

Fire Services Examinations Board
Qualifying Examination for Promotion to the Rank of
Station Officer



Paper 1: Operations

StO1-1

Tuesday 13 September 2005
0920 hours – 1135 hours (2 hours 15 minutes)

Attempt ALL SIX questions.
ALL questions carry equal marks.

SECTION A OPERATIONAL PROCEDURES AND INCIDENT COMMAND

Attempt BOTH questions from this Section

- 1 In the role of Station Manager, you are mobilised as part of the initial attendance to a serious house fire. The first appliance books in attendance whilst you are still en-route and the following message is sent:

'From Crew Manager Smith at 15 Any Street, Blanktown. House fire, persons reported, 2 BA, 2 hose-reels in use, rapid deployment procedure in use.'

- (a) With regard to the rapid deployment procedure:
- (i) describe its objective and the limited circumstances under which the Incident Commander may apply the procedure; and
 - (ii) describe the procedure and identify when it should be transferred to the Stage I or Stage II procedure.

(19 marks)

and

- (b) On arrival at the incident you find 3 appliances now in attendance with a total of 15 firefighters present, 6 BA in use using 2 entry points, and 2 persons still unaccounted for.

Identify and describe the BA entry control procedure that you would expect is being applied. (6 marks)

- 2 You are mobilised as part of a two-pump attendance to a report of a car fire in an area that has recently experienced some tension within the community, with reports of stones being thrown at fire appliances.

Whilst en-route, you are informed by fire control that the Police have identified this as a civil disturbance situation.

On arrival you are met by a police officer who informs you that the situation is rapidly deteriorating with missiles and petrol bombs being thrown. You decide that you need additional fire appliances and establish a suitable rendezvous point.

From a risk assessment perspective, identify the precautions that need to be taken into account:

- (a) by the additional crews that you have requested, as well as any senior officers, when responding to the rendezvous point. (10 marks)

and

- (b) when deploying crews to undertake firefighting. (15 marks)

SECTION B FIREFIGHTING AND RESCUE INCIDENTS

Attempt ALL questions from this Section

- 3 You are mobilised as the officer-in-charge to a reported fire at a local university. Following a recent risk assessment visit, you are aware that the building contains radioactive substances.

On arrival, a senior member of staff confirms that the fire is in the laboratory, which contains radioactive substances. These substances emit gamma radiation and low-level Beta particles. The staff member confirms that she can offer relevant advice on dealing with the situation.

Identify your initial actions. (25 marks)

- 4 You arrive at a serious fire in a large volume distribution warehouse, constructed by using insulated panels, with the core of the panels comprising of expanded polystyrene.

These panels are now involved in the fire which is spreading.

Explain why this form of construction will provide additional hazards to the life safety of firefighters dealing with this fire, giving your reasons. (25 marks)

- 5 You have arrived at a fire incident at a chemical processing plant and the Watch Manager in charge informs you that 3 pumps are in attendance and a request for these to be increased to 10 has been sent. A more senior officer is attending, but will not arrive for at least a further 25 minutes.

You are also informed that the flange of a pipe from a large capacity banded storage tank has fractured and the leaking chemical has ignited. The content of the tank is a highly flammable liquid, which gives off vapours that are toxic and corrosive. All employees have been evacuated and accounted for. Specialist advice is available on site.

Foam from 2 hand held branches is being applied to the leaking chemical and more branches are being prepared. Safety officers are in position.

You formally take command of the incident.

What considerations will you now give specifically to the interests of the operational safety of the firefighters? (25 marks)

SECTION C SCIENCE AND FIREFIGHTING

Attempt the question from this Section

6 You undertake a risk assessment visit to a factory producing parts for the automotive industry. You are informed that the site encompasses a storage area where various metals, including a large quantity of potassium are stored.

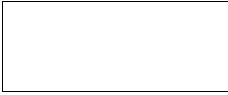
(a) Identify the main properties of metals. (14 marks)

and

(b) In what substance would you expect to find potassium stored? (2 marks)

and

(c) Describe how the metals at the higher end of 'the Activity Series of metals', such as potassium, will react with water. (9 marks)



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Paper 2: Fire Safety, Education and Enforcement

StO1-2

Tuesday 13 September 2005
1345 hours – 1600 hours (2 hours 15 minutes)

Attempt ALL SIX questions.
ALL questions carry equal marks.

SECTION A FIRE SAFETY LEGISLATION

Attempt BOTH questions from this Section

- 1 In the role of Station Manager, you decide to refresh the knowledge and understanding of the officers on your station regarding interviewing and cautioning procedures related to the collecting of evidence that may be used in a Court of Law.

When carrying out an interview of a person to determine the cause of a fire:

- (a) what information could be obtained from a person without the need to caution them? **(11 marks)**

and

- (b) at what point in the interview would it be appropriate for you to caution that individual? **(14 marks)**

- 2 The owner of a business has asked for your advice about the provision of firefighting equipment and signage relating to it. You have established that the owner will need to comply with the requirements of the Health and Safety (Safety Signs and Signals) Regulations.

Explain in detail:

- (a) how the location of the non-automatic firefighting equipment must be identified. **(12 marks)**

and

- (b) the method by which the latest portable fire extinguishers and their types are identified. **(13 marks)**

SECTION B COMMUNITY FIRE SAFETY

Attempt BOTH questions from this Section

3 In the absence of a Fire and Rescue Service Community Fire Safety Team, you, in the role of Station Manager, have been tasked to reduce the statistical incidence of accidental dwelling fires, fatalities and casualties in your station area.

(a) What national targets would you endeavour to meet over a 5 year period regarding:

- (i) accidental dwelling fires;
- (ii) accidental fire fatalities;
- (iii) accidental serious fire casualties; and
- (iv) fire safety awareness, attitudes and behaviour?

(8 marks)

and

(b) In what way would you endeavour to achieve your targets identified for (a) above within your station area? (17 marks)

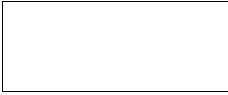
4 It has been agreed that a dance may be held in the appliance bay of your fire station in order to raise money for the Fire Services National Benevolent Fund. This will result in electrical equipment being brought onto the fire station by a contractor.

When considering safety precautions, what key points should you look out for regarding this equipment and the contractor? (25 marks)

SECTION C FIRE SAFETY RISK ASSESSMENT

Attempt BOTH questions from this Section

- 5 In the role of Station Manager, you decide to develop the knowledge and understanding of the personnel on your station about firefighting in high rise buildings. Your initial lecture will deal with firefighting shafts.
- (a) Identify the three factors that determine the number of firefighting shafts in a building. **(8 marks)**
- and**
- (b) Describe the design, construction and installation requirements of firefighting shafts including their stairs and lifts. **(17 marks)**
- 6 During a general discussion with a local builder you are asked for an opinion about the general behaviour of the walls of a building in a fire.
- (a) Describe the four factors that usually determine the stability of a brick load bearing wall in a fire. **(9 marks)**
- and**
- (b) Identify the factors that usually cause the collapse of walls at a fire. **(16 marks)**



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Paper 3: Human Resource Management

StO1-3

Wednesday 14 September 2005
0920 hours – 1135 hours (2 hours 15 minutes)

Attempt ALL SIX questions.
ALL questions carry equal marks.

SECTION A EMPLOYMENT

Attempt BOTH questions from this Section

- 1 You have been informed that a firefighter from your station is in legal custody and that the Chief Fire Officer has suspended the firefighter from duty. The firefighter's partner has asked you for some clarification.
- (a) Define 'Legal Custody'. (9 marks)
- and**
- (b) Explain why suspension from duty is necessary before or during an investigation relating to discipline within the Fire and Rescue Service. (16 marks)
- 2 On joining your station as the Station Manager, you find that there are tensions between the personnel, caused by one member being allowed time-off for trade union duties. Some personnel feel that the entitlement is being abused.
- You decide to explain to the station personnel the rights to time-off for trade union activities.
- Identify those matters related to collective bargaining on industrial relations that would entitle a trade union representative to reasonable time-off, with pay, during the employee's working time. (25 marks)

SECTION B TRAINING AND DEVELOPMENT

Attempt BOTH questions from this Section

- 3 Your Fire and Rescue Service is about to undertake a scenario based training exercise and you have been tasked with the job of briefing and de-briefing the crews from the various stations that will attend.
- (a) List the points you would cover in your briefing. (15 marks)
- and**
- (b) List the main areas you would cover in your de-briefing. (10 marks)
- 4 Following your appointment to the Training Department, you are to make a short presentation on 'an effective system of training for competence'.
- List the objectives of an effective system of training for competence. (25 marks)

SECTION C HEALTH, SAFETY AND WELFARE

Attempt BOTH questions from this Section

- 5 During a drill on your fire station, when water under pressure was passed through a ground monitor, part of it fractured causing an injury to a firefighter.

You are informed that Inspectors from the Health and Safety Executive will visit the fire station and that you will liaise with them.

List the principal powers that the Health and Safety Inspector can exercise under these circumstances. (25 marks)

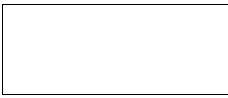
- 6 Having been appointed as the Station Manager, a member of the station is introduced to you as the appointed Safety Representative for the station.

(a) When is the Safety Representative entitled to carry out safety inspections? (6 marks)

and

(b) Identify the functions the Safety Representative has been appointed to undertake. (19 marks)

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StO1-4

Paper 4: Business Administration – Key Skills

Wednesday 14 September 2005

Section A

1345 hours – 1430 hours (45 minutes)

Attempt BOTH questions.

BOTH questions in this Section carry equal marks.

SECTION A PRINCIPLES OF MANAGEMENT

Attempt BOTH questions

Both questions in this Section carry equal marks

- 1 In the role of Station Manager in charge of a fire and rescue station, there is a need for you to undertake your duties diligently when exercising the effective management of financial resources. Explain the ways in which budgetary control can be so applied at fire station level. (25 marks)
- 2 The Fire and Rescue Service uses performance standards to establish the basis of planning for the delivery of service.
- (a) What should performance standards set out to do? (7 marks)
- and**
- (b) Before endeavouring to measure the performance of the organisation, groups, teams and individuals, what key activities of performance measurement should be identified? (9 marks)
- and**
- (c) What should an audit of performance measurement seek to provide? (9 marks)