



NATIONAL SENIOR CERTIFICATE EXAMINATION
SUPPLEMENTARY EXAMINATION – MARCH 2018

**SUPPLEMENTARY
LIFE SCIENCES: PAPER III**

Time: 1½ hours

50 marks

INSTRUCTIONS TO TEACHERS AND LABORATORY TECHNICIANS

NOTE:

It is essential that all workstations and equipment are tested for freshness and are ready ahead of candidates entering the venue.

PLEASE NOTE: This is an open-ended practical, and as such, results can be HIGHLY variable from one school to another and also from one candidate to another. There is no CORRECT result for this investigation. It is imperative that candidates write up and discuss EXACTLY the results they get. They MUST NOT try to guess the result and make their data 'fit' the expected result.

- Do **NOT** share any of this information with your candidates. It is considered an irregularity if you do.
- Do **NOT** open the examination packs before the day that the examination is to be written.
- Do **NOT** try the experiments out first or adjust any of the instructions or volumes/amounts of chemicals.

You may **NOT** run successive sessions in order to accommodate all the candidates on an individual basis. This examination must run at the same time for **all** candidates. It is designed so that it can be carried out in any venue and **MUST BE** invigilated by staff members that **do not have a Life Sciences background**. Invigilators are to be carefully briefed before the examination on how to complete the grid for procedural and manipulative skills.

IT IS IMPORTANT THAT TEACHERS READ THROUGH THIS ENTIRE SET OF INSTRUCTIONS CAREFULLY BEFORE THE EXAMINATION.

SPECIAL ATTENTION IS DRAWN TO INSTRUCTIONS (AT THE END OF THIS DOCUMENT) TO BE GIVEN TO INVIGILATORS SO THEY CAN PERFORM THEIR DUTY ON THE DAY.

The following equipment is to be laid out for EACH candidate at each individual workstation:

THIS MUST BE DONE BEFORE THE 45 MINUTES NEEDED TO GO THROUGH THE INFORMATION WITH INVIGILATORS.

- 150 ml of 40% salt solution in a container
- six cylinders of potato with the same diameter
- 300 ml beaker of distilled water
- 10 ml syringe for transferring salt solution
- 10 ml syringe for transferring distilled water
- six small, clear plastic party cups
- permanent marking pen
- ruler
- sharp vegetable knife and cutting surface
- forceps
- access to timing device
- additional distilled water should be available
- paper towel
- thermometer

NOTES ABOUT THE APPARATUS AND MATERIALS

The items listed below are to be set out for **each** candidate at a dedicated workstation.

150 ml of 40% salt solution in a container. To make up the 40% salt solution, add 50 ml table salt to 500ml distilled water.

Six cylinders of potato with the same diameter. Using potatoes of same type, take a cork borer and, using the widest diameter, cut cylinders so you have six cores that are in excess of 20 mm (length) each.

300 ml distilled water in a beaker/container labelled 'distilled water'.

Two 10 ml syringes – these can be obtained cheaply from your local pharmacy or chemical supplier. Have some spares available in case some are problematic.

Six small, clear plastic cups – each candidate needs to have these available.

Permanent marking pen – any brand of marker.

Ruler – normal clear metric ruler of 30 cm as used by scholars is sufficient.

Sharp vegetable knife and cutting surface

Forceps

Timing device – any clock or watch provided by the candidate or the teacher. Wall clock is adequate. No cell phones.

Additional distilled water should be available.

Paper towel

Thermometer – alcohol one is sufficient for each candidate.

GENERAL INSTRUCTIONS

Candidates must supply their own pen, sharp HB pencil, metric ruler, eraser and calculator.

Candidates may be requested to bring their own marking pens if not supplied above.

Several skills are to be assessed in this examination. Attached is a suitable grid which can be photocopied and used on clipboards by the invigilators during the examination. Make sure that sufficient copies of the grid are made for each venue before you commence the examination.

The information contained in these grids **MUST** be transposed across to the front cover of EACH candidate's script after the completion of the examination. This needs to be checked by the Chief Invigilator at the school not just by the invigilator.

The completed original grids must be sent to the IEB in an envelope with the completed scripts. ARRANGE the scripts in examination number order (in packs of 20) and clearly record absentees on the forms supplied.

Invigilators are asked to please complete this after the examination on the front of the script.

EXAMINATION NUMBER:		
CRITERIA		
Following instructions	0	1
Container contents	0	1
Recording	0	1
TOTAL		(3)

EXAMINATION NUMBER:		
CRITERIA		
Following instructions	0	1
Container contents	0	1
Recording	0	1
TOTAL		(3)

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CRITERIA		
Following instructions	0	1
Container contents	0	1
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Container contents	0	1
Recording	0	1
TOTAL		(3)

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CRITERIA		
Following instructions	0	1
Container contents	0	1
Recording	0	1
TOTAL		(3)

An alternate method

[illegible]