

1 Fill the gaps in the sentences using the words in the box.**10 marks**

fuel landing ground fire life liquid safety oxygen seat breathing

- 1 All _____ extinguishers must have an up-to-date service log.
- 2 In the event of a loss of pressure, _____ masks will drop automatically.
- 3 _____ jackets are stored under the seat.
- 4 If an aircraft does not pass a _____ inspection, it will not be allowed to fly.
- 5 OBIGGS removes nitrogen from the _____ tanks.
- 6 _____ crews need easy access to fuel tanks.
- 7 Emergency valves serve hydraulic lines to the _____ gear and flaps.
- 8 OBIGGS burns oxygen-rich fuel vapours by mixing them with _____ nitrogen.
- 9 If there is smoke in the cabin, the crew have to use _____ equipment.
- 10 Passengers must fasten _____ belts during take-off and landing.

2 Match the adjectives to their definitions.**10 marks**

- | | |
|----------------|--------------------------------------|
| 1 reliable | a able to bend easily |
| 2 mandatory | b outside |
| 3 prohibited | c good in a particular situation |
| 4 suitable | d does not always work well |
| 5 unreliable | e must not be done |
| 6 unsuitable | f always works well |
| 7 internal | g able to burn easily |
| 8 external | h must be done |
| 9 flexible | i not good in a particular situation |
| 10 combustible | j inside |

3 Complete these sentences about emergency ejection with a suitable phrase from the list. Write the letter of the correct phrase in the space.

10 marks

- 1 Modern ejector seats can operate safely _____.
- 2 The ejection seat weighs _____ depending on the equipment fitted.
- 3 When a pilot ejects, he experiences _____.
- 4 The initial ejection sequence takes place in _____.
- 5 The pilot is accelerated out of the plane from _____.
- 6 He reaches this speed in _____.
- 7 _____ ignition, the rocket motor stops burning.
- 8 While being propelled by the ejection seat, a 65 kg man has _____.
- 9 _____, a small parachute stabilizes the seat.
- 10 The main parachute doesn't open until the pilot is _____.

- a 45 seconds after
- b less than one second
- c under 0.25 seconds
- d about 90 kg
- e One second after ejection
- f a force of 30 g
- g 0 to 260 kph
- h below 13,000 feet
- i at zero altitude and speed
- j an equivalent weight of 2,000 kg

4 Fill the gaps in these safety warnings using the verbs in the box.

10 marks

switch on wash grip check put on keep oil mix touch fasten

- 1 Do not _____ or clean moving machinery.
- 2 _____ ear protectors before you _____ this machine.
- 3 This water is very hot. Always _____ it with some cold.
- 4 When lifting a heavy box, _____ it firmly and _____ it close to the body.
- 5 Never _____ electrical equipment with wet hands.
- 6 _____ that electrical equipment is switched off before starting maintenance work.
- 7 Always _____ your hands thoroughly.
- 8 _____ your seat belt when you get into the aircraft.

5 Expand these notes to form complete sentences in the past. Note that one verb in each sentence is in the passive form and one in the active form.

10 marks

Example: manual/modified/pilots/report/no further problems

The manual was modified and the pilots reported no further problems.

- 1 aircraft/inspect/and/crew/find/several problems
- 2 crew/report/problem/and/tyre/replace
- 3 they/consult/manual/before/equipment/test
- 4 valve/block/so/technicians/clean/it
- 5 aircraft/refuel/before/it/take-off

6 The information below comes from a fire extinguisher manufacturing manual. Read the texts carefully and match the paragraphs in the box to the correct section. There is one more than you need.

10 marks

1 Mishandling components

When loading, unloading or moving boxes of or individual extinguisher components, they could be dropped or fall over, resulting in injury to personnel and severe damage to the components.

2 Components selection

When an instruction is given to assemble a quantity of a particular fire extinguisher, the incorrect components may be picked.

3 Assembly – general

During the assembly process, o-rings may be misaligned and damaged.

4 Assembly – powder

Powder poses specific problems, such as getting wet, or being inhaled.

5 Assembly – foam

Foam is a very frothy substance and must be handled with care to avoid it expanding everywhere.

- a** When filling a cylinder, the water must always be put in first and the chemical concentrate added later, just prior to sealing.
- b** Filling must be done out during dry conditions. The bags should be opened at the last minute and used as quickly as possible. The operator must wear suitable protection during the filling of the cylinders. The cylinder o-ring sealing area and the sealing thread must be brushed and thoroughly cleaned prior to valving. The operator must clean his hands prior to sub-assembling o-rings.
- c** Correct and appropriate training for fork lift truck operators and assembly personnel must be ensured.
- d** These must be handled carefully so as not to scuff or cut the surface. They should also be kept clean, and prior to sub-assembly, their location recess should be checked for cleanliness. The cylinder o-ring recess should be checked for cleanliness and surface finish prior to greasing. Some grease should also be put in the thread to ease screwing.
- e** The extinguishers must be connected to the gas supply using the approved connector. The gas supply must be suitably controllable, so that the pressure inside the extinguisher increases gradually and can be stopped when the correct point is reached.
- f** Ensure appropriate operator training, using the Extinguisher Parts List (QAS 54) and consultation with the Storeman. Refer to ESR 2.8 of the Technical File.

(Adapted from <http://myweb.tiscali.co.uk/ecsmidlands/Operating%20Instructions.pdf>)