
(C)increase the amount of fuel in the mixture to compensate for the decrease in pressure and density of the air.

原始題號:0015226 題組:0 難易度:中

- (B) 120. At high altitudes, an excessively rich mixture will cause the
(A)engine to overheat. (B)fouling of spark plugs. (C)engine to operate smoother even though fuel consumption is increased.

原始題號:0015227 題組:0 難易度:易

- (A) 121. Which statement is true concerning the effect of the application of carburetor heat?
(A)It enriches the fuel/air mixture. (B)It leans the fuel/air mixture. (C)It has no effect on the fuel/air mixture.

原始題號:0015228 題組:0 難易度:中

- (C) 122. The uncontrolled firing of the fuel/air charge in advance of normal spark ignition is known as
(A)instantaneous combustion. (B)detonation. (C)pre-ignition.

原始題號:0015229 題組:0 難易度:易

- (C) 123. Detonation occurs in a reciprocating aircraft engine when
(A)there is an explosive increase of fuel caused by too rich a fuel/air mixture.
(B)the spark plugs receive an electrical jolt caused by a short in the wiring.
(C)the unburned fuel/air charge in the cylinders is subjected to instantaneous combustion.

原始題號:0015230 題組:0 難易度:中

- (B) 124. For internal cooling, reciprocating aircraft engines are especially dependent on
(A)a properly functioning cowl flap augments. (B)the circulation of lubricating oil. (C)the proper freon/compressor output ratio.

原始題號:0015231 題組:0 難易度:易

- (C) 125. Can the tail rotor produce thrust to the left?
(A)No, the right thrust can only be reduced, causing tail movement to the left.
(B)Yes,primarily so that hovering turns can be accomplished to the right.
(C)Yes,primarily to counteract the drag of the transmission during autorotation.

原始題號:0015232 題組:0 難易度:中

- (A) 126. How does high density altitude affect rotorcraft performance?
(A)Engine and rotor efficiency is reduced. (B)Engine and rotor efficiency is increased. (C)It increases rotor drag, which requires more power for normal flight.

原始題號:0015233 題組:0 難易度:易

- (C) 127. The proper action to initiate a quick stop is to apply
(A)forward cyclic, while raising the collective and applying right antitorque pedal. (B)aft cyclic, while raising the collective and applying left antitorque pedal. (C)aft cyclic, while lowering the collective and applying right antitorque pedal.

原始題號:0015234 題組:0 難易度:中

- (C) 128. If ground resonance is experienced during rotor spin-up, what action should you take?
(A)taxi to a smooth area. (B)make a normal takeoff immediately. (C)close the throttle and slowly raise the spin-up lever.

原始題號:0015235 題組:0 難易度:易

- (B) 129. Which is true with respect to vortex circulation? Not vortex circulation.
(A)helicopters generate downwash turbulence only. (B)the vortex strength is greatest when the generating aircraft is heavy, and slow. (C)when vortex circulation sinks in to ground effect, it generating dissipate rapidly offer little danger.

原始題號:0015236 題組:0 難易度:中

- (B) 130. Which statement is true about magnetic deviation of a compass? Deviation
(A)Varies over time as the agonic line shifts. (B)varies for different headings of the same aircraft. (C)is the same for all aircraft in the same locality.

原始題號:0015237 題組:0 難易度:易

- (C) 131. When a dashed blue circle surrounds an airport on a sectional aeronautical chart, it will depict the boundary of
(A)special VFR airspace. (B)Class B airspace. (C)Class D airspace.

原始題號:0015238 題組:0 難易度:中

- (A) 132. To use VHF/DF facilities for assistance in locating your position, you must have an operative VHF
(A)transmitter and receiver. (B)transmitter and receiver, and an operative ADF receiver. (C)transmitter and receiver, and an operative VOR receiver.

原始題號:0015239 題組:0 難易度:易

- (B) 133. Which is true with respect to a high-or low-pressure system?
(A)A high-pressure area or ridge is an area of rising air. (B)A low-pressure area or trough is an area of descending air. (C)Both high-and low-pressure areas are characterized by descending air.

原始題號:0015240 題組:0 難易度:中

- (B) 134. When flying into a low-pressure area in the Northern Hemisphere, the wind direction and velocity will be from the
(A)left and decreasing. (B)left and increasing. (C)right and decreasing.

原始題號:0015241 題組:0 難易度:易

- (A) 135. Which would decrease the stability of an air mass?
(A)Warming from below. (B)Cooling from below. (C)Decrease in water vapor.

原始題號:0015242 題組:0 難易度:中

- (B) 136. Which would increase the stability of an air mass?
(A)Warming from below. (B)Cooling from below. (C)Decrease in water vapor.

原始題號:0015243 題組:0 難易度:易

- (C) 137. The conditions necessary for the formation of cumulonimbus clouds are a lifting action and
(A)unstable, dry air. (B)stable, moist air. (C)unstable, moist air.

原始題號:0015244 題組:0 難易度:中

- (C) 138. Which are characteristics of a cold air mass moving over a warm surface?
(A)Cumuliform clouds, turbulence, and poor visibility. (B)Cumuliform clouds, turbulence, and good visibility. (C)Stratiform clouds, smooth air, and poor visibility.

原始題號:0015245 題組:0 難易度:易

- (B) 139. Weight A: 155 pounds at 45 inches aft of datum , Weight B:165 pounds at 145 inches aft of datum , Weight C: 95 pounds at 185 inches aft of datum , Based on this information, where would the CG be located aft of datum?
(A)86.0 inches. (B)116.8 inches. (C)125.0 inches.

原始題號:0015246 題組:0 難易度:中

- (B) 140. A helicopter is loaded in such a manner that the CG is located forward of the allowable CG limit. Which is true about this situation?
(A)This condition would become less hazardous as fuel is consumed if the fuel tank is located aft of the rotor mast. (B)In case of engine failure and the resulting autorotation, sufficient cyclic control may not be available to flare properly to land. (C)Should the aircraft pitchup during cruise flight due to gusty winds, there may not be enough forward cyclic control available to lower the nose.

原始題號:0015247 題組:0 難易度:易

- (B) 141. What type approach should be made to a pinnacle under conditions of relatively high wind and turbulence?
(A)A normal approach. (B)A steeper-than-normal approach.
(C)A shallower-than-normal approach.

原始題號:0015248 題組:0 難易度:中

- (C) 142. Large components on the helicopter are usually provided with what device for the removal of the component.
(A)Jack points (B)Supporting points (C)Lifting points (D)No device required.

原始題號:0015249 題組:0 難易度:易

- (B) 143. Which is probably the greatest contributing factor to the life of the bearing?
(A)Material of the bearing. (B)Lubrication of the bearing. (C)Type of the bearing
(D)Location of the bearing on helicopter.

原始題號:0015250 題組:0 難易度:中

- (C) 144. Discoloration of the bearing is always an indication of excessive heat. this may be caused by
(A)overspeed. (B)improper installation. (C)a lack of lubrication. (D)abnormal vibration in high frequency range.

原始題號:0015251 題組:0 難易度:易

- (D) 145. Gears are used to :
a) transmit power, b) change direction, c) change speed.
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015252 題組:0 難易度:中

- (D) 146. The main rotor system is exposed to many stresses during operation which include:
a) centrifugal, b) vibration, c) twisting, d) flexing
(A)Only a, b and c are correct. (B)Only b, c and d are correct. (C)Only a, c and d are correct. (D)The a,b,c and d are all correct.

原始題號:0015253 題組:0 難易度:易

- (B) 147. The rotor system utilizing the seesaw or flapping axis system is known as
(A)rigid rotor (B)semi-rigid rotor (C)fully articulating rotor (D)rigid and fully articulating systems

原始題號:0015254 題組:0 難易度:中

- (C) 148. Lead and lag action is controlled by the use of
(A)an actuator (B)a spring linkage (C)a dampener (D)lead-lag hinge

原始題號:0015255 題組:0 難易度:易

- (C) 149. When the rotor blade is repainted, what procedure will be necessary on the rotor system?
(A)Power trim (B)Pitch trim (C)Rebalance (D)No procedure required

原始題號:0015256 題組:0 難易度:中

- (A) 150. Compare the damage between the root and the outboard portion of blade.
(A)Damage which is near the root of the blade is more critical than at the outboard portion of the blade. (B)Damage which is near the outboard portion of the blade is more critical than at the root of the blade. (C)Damage which is near the root of the blade is as the same as at the outboard portion of the blade. (D)Damage which is near the root of the blade is less critical than at the outboard portion of the blade.

原始題號:0015257 題組:0 難易度:易

- (C) 160. Most fully articulated rotors use dampeners to control movement about which axis of the rotor blades.
(A)Vertical (B)Horizontal (C)Lead lag (D)Longitudinal

原始題號:0015267 題組:0 難易度:易

- (B) 161. The autorotation rpm is affected by :
a) a gross weight of the helicopter
b) power rpm
c) density altitude
d) temperature altitude
(A)Both a and b are correct. (B)Both a and c are correct. (C)Both b and c are correct. (D)Both c and d are correct.

原始題號:0015268 題組:0 難易度:中

- (B) 162. a) Before filters changing, the system must be checked under pressure for filter leaks.
b) When filters are changed, the system must be checked under pressure for filters leaks.
c) When filters are changed, the system must be checked without pressure for filters leaks.
Which description is correct?
(A)a is correct (B)b is correct (C)c is correct (D)No answer is correct.

原始題號:0015269 題組:0 難易度:易

- (B) 163. Rotors cannot operate at engine rpm because of :
a) Materials of the rotors
b) Rotor tip speed
c) Retreating blade stall
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015270 題組:0 難易度:中

- (B) 164. What device is necessary to unload the engine during starting because of the forces required to move the rotor.
(A)The free wheeling unit (B)The clutch (C)The pitch change unit (D)The swash plate assembly

原始題號:0015271 題組:0 難易度:易

- (B) 165. a) The free wheeling unit allows the transmission to drive the rotor but prevent the rotor from driving the engine.
b) The free wheeling unit allows the engine to drive the transmission but prevent the rotor from driving the engine.
c) The free wheeling unit allows the rotor to drive the transmission but prevent the rotor from driving the engine.
d) The free wheeling unit allows the engine to drive the transmission but prevent the transmission from driving the rotor.
Which statement is correct?
(A)a is correct (B)b is correct (C)c is correct (D)d is correct

原始題號:0015272 題組:0 難易度:中

- (C) 166. In the hydro mechanical clutch, which unit makes a mechanical coupling when rotor rpm is obtained.
(A)Transmission unit (B)Drive unit (C)Free wheeling unit (D)No answer is correct.

原始題號:0015273 題組:0 難易度:易

- (C) 167. a) The sprag unit is the most common free wheeling unit in use.
b) The sprag unit allows movement to be transmitted in both direction.
c) The oil for lubrication of the sprag unit is supplied by the transmission.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015274 題組:0 難易度:中

- (A) 168. Some helicopters have a rotor brake located between which part of the helicopter?
(A)Engine and Transmission (B)Transmission and Main Rotor (C)Transmission and Tail Rotor (D)Engine and Rotor

原始題號:0015275 題組:0 難易度:易

- (B) 169. Most operators limit the use of the rotor brake because of what factors of the brake unit?
(A)Temperature (B)Wear (C)Material (D)All answers are correct

原始題號:0015276 題組:0 難易度:中

- (B) 170. a) Without the rotor brake, the inertial of the main rotor will continue to move the main rotor after engine starting.
b) Brake units are normally attached to the input to the transmission.
c) The brake may be either hydraulically or manually operated.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015277 題組:0 難易度:易

- (A) 171. a) During starting, the engine rpm will be ahead of the rotor rpm until the clutch is fully engaged.
b) During starting, the rotor rpm will be ahead of the engine rpm until the clutch is fully engaged.
c) During starting, the engine rpm will be ahead of the rotor rpm until the clutch is fully disengaged.
d) During starting, the rotor rpm will be ahead of the engine rpm until the clutch is fully disengaged.
Which statement is correct?
(A)a is correct (B)b is correct (C)c is correct (D)d is correct

原始題號:0015278 題組:0 難易度:中

- (D) 172. a) The free wheeling unit is inoperative, the helicopter would have problems with autorotation.
b) The wheeling unit is checked during pre-flight run up with the use of the tachometer.
c) Some free wheeling units carry their oil supply which requires servicing.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015279 題組:0 難易度:易

- (A) 173. a) The threaded rod ends of the sprag mount are used to align the mast.
b) Incorrect adjustment of the sprag system can affect the ground characteristics and cause abnormal vibrations.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015280 題組:0 難易度:中

- (D) 174. a) The inner ring of the free wheeling unit acts as a free gear while the engine is driving the rotor.
b) When the rotor is driving, the inner ring acts as a fixed gear.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015281 題組:0 難易度:易

- (C) 175. a) Oil from the pressure pump goes to the oil cooler.
b) Oil bypasses the oil cooler when the oil temperature is too high.
c) The oil cooler blower is powered by the main drive shaft.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015282 題組:0 難易度:中

- (D) 176. a) Increasing the maximum speed is one method of increasing the horsepower.
b) All reciprocating engines require a fan for cooling.
c) Main rotor usually operate at a constant rpm.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015283 題組:0 難易度:易

- (C) 177. a) The twist grip of collective is similar to those used on motorcycles except the action is in the opposite direction.
b) The decrease position of the twist grip is towards the thumb as the hand grips the collective.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015284 題組:0 難易度:中

- (A) 178. a) The free turbine delivers power from a turbine not connected to the compressor.
b) The direct drive turbine engine turns at the same speed as the turbine because they share a common shaft.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015285 題組:0 難易度:易

- (A) 179. a) Most of the helicopter turbines, today, use a compressor which is a combination of axial and centrifugal compressors.
b) The first portion of the compressor will be centrifugal and the last stage is axial.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015286 題組:0 難易度:中

- (C) 180. a) Power is measured by the manifold pressure gauge on reciprocating engines.
b) The power output of turbine is measured by a torquemeter on turboshaft engines.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015287 題組:0 難易度:易

- (D) 181. The EGT gauges is carefully monitored during:
a) Starting
b) Takeoffs with heavy loads
c) High ambient temperatures
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015288 題組:0 難易度:中

- (B) 182. Most helicopters require a particle separator on the inlet of the turbine engine. The particles move to the outside of the filter by which force?
(A)Inertial (B)Centrifugal (C)Accelerated (D)Torsional

原始題號:0015289 題組:0 難易度:易

- (A) 183. a) The particle separator is usually open.
b) The particle separator automatically closes when the N1 rpm increases above certain percent of rpm and fire extinguisher handle is pulled.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015290 題組:0 難易度:中

- (C) 184. a) To assist in acceleration time, most turbo shaft engines use one of the bleed valves, bleed ports and variable stators systems.
b) These systems unload the turbine during acceleration.
c) All of these systems are usually operated by the fuel control and air pressure ratio.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015291 題組:0 難易度:易

- (B) 185. Which statement is correct?
(A)The airflow and fuel flow system are in operation prior to ignite to the combustor. (B)The airflow and ignition system are in operation prior to fuel flow to the combustor. (C)The ignition and fuel flow system are in operation prior to air flow to the combustor. (D)No answer is correct.

原始題號:0015292 題組:0 難易度:中

- (B) 186. a) When collective is raised, the governor senses an under speed condition which demands less fuel.
b) When collective is raised, the governor senses an under speed condition which demands more fuel
c) When collective is raised, the governor senses an over speed condition which demands more fuel.
Which statement is correct?
(A)a is correct (B)b is correct (C)c is correct (D)No answer is correct.

原始題號:0015293 題組:0 難易度:易

- (C) 187. a) The manual fuel control unit is controlled by the power control lever.
b) The automatic fuel control established the fuel schedule in response to the power requirements.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015294 題組:0 難易度:中

- (C) 188. a) Many turbine powered helicopter have an engine out warning system. this system usually has a light and horn when N1 deteriorates.
b) The life of a turbine is based on the hours of operation and the cycles of the engines.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015295 題組:0 難易度:易

- (C) 189. a) Misalignment between the engine and transmission will shorten the short shaft life.
b) Alignment is usually accomplished by shimming the engine mount.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015296 題組:0 難易度:中

- (C) 190. a) Helicopters using a lever arrangement for N1 speed normally have three operating positions. These are : Ground idle, Flight idle and Full N1.
b) On direct shaft turbines, no linkage connects the collective and fuel control.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015297 題組:0 難易度:易

- () 191. a) Direction control is obtained by using foot pedals to change the blade pitch of tail rotor.
b) The power for the tail rotor is furnished through the transmission of the helicopter.
c) When the engine is not operating, the tail rotor is driven by the main rotor.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015298 題組:0 難易度:中

- (A) 192. a) Alignment of the tail rotor shafting is important because of vibration.
b) The tail rotor gear box may be used to increase or decrease speed for the tail rotor.
c) The main rotor always turns faster than the tail rotor.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015299 題組:0 難易度:易

- (C) 193. a) The impending failure of a bearing will always be indicated by a rise in temperature of the bearing package.
b) Bearing failures of the tail rotor system are always accompanied with low frequency vibration.
c) Enclosed shafts often use heat sensitive stickers as a warning device.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015300 題組:0 難易度:中

- (A) 194. a) Particular attention to the ends of the drive shafts should be taken during inspection to check the pins, rivets and bonding.
b) Misalignment of the tail rotor shafting will cause vibration levels to decrease.
c) Runout checked of the tail rotor shafting is done with the shafting removed from the helicopter.
Which statement is correct?
(A)Only a is correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015301 題組:0 難易度:易

- (C) 195. a) The tail rotor will require static balance and dynamic balance in the field.
b) The placement of weight in other than authorized locations on the tail rotor would be dangerous.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015302 題組:0 難易度:中

- (A) 196. The wheel and skid gear have advantages and disadvantages which are:
a) wheel gear is difficult to maintain.
b) wheel gear is difficult to ground handle.
c) skid gear is more complex.
d) skid gear simplifies ground handling.
Which statement is correct?
(A)Only a is correct. (B)Both a and b are correct. (C)All a, b, c and d are correct (D)All a, b, c and d are incorrect.

原始題號:0015303 題組:0 難易度:易

- (C) 197. a) The lift is increased with the angle of attack until the stall angle is reached.
b) Lift will not vary with the density of the air.
c) Air density is affected by temperature, altitude and humidity.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015304 題組:0 難易度:中

- (C) 198. a) A helicopter is often capable of hover at sea level but not at high altitude.
b) On a cold day more power is required to maintain lift than on a hot day.
c) The heavier the helicopters, the greater will be the pitch angle and power requirement to hover.
Which statement is correct?
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015305 題組:0 難易度:易

- (B) 199. a) Pitch change may be accomplished by the movement of the cyclic control.
b) The movement of pitch change changes the pitch of each rotor blade as equal amount.
c) The movement of each individual blade is accomplished by the collective control.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015306 題組:0 難易度:中

- (D) 200. a) The speed at which the rotor moves through the air is not the same on all parts of the rotor.
b) The fastest portion of the rotor is at the tip of the rotor blade and the slowest portion is at the root.
c) The slower portion of the blade has a greater angle of attack built into the blade than the faster portions.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015307 題組:0 難易度:易

- (D) 201. a) The difference in lift produced by the rotor disc is referred to as dissymmetry of lift.
b) In order to correct for the difference in lift, the rotor must be provided with a flapping hinge on some rotor systems.
c) Two bladed rotors often use the seesaw systems to correct for dissymmetry of lift.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and c are correct. (D)All a, b and c are correct.

原始題號:0015308 題組:0 難易度:中

- (A) 202. a) Ground effect occurs when the helicopter is within one half of the rotor diameter from the ground.
b) During ground effect, the air becomes less dense and forms an air cushion under the helicopter.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015309 題組:0 難易度:易

- (C) 203. An airfoil may stall due to:
a) insufficient airspeed
b) too small of an angle of attack
c) heavy wing load
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)The a, b and c are all correct.

原始題號:0015310 題組:0 難易度:中

- (C) 204. When a stall is experienced, one should :
a) reduce forward speed
b) increase pitch of the rotor
c) increase rotor speed
(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)The a, b and c are all correct.

原始題號:0015311 題組:0 難易度:易

- (C) 205. a) During normal operation, the airflow through the rotor is in a downward direction.
b) During autorotation, the airflow is in an upward direction.
Which statement is correct?
(A)Only a is correct. (B)Only b is correct. (C)Both a and b are correct. (D)Both a and b are incorrect.

原始題號:0015312 題組:0 難易度:中

- (B)²⁰⁶ a) The anti-torque pedals change the rpm of the tail rotor.
b) The highest positive pitch of the tail rotor is required during take off.
c) In addition to torque correction, the tail rotor pitch is used for directional control.

Which statement is correct?

(A)Both a and b are correct. (B)Both b and c are correct. (C)Both a and c are correct. (D)All a, b and c are correct.