

**QUESTION 1**

**MVA equipment**

- a) List three things you **should** do and three things you should **not** do as safety precautions if you discover a live S.R.S. system in a motor vehicle which has been involved in an accident? **(6 marks)**

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- b) There are many ways to perform glass management at an MVA. Choose one method of removing a hardened (or safety glass) windscreen and list the equipment required to perform it safely. Do not include personal protective equipment. **(4 marks)**

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c) Detail the technique for removal of a windshield of laminated construction as per the NZFS MVA manual. **(5 marks)**

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d) Detail the removal of side glass (passenger windows) as per the NZFS MVA manual. **(5 marks)**

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**QUESTION 2**

**Knots and Lines**

- a) List and explain the construction of a rescue line, its components and the purpose of those components. **(5 marks)**

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- b) What is the test regime for a rescue line? List the tests and detail them. **(5 marks)**

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- c) What are two knots/methods used to connect 2 lines together? **(2 marks)**

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- d) Using an illustration, detail and explain an improvised anchor point using Hydrant keys, a long crow bar, sledgehammer, General purpose line or bucket line and rescue line. **(8 marks)**

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**QUESTION 4**

**Pumps**

a) As portable pump operator operating from static supply, you notice your compound gauge is indicating an increase in vacuum. List 3 likely reasons for this and detail how you would correct the problem. **(12 marks)**

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b) When conducting a vacuum test on a Millenium pump, the primer must not be operated for more than 'x' seconds. **(2 marks)**

What value is 'x'? .....

c) When conducting a vacuum test on a mid mount pump priming must not be continued beyond 'x' seconds. **(2 marks)**

What value is 'x'? .....

d) List the Personal Protective Equipment that a pump operator should use during pumping operations. **(4 marks)**

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**QUESTION 5**

**General Knowledge**

a) Your body sheds metabolic heat in three ways, convection, conduction and radiation. Explain the way this normally happens. **(3 marks)**

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b) Explain how fire fighting PPE prevents these processes from happening. **(3 marks)**

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c) What command do you give immediately prior to mounting to climb or mounting to descend a ladder? **(2 marks)**

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d) With regard to fire fighting foam what is meant by the term “Induction (or concentrate) ratio”. **(3 marks)**

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e) At the time your warning whistle activates in Breathing Apparatus, how many ATS/BAR will your cylinder contain? **(1 mark)**

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f) List the five common causes of damage to Fire Service hose. **(5 marks)**

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g) What is the purpose of a 'discharge check valve' in a Fire Service pumping appliance? **(1 mark)**

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h) Describe a Breathing Apparatus personal line. **(2 marks)**

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**QUESTION 6**

**Pumps**

- a) What pressure does the New Zealand Fire Service charge a dry riser to during operation at a fire? **(1 mark)**

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- b) Which of the following pump types is not a primer?  
Reciprocating, Centrifugal, Exhaust ejector, Diaphragm **(1 mark)**

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- c) By means of a diagram draw a cross sectional profile of a 'B' Type ejector pump, clearly indicating the functional parts and the direction of flow. **(6 marks)**

d) Explain exhaust ejector primers in theory. Detail the practical use of an exhaust ejector primer **(6 marks)**

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e) There are 11 tasks associated with recommissioning a pumping appliance after use at an incident. The first is supplied, list the other ten. **(6 marks)**

- Flush the tank after using contaminated water.
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