NAMIBIA SENIOR SECONDARY CERTIFICATE

BIOLOGY ADVANCED SUBSIDIARY LEVEL

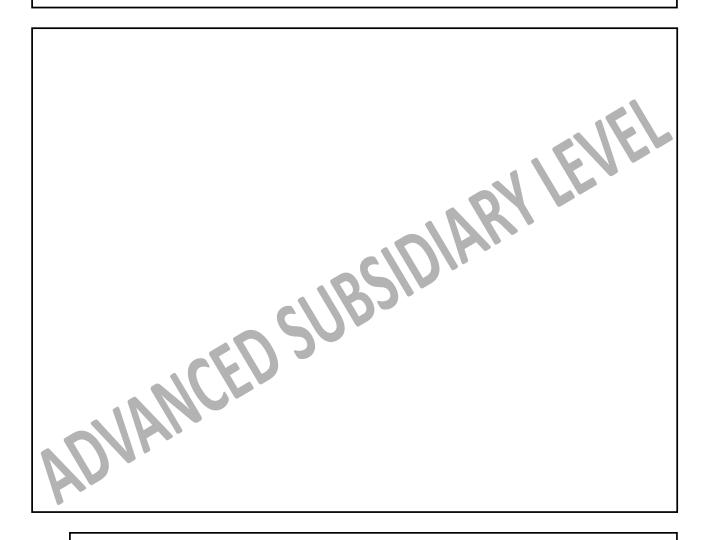
8223/3

PAPER 3 Advanced Practical Skills

2022

INSTRUCTIONS TO SUBJECT TEACHERS

(For preparation of laboratories)



This document consists of 4 printed pages.



Republic of Namibia
MINISTRY OF EDUCATION, ARTS AND CULTURE

Instruction to teachers

The following fresh materials need to be **obtained in good** time before the practical examination to provide accurate results:

- 0.5 g of yeast per candidate. One 10 g sachet is sufficient for exactly 20 candidates (buy fresh to ensure that the yeast is active/before expiry date).
- Test the distilled water with Universal Indicator to ensure that the pH is close to 7.0.

Teachers should ensure that they can provide learners with warm water of 45°C – 50°C for a water-bath.

Material for Question 2

Material	quantity	✓
250 cm³ beaker labelled "water-bath"	1	
250 cm³ beaker labelled "distilled water" and filled with 100 cm³ distilled water	1	
400 cm³ beaker labelled "for washing" filled with 400 cm³ of tap water	1	
Test-tube (150 × 20 mm)	6	
Six-hole test-tube rack	1	
Dropper bottle filled with 5 cm³ of Universal Indicator solution labelled 'Universal Indicator solution'	1	
Marker pen	1	
Glass stirring rod (label 5 stirring rods A - E and one non-labelled stirring rod) Label glass stirring rod with self-adhesive labels 10 × 20 mm or not larger than 16 × 32 mm.	6	
50 cm³ beaker filled with 30 cm³ of glucose solution labelled "beaker 1 – glucose solution	1	
Empty 50 cm³ beakers labelled "beaker 2, beaker 3, beaker 4 and beaker 5"	4	
50 cm³ beaker labelled "yeast" containing 0.5 g of yeast	1	
Stopwatch	1	
5 cm³ syringe	2	
10 cm ³ syringe	2	
Tripod stand with a wire gauze to hold and support the water-bath	1	
Thermometer ranging from 0 – 100°C	1	

Preparation of glucose solution

Dissolve 10 g of glucose in 100 cm³ of distilled water. 100 cm³ of glucose solution is sufficient for 3 candidates.

Material for Question 2

Material	quantity	√
Pre-prepared microscope slide of a transverse section of a dicotyledonous leaf	1	
Access to a light microscope with an eyepiece graticule and stage micrometer slide (with scale division of 0.1 mm)		

REPORT FORM Republic of Namibia NAMIBIA SENIOR SECONDARY CERTIFICATE

	NAMIBIA SEN	HOR SECONDARY CERT	IFICATE	
вю	LOGY ADVANCED SU	BSIDIARY LEVEL	8223/3	
PAP	ER 3 Advanced Practical Sl	kills		
Qu	estion Paper & Examination	n Security Declaration		
Re	gion	Date		
Се	ntre Number	Centre Name		
Pri	ncipal (full name, print)			
Не	ad of Examination Centre (full name, print)		
me	reby it is certified that this asures and conditions as st aminations'.			
Att	ached are the following deta	ails;		
1	1 Subjects Teacher's Results			
		e readings obtained in Qu o uestion paper clearly mark Centre Number.		
	•	ncket of candidates' scripts her's Results' as the cand out such information.		
2	The Candidate Numbers Please write them in their s	of candidates attending	each session were:	
	First Session	Second Session	Third Session	

- 3 The supervisor is required to give details of any difficulties experienced by particular candidates, giving Candidates' Names and Numbers. This should include any reference to:
 - any general difficulties encountered in making preparation
 - difficulties due to faulty apparatus or materials
 - accident to apparatus or materials
 - assistance with respect to colour-blindness

Other cases of hardship, e.g. illness, temporary disability, should be reported directly to DNEA through the regional offices on the normal 'Application for Special Consideration' form.

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F	Principal's Signature & Date
ŀ	Head of Examination Centre's Signature & Date:
S	Subject Teacher's Full Name:
ç	Subject Teacher's Signature & Date: