

# Simulazione di Esame

Human factor and limitations - PPL(A) English - Private Pilot License (Aircraft), 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

## 01. The term "flight time" is defined as...

- a) The period from the start of the take-off run to the final touchdown when landin
- b) The total time from the first aircraft movement until the moment it finally comes to rest at the end of the flight.
- c) The period from engine start for the purpose of taking off to leaving the aircraft after engine shutdown. ? the total time f
- d) The period from engine start for the purpose of taking off to leaving the aircraft after engine shutdown. ? the total time f

## 02. Which statement about the airflow around an aerofoil is correct if the angle of attack increases?

- a) The stagnation point moves down
- b) The center of pressure moves down
- c) The center of pressure moves up
- d) The stagnation point moves up

## 03. What does the term "confirmation bias" mean?

- a) The feedback loop in a closed communication
- b) The preference to find arguments to proof the own mental model
- c) The bias to confirm each radio call
- d) The critical check of ambiguous situations in flight

## 04. What does a readability of 3 indicate?

- a) The transmission is readable now and then
- b) The transmission is perfectly readable
- c) The transmission is readable but with difficulty
- d) The transmission is unreadable

## 05. A boundary between a cold polar air mass and a warm subtropical air mass showing no horizontal displacement is called...

- a) Cold front
- b) Warm front.
- c) Occluded front.
- d) Stationary front.

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## 06. What is the period of validity of a private pilot license (PPL)?

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- a) Unlimited
- b) 24 months
- c) 48 months
- d) 60 months

## 07. The pressure compensation between wind upper and lower surface results in ...

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- a) Laminar airflow by wing tip vortices.
- b) Profile drag by wing tip vortices.
- c) Induced drag by wing tip vortices.
- d) Lift by wing tip vortices

## 08. Being intercepted by a military aircraft at daytime, what is the meaning of the following signal: A sudden heading change of 90 degrees or more and a pull-up of the aircraft without crossing the track of the intercepted aircraft?

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- a) You are entering a restricted area, leave the airspace immediately
- b) You may continue your flight
- c) Follow me, i will bring you to the next suitable airfield
- d) Prepare for a safety landing, you have entered a prohibited area

## 09. What does the abbreviaton "FIR" stand for?

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- a) Flight integrity receiver
- b) Flow information radar
- c) Flight information region
- d) Flow integrity required

## 10. For a take-off from runway 22 and a reported wind of 250°/10 kt, the longitudinal wind component equals...

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- a) 9 kt tailwind
- b) 5 kt tailwind.
- c) 9 kt headwind.
- d) 9 kt headwind.

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## 11. Which area is suitable for an off-field landing?

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- a) Harvested cornfield
- b) Glade with long dry grass
- c) Plowed field
- d) Sports area in a village

## 12. With only a slight crosswind, what is the danger at take-off after the departure of a heavy aeroplane?

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- a) Wake turbulence on or near the runway
- b) Wake turbulence is amplified and distorted.
- c) Wake turbulence rotate faster and higher.
- d) Wake turbulence twisting transverse to the runway

## 13. An aircraft is flying at aFL 75 with an outside air temperature (OAT) of -9°C. The QNH altitude is 6500 ft. The true altitude equals...

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- a) 6500 ft
- b) 6750 ft
- c) 7000 ft.
- d) 6250 ft.

## 14. An aircraft is flying with an indicated airspeed (IAS) of 150 kt at 8000 ft MSL. According to the rule of thumb, the true airspeed (TAS) equals...

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- a) 174 kt.
- b) 150 kt
- c) 142 kt.
- d) 208 kt

## 15. What is the purpose of a ground adjustable trim tab?

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- a) It is set on the ground to correct an out-of-trim condition arising from the mass and balance situation of an aircraft
- b) It is preset on the ground and further adjusted in flight to reduce the need to constantly re-trim the aircraft
- c) It is used to optimize the handling characteristics of an aircraft during ground operations
- d) It is a non-movable metal tab on a flight control which is adjusted on the ground to optimize the inflight characteristics of an aircraft

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**16. In what situation is it appropriate to set the transponder code 7600?**

- a) Hijacking
- b) Emergency
- c) Flight into clouds
- d) Loss of radio

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**17. Stability around which axis is mainly influenced by the center of gravity's longitudinal position?**

- a) Vertical axis
- b) Longitudinal axis
- c) Gravity axis
- d) Lateral axis

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**18. In which way is a SEP (land) rating renewed if you do not meet the required flight time?**

- a) A proficiency check with an examiner
- b) According to the flight experience there have to be several training flights under supervision of an ATO
- c) The ATO can renew the rating after a training flight with a flight instructor
- d) The required flight experience has to be accumulated under supervision of a flight instructor

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**19. In airspace "D" a Boeing 737 and a Cessna 152 are flying on crossing courses. Which aeroplane has to divert?**

- a) The Cessna 152, because IFR and commercial flights have priority
- b) The air traffic control (ATC) has to decide which one has to divert
- c) The aeroplane flying from right to left has priority, the other one has to divert
- d) The Boeing 737, because an airliner has greater power reserves

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**20. Which kinds of drag contribute to total drag?**

- a) Form drag, skin-friction drag, interference drag
- b) Interference drag and parasite drag
- c) Induced drag, form drag, skin-friction drag
- d) Induced drag and parasite drag

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## 21. What is the percentage of oxygen in the atmosphere at 6000 ft?

- a) 21 %
- b) 12 %
- c) 78 %
- d) 18.9 %

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## 22. A technical fault requires an emergency off-field landing. Which steps, with respect to the pilot's operating handbook, are necessary?

- a) Inform air traffic control and request technical support, check the pilot's operating handbook for a reference on the matter and execute an emergency landing
- b) Reduce speed and configure the aircraft for landing in an attempt to gain time, declare an emergency, complete the applicable emergency procedure and execute an emergency landing.
- c) Locate a suitable landing area, plan the approach, complete the applicable emergency procedure, declare an emergency, start and concentrate on the approach in due time.
- d) Declare an emergency, complete the applicable emergency procedure, cover as much distance towards the airport as possible to be closer to the rescue forces.

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## 23. When increasing the airflow speed by a factor of 2 while keeping all other parameters constant, how does the parasite drag change approximately?

- a) It decreases by a factor of 2
- b) It increases by a factor of 2
- c) It decreases by a factor of 4
- d) It increases by a factor of 4

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## 24. Wake turbulences develop during take-off just as the aeroplane...

- a) Reaches an altitude of 15 ft.
- b) Lifts off with the main gear.
- c) Lifts off with the front gear.
- d) Accelerates

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## 25. What is the mean height of the tropopause according to ISA (ICAO Standard Atmosphere)?

- a) 18000 ft
- b) 11000 ft
- c) 11000 m
- d) 36000 m

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**26. Given the following data: Take-Off fuel = 200 lbs Alternate fuel = 40 lbs Final reserve fuel = 30 lbs After 25 minutes the remaining fuel is 120 lbs. Assuming that fuel flow will remain unchanged, the remaining time to the destination should not exceed:**

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- a) 37.5 min
- b) 20.0 min
- c) 15.6 min
- d) 59.4 min

**27. What kind of hydraulic oil is used in aeroplane systems today?**

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- a) Mineral oil
- b) Vegetable oil
- c) Bio-oil
- d) Synthetic oil

**28. What values are usually marked with a red line on instrument displays?**

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- a) Operational limits
- b) Caution areas
- c) Recommended areas
- d) Operational areas

**29. Which of the human senses is most influenced by hypoxia?**

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- a) The olfactory perception (smell)
- b) The tactile perception (sense of touch)
- c) The auditory perception (hearing)
- d) The visual perception (vision)

**30. What is the purpose of winglets?**

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- a) Increase gliding performance at high speed.
- b) Increase of lift and turning manoeuvring capabilities
- c) To increase efficiency of aspect ratio
- d) Reduction of induced drag

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**31. Given: True course from A to B: 352°. Ground distance: 100 NM. GS: 107 kt. Estimated time of departure (ETD): 0933 UTC. The estimated time of arrival (ETA) is...**

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- a) 1129 UTC.
- b) 1029 UTC.
- c) 1146 UTC
- d) 1045 UTC.

**32. Carbon monoxide poisoning can be caused by...**

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- a) Little sleep.
- b) Alcohol
- c) Smoking.
- d) Unhealthy food.

**33. What structural item provides lateral stability to an airplane?**

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- a) Differential aileron deflection
- b) Wing dihedral
- c) Vertical tail
- d) Elevator

**34. "Foehn" conditions usually develop with...**

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- a) Instability, widespread air blown against a mountain ridge.
- b) Stability, widespread air blown against a mountain ridge.
- c) Instability, high pressure area with calm wind.
- d) Stability, high pressure area with calm wind.

**35. What is likely to be the cause if the engine runs unusually rough while checking the magnetos?**

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- a) Starter is faulty
- b) Sparking plug is defective
- c) Short circuit on the ground cable
- d) Ignition switch is faulty

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**36. The term "balance arm" in the context of a mass and balance calculation defines the...**

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- a) Distance from the datum to the center of gravity of a mass.
- b) Distance of a mass from the center of gravity.
- c) Point on the longitudinal axis of an aeroplane or its extension from which the centers of gravity of all masses are referenced.
- d) Point through which the force of gravity is said to act on a mass.

**37. The symbol labeled (2) as shown in the picture is a / an... See figure (MET-005) (1,00 P.) Siehe Anlage 4**

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- a) Front aloft
- b) Cold front
- c) Warm front.
- d) Occlusion.

**38. Where can the type of restriction for a restricted airspace be found?**

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- a) NOTAM
- b) AIC
- c) ICAO chart 1:500000
- d) AIP

**39. What is the distance between the parallels of latitude 48°N and 49°N along a meridian line?**

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- a) 1 NM
- b) 60 NM
- c) 111 NM
- d) 10 NM

**40. Two aircraft of the same type, same grossweight and same configuration fly at different airspeeds. Which aircraft will cause more severe wake turbulence?**

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- a) The aircraft flying at lower altitude.
- b) The aircraft flying at slower speed.
- c) The aircraft flying at higher speed.
- d) The aircraft flying at higher altitude.



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## 41. What conditions are mandatory for the formation of thermal thunderstorms?

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- a) Conditionally unstable atmosphere, low temperature and low humidity
- b) Absolutely stable atmosphere, high temperature and high humidity
- c) Absolutely stable atmosphere, high temperature and low humidity
- d) Conditionally unstable atmosphere, high temperature and high humidity

## 42. The elevator deflection during take-off rotation...

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- a) Is increased for a front centre of gravity.
- b) Is increased for a rear centre of gravity
- c) Is increased at high speeds.
- d) Is independent of the speed.

## 43. Who provides search and rescue service?

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- a) Only military organisations
- b) International approved organisations
- c) Only civil organisations
- d) Both military and civil organisations

## 44. A wind shear is...

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- a) A slow increase of the wind speed in altitudes above 13000 ft.
- b) A wind speed change of more than 15 kt.
- c) A vertical or horizontal change of wind speed and wind direction
- d) A meteorological downslope wind phenomenon in the alps

## 45. Which constructive feature is shown in the figure? See figure (PFA-006) L: Lift (1,00 P.) Siehe Anlage 4

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- a) Longitudinal stability by wing dihedral
- b) Lateral stability by wing dihedral
- c) Differential aileron deflection
- d) Directional stability by lift generation

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**46. Given the following conditions, the climb speed equals... Outside air temperature: -20° C Pressure altitude: 10000 ft See annex (PFP-011) (1,00 P.) Siehe Anlage 11**

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- a) 200 ft/min
- b) 350 ft/min.
- c) 390 ft/min
- d) 450 ft/min.

**47. May an engine, which previously was on fire, be restarted?**

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- a) No, the risk of a reignition of the fire would be too high
- b) Yes, if the aircraft is flying at a safe altitude
- c) Yes, but only on the ground for the purpose of taxiing
- d) Yes, but only if the cause of the fire was a carburettor fire during engine start

**48. What is the meaning of a steady green light signal at a controlled aerodrome directed to an aircraft in flight?**

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- a) Give way to other aircraft and continue circling
- b) Cleared to land
- c) Return for landing, followed by steady green at the appropriate time
- d) Airport unsafe, do not land

**49. Which statement about the airflow around an aerofoil is correct if the angle of attack decreases?**

---

- a) The center of pressure moves aft
- b) The stagnation point remains constant
- c) The stagnation point moves down
- d) The center of pressure moves forward

**50. Air consists of oxygen, nitrogen and other gases. What is the approximate percentage of other gases?**

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- a) 0.1 %
- b) 78 %
- c) 1 %
- d) 21 %

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**51. At which point in the diagram will a pilot find himself to be overstrained? See figure (HPL-002) P = Performance A = Arousal / Stress Siehe Anlage 1**

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- a) Point D
- b) Point B
- c) Point C
- d) Point A

**52. What is the mass of a "cube of air" with the edges 1 m long, at MSL according ISA?**

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- a) 1,225 kg
- b) 0,01225 kg
- c) 0,1225 kg
- d) 12,25 kg

**53. "Longitudinal stability" is referred to as stability around which axis?**

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- a) Propeller axis
- b) Vertical axis
- c) Longitudinal axis
- d) Lateral axis

**54. Which of the following states the working principle of an airspeed indicator?**

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- a) Total air pressure is measured and compared against static air pressure.
- b) Total air pressure is measured by the static ports and converted into a speed indication by the airspeed indicator
- c) Dynamic air pressure is measured by the Pitot tube and converted into a speed indication by the airspeed indicator
- d) Static air pressure is measured and compared against a vacuum

**55. The angle between compass north and magnetic north is called...**

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- a) WCA
- b) Variation
- c) Inclination
- d) Deviation

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**56. In which situation is it NOT possible to achieve a pressure compensation between the middle ear and the environment?**

---

- a) During a light and slow climb
- b) All windows are completely closed
- c) Breathing takes place using the mouth only
- d) The eustachien tube is blocked

**57. Carbon monoxide poisoning can be caused by...**

---

- a) Fuel or hydraulic fluids.
- b) Generator failure.
- c) Cracks in the heat exchanger.
- d) Pitot icing.

**58. In what case is the pilot allowed to abbreviate the call sign of his aircraft?**

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- a) After the ground station has used the abbreviation
- b) Within controlled airspace
- c) If there is little traffic in the traffic circuit
- d) After passing the first reporting point

**59. What is referred to as mountain wind?**

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- a) Wind blowing uphill from the valley during daytime
- b) Wind blowing uphill from the valley during the night
- c) Wind blowing down the mountain side during the night
- d) Wind blowing down the mountain side during daytime.

**60. What visual flight conditions can be expected within the warm sector of a polar front low during summer time?**

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- a) Visibilty less than 1000 m, cloud-covered ground
- b) Good visibility, some isolated high clouds
- c) Moderate to good visibility, scattered clouds
- d) Moderate visibility, heavy showers and thunderstorms

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## 61. The critical angle of attack...

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- a) Increases with a front centre of gravity.
- b) Decreases with a rear centre of gravity.
- c) Is changed by different aircraft weights.
- d) Is not changed by different aircraft weights.

## 62. What conditions are favourable for the formation of thunderstorms?

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- a) Warm humid air, conditionally unstable environmental lapse rate
- b) Calm winds and cold air, overcast cloud cover with St or As
- c) Clear night over land, cold air and patches of fog
- d) Warm and dry air, strong inversion layer

## 63. Rotation around the lateral axis is called...

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- a) Rolling
- b) Stalling
- c) Yawing
- d) Pitching

## 64. How does wind affect the take-off performance?

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- a) Tailwind aids the aircraft in overcoming the initial drag at the commencement of the take-off roll. The take-off distance will decrease
- b) Tailwind reduces the relative wind on the airfoil. The take-off distance will increase
- c) Headwind causes an increased airflow around the wing. The take-off distance will increase
- d) Headwind imposes an increased drag on the aircraft. The take-off distance will increase

## 65. The angle between the magnetic course and the true course is called...

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- a) Deviation
- b) WCA
- c) Variation
- d) Inclination

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**66. How are rhumb lines and great circles depicted on a direct Mercator chart?**

- a) Rhumb lines: curved lines Great circles: straight lines
- b) Rhumb lines: curved lines Great circles: curved lines
- c) Rhumb lines: straight lines Great circles: curved lines
- d) Rhumb lines: straight lines Great circles: straight lines

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**67. What is the correct course of action when experiencing a radio failure in class D airspace?**

- a) The flight has to be continued above 5000 feet complying with VFR flight rules or the airspace has to be left by the shortest route
- b) The flight has to be continued according to the last clearance complying with VFR rules or the airspace has to be left by the shortest route
- c) The flight has to be continued above 5000 feet complying with VFR flight rules or the airspace has to be left using a standard routing
- d) The flight has to be continued according to the last clearance complying with VFR flight rules or the airspace has to be left using a standard routing

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**68. The term "maximum elevation figure" (MEF) is defined as...**

- a) The highest elevation within an area covering 30 minutes of latitude and 30 minutes of longitude.
- b) The highest elevation within an area covering 30 minutes of latitude and 30 minutes of longitude plus a safety margin, rounded to the next higher 100 ft.
- c) The highest elevation within an area covering 30 minutes of latitude and 30 minutes of longitude plus a safety margin of 1000 ft (305 m), rounded to the next higher 100 ft
- d) The highest elevation within an area covering 1 degree of latitude and 1 degree of longitude plus a safety margin, rounded to the next lower 100 ft.

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**69. What is the meaning of the illustrated ground signal as shown in the signal area of an aerodrome? See figure (ALW-012) Siehe Anlage 4**

- a) Caution, manoeuvring area is poor
- b) Prohibition on landing for a longer period
- c) After take-off and before landing all turns have to be made to the right
- d) Ground movement restricted to hard surfaces

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**70. With Central European Summer Time (CEST) given as UTC+2, what UTC time corresponds to 1600 CEST?**

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- a) 1600 UTC.
- b) 1500 UTC.
- c) 1700 UTC.
- d) 1400 UTC.

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## Schema Risposte

Confronta le risposte fornite con il seguente schema e segna il tuo punteggio!

01: B	02: A	03: B	04: C
05: D	06: A	07: C	08: B
09: C	10: C	11: A	12: A
13: D	14: A	15: D	16: D
17: D	18: A	19: C	20: D
21: A	22: C	23: D	24: C
25: C	26: C	27: D	28: A
29: D	30: D	31: B	32: C
33: B	34: B	35: B	36: A
37: C	38: D	39: B	40: B
41: D	42: A	43: D	44: C
45: B	46: D	47: A	48: B
49: A	50: C	51: A	52: A
53: D	54: A	55: D	56: D
57: C	58: A	59: C	60: C
61: D	62: A	63: D	64: B
65: C	66: C	67: B	68: B
69: C	70: D		