S-185 Fire Entrapment Avoidance Exam Answer Key

Name: _____ Date: _____

There is a 30 minute time limit for this exam. Mark: _____ / **55** (Pass = 70%)

(2 marks) **1.** Define fire entrapment.

- it is a life threatening situation often caused by weather changes
- fire personnel are unable to use escape routes and retreat to safety zones due to a sudden change in fire behaviour

(2 marks) **2.** What is fire entrapment avoidance?

- this is the use of suppression strategies and tactics based on safety - LACES
- current and predict fir behaviour are taken into consideration

(2 marks) **3.** Who is responsible for fire entrapment avoidance?

- fireline supervisors
- firefighters

(4 marks) **4.** List 4 topics specific to fire entrapment avoidance that should be a part of a pre-work safety briefing.

- LACES
- fire suppression tasks
- current and predicted fire behaviour
- location of first aid equipment

(5 marks) **5.** What does the acronym '**LACES**' stand for?

L - Lookouts
A - Anchor Points
C - Communications
E - Escape Routes
S - Safety Zones

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(1 mark) **6.** How often does a **L**ookout need to check in with a Supervisor or other fire personnel (circle the correct answer)?

a) Every 4 hours.
b) At least once per hour, or more frequently if fire behaviour increases or there are weather changes.
c) Every hour.
d) At least 3 times per operational period.

(1 mark) **7.** What is an **E**scape Route?

- a predetermined trail, control line or road
- provides rapid access to safety zones if retreat is necessary

(1 mark) **8.** Why should there be more than 1 Escape Route?

- a single escape route may be cut off by the fire
- gives fire personnel more access to safety zones along the fireline

(2 marks) **9.** Under what circumstances does a firefighter have the Right and Responsibility to disengage from the fireline?

- when the risk of fire entrapment is possible due to fire behaviour
- this is a personal opinion and is used if communications are lost

(1 mark) **10.** What is a **S**afety Zone?

- are predetermined locations where fire personnel can shelter
- need to protect personnel from all fire hazards
- must be free of heat, smoke, falling timber, danger trees, etc.

(4 marks) **11.** List 4 areas that can be used as a Safety Zone on a wildfire.

- large, burnt areas that are free of aerial fuels and danger trees
- large rocky areas
- large clearings free of fuels and overburden - down to mineral soil
- marshes, bogs and large bodies of water
- deciduous tree stands free of danger trees

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(2 marks) **12.** What condition does the remaining forest fuels in a Safety Zone need to be in if this shelter is located 'In the Black?'

- it must be a clean burn without patches of burnt fuel
- the majority of surface and aerial fuels must be burned off

(1 mark) **13.** Safety Zones must provide a minimum distance of _____ between fire personnel and flames in order to protect against radiant heat issues.

a) at least 4 times the maximum flame length
b) 2 times the maximum flame length
c) at least 8 times the maximum flame height
d) 2 times the maximum flame height

(3 marks) **14.** List 3 key points to remember when disengaging from a fire.

- stay with your crew
- do not run
- do not panic
- follow your supervisor's instructions
- take hand tools and pack unless told to drop

(2 marks) **15.** What is the first decision you need to make when in a fire entrapment situation?

- a firefighter must decide whether escape is possible or not
- if escape is possible then escape routes are used immediately

(2 marks) **16.** What is the most important part of your body to protect from flames and heat during fire entrapment?

- airway - nose, mouth, air passage and lungs

(1 mark) **17.** What is a survival zone?

- an area where fire personnel can shelter from flames, heat and smoke in an emergency
- used if firefighters are unable to make it to a safety zone

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(4 marks) **18.** List 4 critical actions you must complete as a part of your fire entrapment survival plan if this life threatening situation occurs.

- stay low to the ground
- shelter in a survival zone
- used PPE and clothing
- lie flat and face down
- cover body with dirt
- wet down clothing if possible
- dig a breathing well with hands
- do not wear synthetic clothing

(1 mark) **19.** Heavy equipment located in a survival zone can block some radiant heat and flames. Fire personnel should shelter _____ _____ (circle the correct answer).

a) in a depression or trench on the side of the machine away from the flame front.
b) in the cab of the machine.
c) in a depression or trench on the side of the machine facing the flame front.
d) as far away from the machine as possible.

(6 marks) **20.** Match the term from the column on the left with the statement that best describes that term (write the letter from the left column on the line before the statement that matches the best).

a) Anchor Points	**b**	monitoring the fire in order to avoid entrapment situations.
b) Lookouts	**f**	providing a fire assessment to a supervisor about fire behaviour.
c) Emergency Escape	**e**	retreating from the fireline due to increased fire activity.
d) Entrapment Survival Actions	**c**	the decision to drop hand tools and packs before retreating to a safe zone.
e) Disengagement Procedures	**d**	staying low to the ground while sheltering in a trench.
f) Communications	**a**	burning out fuels behind a dozer line to ensure crew safety.

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True or False Questions: Indicate whether the statement on the right is **True** or **False** by circling the 'T' or 'F'. Each correct answer is worth 1 mark.

T F The majority of fireline injuries and fatalities are the result of fire personnel not following safe work procedures.

T **F** Lookouts are able to perform a number of fireline tasks because these firefighters only need to update a supervisor twice per day.

T **F** Areas that are 'In the Black' will always be the best Safety Zones.

T F Working alone or without communications with other fire personnel is not allowed.

T **F** Loss of communications is a minor safety issue, which does not require immediate attention and possible fireline disengagement.

T F Lookouts need to be appointed when there is extreme fire behaviour (e.g. Rank 4 Fires) with a potential for fire entrapment scenarios.

T **F** A firefighter should stay inside a vehicle if the fuels surrounding the cab are heavy.

T F Every firefighter needs to know the location of Escape Routes and Safety Zones before the start of suppression activities.

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