

NAMIBIA SENIOR SECONDARY CERTIFICATE

BIOLOGY HIGHER LEVEL

8321/3

PAPER 3 Practical Test

2020

INSTRUCTIONS TO SUBJECT TEACHERS

(For preparation of laboratories)

HIGHER LEVEL

This document consists of **2** printed pages.



Republic of Namibia
MINISTRY OF EDUCATION, ARTS AND CULTURE

Teachers need to prepare the following solutions for the practical examination:

- 2% glucose solution – 100 cm³ is sufficient for 10 learners.
- 2% lactose solution – 100 cm³ is sufficient for 20 learners
- 2% starch solution – 100 cm³ is sufficient for 18 learners (once the starch solution has been made and the starch settles to the bottom, use only the relatively clear solution)
- 2% yeast solution – 100 cm³ is sufficient for 20 learners. Prepare fresh on the day of the examination with water at room temperature.

Each working station should contain the following:

- Test tube rack with 7 test tubes
- 4 x test tubes labelled **E**, **F**, **G** and **H** and filled with 5 cm³ of the following:
 - o **E** – 2% glucose solution
 - o **F** – 2% lactose solution
 - o **G** – 2% starch solution
 - o **H** – 2% glucose solution
- 2 x 150 cm³ glass beakers labelled “**hot water**” and “**cold water**”
- 2 x 250 cm³ glass beakers labelled “**20°C**” and “**40°C**”
- 2 x pieces of cotton wool (approximately 12 cm x 8 cm)
- 4 x rubber bands
- 3 x thermometers
- 1x marker pen
- 1x syringe of 5 cm³
- 2 x plastic droppers
- 4 x stirring rods
- 5 cm³ yeast solution in a beaker labelled “**yeast**”.
- 5 cm³ bromothymol blue solution labelled “**Bromothymol blue**”
- 1 x stop watch / view of a watch which also indicates seconds

Throughout the examination the teacher / invigilator needs to be able to supply the learners with the following:

- Boiling hot water
- Cold water from a fridge