



# **2018 NZFBI EXAMINATION**

## **Associate A: On Station**

**Saturday 1 September**  
**0900 to 1100 hours**

# EXAMINATION RULES AND INSTRUCTIONS TO CANDIDATES

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1. Ten minutes will be allowed prior to the commencement of the examination for candidates to read the question paper, but they are not permitted to commence the examination until instructed.
2. Candidates are prohibited from introducing any books or papers of any kind into the examination room.
3. Candidates are not to communicate with, copy from each other, or communicate with anyone outside the examination room. Cellular phones are not permitted in the examination room.
4. Slide rules and silent non-programmable calculators may be used, subject to the scrutiny and satisfaction of the examination supervisor.
5. All written work must be completed in ink or good ball point pen, with drawings and/or diagrams in pencil. Drawing instruments may be used and are to be supplied by the candidate. Marks may be deducted for untidy work.
6. All answers are to be written in the combined question/answer books which will be handed in at the end of the examination. You can request additional paper from the examination supervisor if required.
7. Candidates should ensure that only their allocated examination number appears in the answer book. Do NOT write your name or brigade in the answer book or use them in the text of any of your answers – if required, use fictitious identification.
8. Candidates accept to abide by the rules of the New Zealand Fire Brigades Institute and accept the examination result as final. No correspondence will be entered into.
9. This examination contains five questions. Candidates are to attempt all questions.
10. Write the candidate number provided to you in the boxes below:

2	0	1	8	/		
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## Question 1: Multiple Choice

20 Marks

Answer all questions. Circle the letter beside the answer you think is correct.

1 mark each

1. 41 mm non-percolating lined hoses may be required to operate to what pressure?
  - a) 1050kPa
  - b) 1500kPa
  - c) 1900kPa
  - d) 2100kPa
  
2. What is this piece of equipment called?



- a) McLeod Tool
  - b) Pulaski
  - c) Mattock
  - d) Axe
  
3. When completing the primary survey of a patient, what does the B stand for in the mnemonic DRSABCD?
  - a) Bleeding
  - b) Broken bones
  - c) Breathing
  - d) Blood sugar

4. When breaking a glass pane during forced entry, where should you strike the glass pane?
  - a) The top
  - b) The centre
  - c) The base
  - d) Any of the above
  
5. On arrival at an incident involving electrical equipment, everyone not directly involved with the rescue should keep back how many metres?
  - a) Two
  - b) Four
  - c) Six
  - d) Eight
  
6. During short term storage of Personal Protective Equipment, all items must be:
  - a) Laundered after use
  - b) Stored out of direct sunlight
  - c) Stored bundled or folded up
  - d) Pressed
  
7. Who is responsible for checking that seatbelts are being worn in a fire appliance?
  - a) The officer in charge of the appliance
  - b) The driver
  - c) The individual
  - d) The officer in charge of the brigade
  
8. At what point should the pump operator be relieved of their Entry Control Officer duties?
  - a) When there are more than 6 wearers
  - b) When directed by the OIC
  - c) When they are unable to carry out both functions simultaneously
  - d) All of the above
  
9. When should the first arriving officer of an appliance communicate any SitRep after the initial SitRep?
  - a) At the time of arrival of further appliances
  - b) Once the initial scene survey is completed
  - c) Ten minutes after the last SitRep
  - d) Thirty minutes after the last SitRep

10. Which way should a suction strainer face in fast flowing water?
- a) Facing up-stream
  - b) Across the stream
  - c) Any direction
  - d) Facing down-stream
11. When using a two-way radio and you are calling an operator, you should:
- a) Use a person's name
  - b) Always give their callsign first
  - c) Change channels if you don't get a reply
  - d) Move around while speaking if the signal is bad
12. A retardant can be applied to fine fuels (such as grasses and tussock) at what ratio?
- a) 5:1
  - b) 10:1
  - c) 15:1
  - d) 20:1
13. 41 mm non-percolating hose (and extruded hose) is packed in what colour of hose pack?
- a) Blue
  - b) Green
  - c) Red
  - d) Yellow
14. A Status Three patient is in what condition?
- a) Dead
  - b) Critical
  - c) Serious
  - d) Moderate
15. A voltage in the ground that can appear between two points of contact on the ground is called a:
- a) Touch Voltage
  - b) Step Voltage
  - c) Conductor
  - d) Short Circuit
16. At what pressure does the warning whistle operate on a breathing apparatus set?
- a) 45 Bar
  - b) 50 Bar
  - c) 55 Bar
  - d) 60 Bar

17. When should a hydrant inlet strainer be removed?
- a) When working from hydrants
  - b) When working from an ejector pump in salvage operations i.e. floods
  - c) When working from suction
  - d) It should not be removed
18. When an appliance transmits a K10, the appliance is:
- a) Available at the incident
  - b) Requesting a map reference from FireCom
  - c) Advising that all manpower is fully utilised
  - d) Recommissioning
19. Which of these lines is NOT classed as a line by Fire and Emergency NZ?
- a) General Purpose Line
  - b) Lowering Line
  - c) Bucket Line
  - d) Rescue Line
20. When completing mop-up work at a vegetation fire, what is the sufficient nozzle pressure?
- a) 350kPa
  - b) 500kPa
  - c) 700kPa
  - d) 850kPa

## Question 2: Station Management

20 Marks

- 2.1. Your crew officer has asked you to assist with placing an order for Personal Protective Equipment for a group of Operational Support members for your station. List six items they will receive that will form part of their uniform:

3 marks

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_
- vi. \_\_\_\_\_

- 2.2. Your crew officer has also asked you to assist with ensuring the new members are familiar with the words of command when at the station or on the foregrounds. Describe each of the following commands and give an example of when they may be used.

6 marks

**Fall-in** \_\_\_\_\_  
\_\_\_\_\_

**Get to work** \_\_\_\_\_  
\_\_\_\_\_

**Rest** \_\_\_\_\_  
\_\_\_\_\_

**Knock off and make up** \_\_\_\_\_  
\_\_\_\_\_

**Below-below-below** \_\_\_\_\_  
\_\_\_\_\_

**Still** \_\_\_\_\_  
\_\_\_\_\_

2.3. While completing your station checks, you see that some new Air Purifying Respirator (APR) filter cannisters have been delivered following a previous incident. Detail the five occasions when operational personnel may use an APR at an incident:

**5 marks**

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_

3. Your officer in charge has arranged a training night with a neighbouring brigade, and the brigade is planning to demonstrate their Positive Pressure Ventilation equipment to your station. Part of the training night will be learning about horizontal ventilation and vertical ventilation. Detail the principle function of each type of ventilation technique, along with an advantage and a disadvantage of each type.

**6 marks**

	<b>Horizontal Ventilation</b>	<b>Vertical Ventilation</b>
<b>Principal Function</b>		
<b>Advantage</b>		
<b>Disadvantage</b>		



## Question 3: Equipment

20 Marks

- 3.1 All new hoses must undergo an acceptance test before going into service. Outline the six criteria required to be recorded once a hose has passed an acceptance test:

3 marks

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_
- vi. \_\_\_\_\_

- 3.2 Detail three precautions to take when laying hose inside a burnt area.

3 marks

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

- 3.3 Name six pieces of equipment that may be used for gaining access to a locked building with a roller door and locked internal door?

3 marks

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_
- vi. \_\_\_\_\_

3.4 When using an appliance Mobile Status Unit (MSU), priority message indicates that urgency is required, and the appliance is requesting radio channel priority. Detail the four times that a priority message is to be transmitted.

**2 marks**

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_

3.5 State the K code for the following status:

**4 marks**

- a. Proceed to, and stand-by at a location \_\_\_\_\_
- b. Contact communication centre by telephone \_\_\_\_\_
- c. On RT inside normal turnout area \_\_\_\_\_
- d. Stop message, false alarm (Malicious) \_\_\_\_\_
- e. First appliance in attendance – Property fire apparently small \_\_\_\_\_
- f. Fire suppressed, commencing overhaul \_\_\_\_\_
- g. Command or control point established \_\_\_\_\_
- h. Repeat your message \_\_\_\_\_

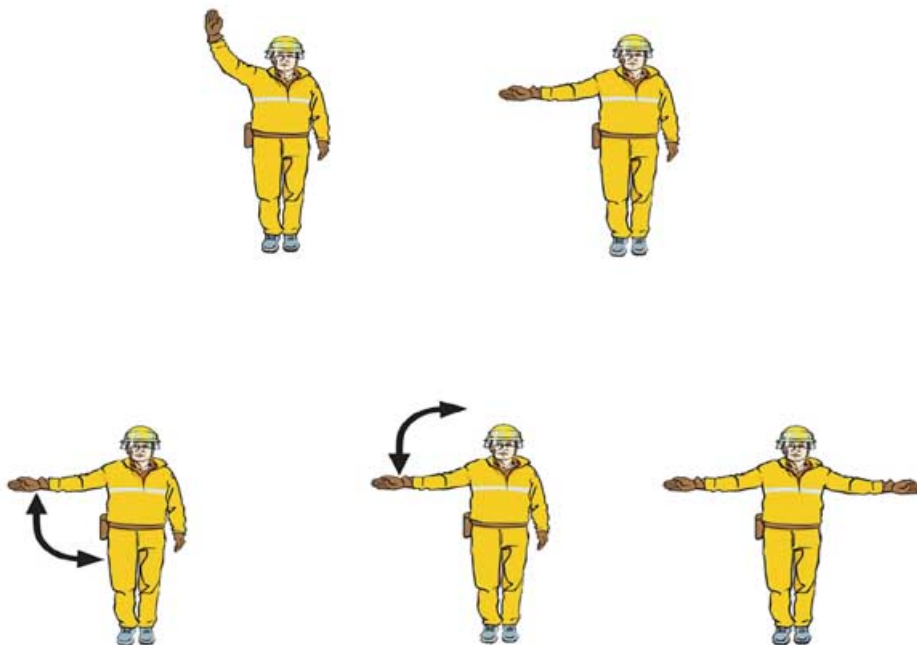
3.6 Match the following knots in the table with their uses below.

2.5 marks

Rolling Hitch	Used to attach a line to an anchor point and can be used to tie off a line with a load on it.
Sheet Bend/ Double Sheet Bend	Used to form a loop in the end of a line to secure a line to an object.
Clove Hitch Pre-formed	Used to join two lines together; however, it should not be used for rescue purposes.
Bowline	Used to secure a line to an object or to another line.
Round Turn & Two Half Hitches	Used when the knot is being tied in the middle of the line and the end of the object is free.

3.7 When communicating to a pump operator, detail the meaning of each of the hand signals in the picture below.

2.5 marks



## Question 4: First Aid

20 Marks

- 4.1 Managing common first aid conditions is important for any firefighter in a crew. List the signs and symptoms of the following conditions and detail the appropriate type of management required until the arrival of specialist medical staff.

6 marks

Condition	Signs / Symptoms	Management
Diabetes		
Angina		
Stroke		
Seizure		
Asthma		
Allergic Reaction		

4.2 You and your crew must not perform CPR in certain circumstances. Describe each of the three situations when you do not perform CPR.

**3 marks**

i. \_\_\_\_\_

\_\_\_\_\_

ii. \_\_\_\_\_

\_\_\_\_\_

iii. \_\_\_\_\_

\_\_\_\_\_

4.3 List the flow rates of Oxygen provided for each type of mask below.

**3 marks**

Item	Flow Rate (Litres per minute)
Nasal prong	
Acute (simple) mask	
Reservoir mask and bag mask	

4.4 Detail the procedure for performing a jaw thrust on a patient lying on their back and requiring their airway to be maintained.

**3 marks**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4.5 Fully detail the technique and steps required to administer Oxygen through a bag mask resuscitator to a patient who is not breathing.

**5 marks**

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## Question 5: Safety and Wellbeing

20 Marks

- 5.1 Safe and effective firefighting requires crew-based operation under the control of an officer. Name six of the measures to be implemented by an officer at an incident to ensure the safety of the crew at a large-scale incident.

3 marks

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

iv. \_\_\_\_\_

iv. \_\_\_\_\_

v. \_\_\_\_\_

vi. \_\_\_\_\_

- 5.2 On arrival at an incident involving electrical equipment, what steps should emergency services personnel take to ensure the safety of the crew?

3 marks

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3.5 The mnemonic LIVE provides a prompt to ensure safety around electrical network hazards. Outline what each of the letters of LIVE mean.

**2 marks**

L \_\_\_\_\_

I \_\_\_\_\_

V \_\_\_\_\_

E \_\_\_\_\_

3.6 If a self-rescue is to be performed by the driver of a vehicle entangled in power wires, what information must be communicated to the person in the vehicle prior to the attempt.

**2 marks**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3.7.1 Hoses trained on fires (including gas or smoke) under or near an overhead line can prove extremely dangerous. List three operational considerations when operating hoses under or near an overhead line.

**3 Marks**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3.7.1 List three specific safety observations when firefighting under or near an overhead line.

**3 Marks**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



3.8.1 If an emergency evacuation signal is sounded, all personnel are required to perform certain steps. List the steps to be taken by firefighting crews.

**2 Marks**

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3.8.2 List the steps to be taken by the OIC of the Crews.

**2 Marks**

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