



KARNATAKA BOARD OF SECONDARY EDUCATION

JUNIOR SECONDARY SCHOOL LEAVING EXAMINATION (GRADE 9) 2015

Integrated Science 502/3

Paper 3: Practical Test

(INTERNAL AND EXTERNAL CANDIDATES)

Time: 1 hour

Marks: 20

Name of candidate:

Examination No.:

School / Centre:

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Instructions to candidates

- 1 Write your name, centre number and candidate number in the spaces provided at the top of this page.
- 2 There are two questions in this paper, answer both.
- 3 Write your answers in the spaces provided on the question paper.
- 4 Use sharp HB pencil where you are required to draw. Coloured pencils and crayons should not be used.
- 5 Show steps in any calculations and record all results and observations in the spaces provided.

Information for candidates

The number of marks is shown in brackets [] at the end of each question or part of the question.

Cell phones are not allowed in this examination room.

For examiners use	
1	
2	
Total	

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

QUESTION 1

In this experiment you will test two food samples for the presence of starch and protein.

You are provided with two test tubes labelled **S1** and **S2** containing food samples suspended in water and two empty test tubes also labelled **S1** and **S2** respectively.

(a) Put half of the contents of **S1** in the test tube labelled **S1**.

Put half of the contents of **S2** in the test tube labelled **S2**.

Test the contents of each of the two test tubes **S1** and **S2** for the presence of starch.

(i) Record your results in the table below:

	Observation after testing for starch	Conclusion
S1		
S2		

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[4]

(ii) Describe how you carried out the starch test on each sample.

.....

.....

[1]

- (b) Another nutrient found in food is protein. To test for the presence of protein, biuret reagent is used.

When biuret reagent is added to a food sample containing protein, the biuret reagent turns purple from blue.

Test the remaining food samples in **S1** and **S2** for the presence of protein by adding three drops of biuret solution to each.

- (i) Record your results in the table below.

	Observation after testing for protein	Conclusion
S1		
S2		

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[4]

- (ii) Describe how you carried out the test for protein on each sample.

.....

..... [1]

[Total: 10 marks]

QUESTION 2

In this experiment, you will measure the mass of different volumes of a liquid **P**.

You are provided with a 50cm³ measuring cylinder, a sample of liquid **P** in a beaker labelled **A**, an electronic balance and an empty beaker labelled **B**.

- (a) Measure the mass of the empty beaker labelled **B** and record the mass.

Mass of beaker **B** = [1]

- (b) Measure 10cm³ of liquid **P** using the measuring cylinder. Pour the 10cm³ of liquid **P** in the beaker labelled **B** and measure the mass of the beaker plus liquid **P**. Record the mass obtained.

Mass of beaker **B** plus liquid **P** = [1]

- (c) Calculate the mass of 10cm³ of liquid **P**.

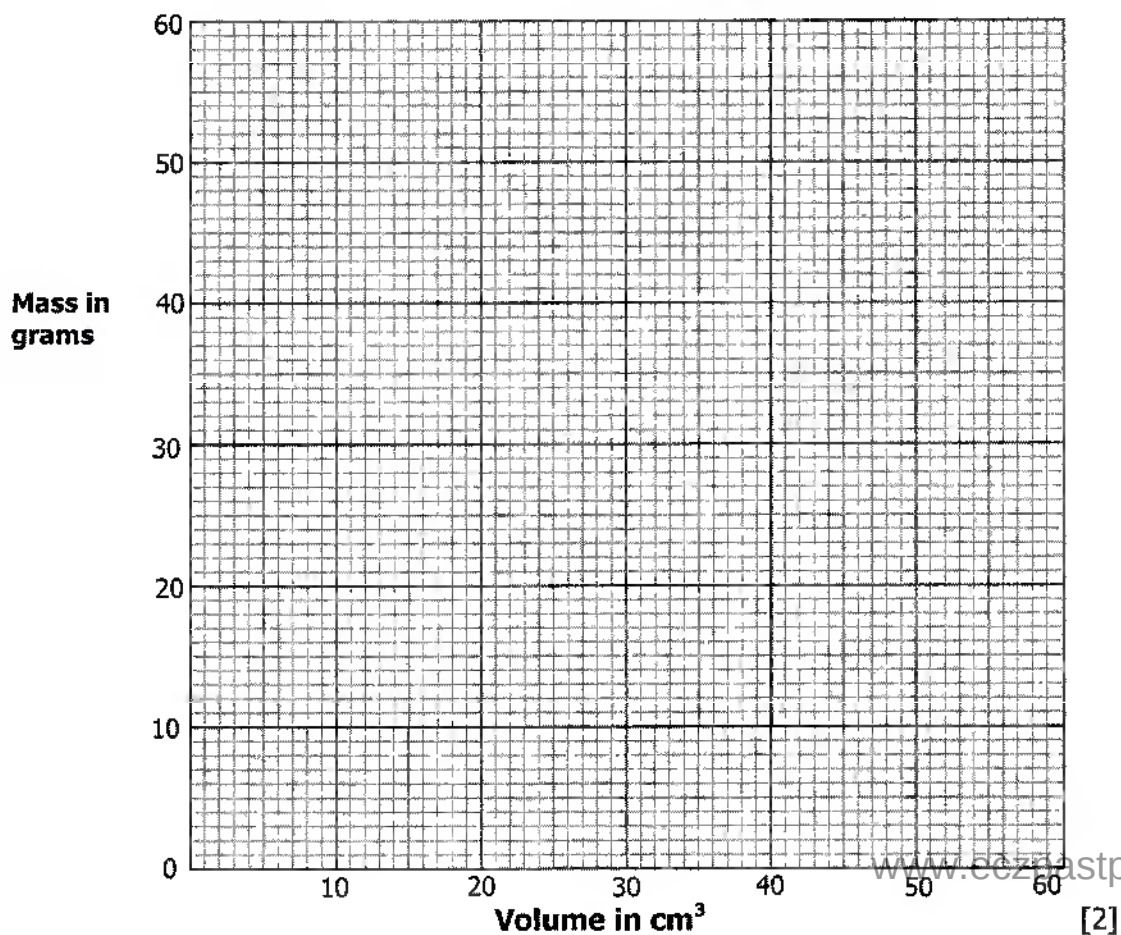
Mass of liquid **P** = [1]

- (d) Repeat step (b) above for different volumes of liquid **P** as shown in the table below. For each, calculate the mass of the liquid **P** and record your results in the table below.

Volume of P in cm ³	Mass of beaker plus liquid P in grams	Mass of liquid P in grams
20		
30		
40		
50		

[4]

- (e) On the grid below, plot a graph of mass of liquid **P** against volume of liquid **P**.



- (f) What physical quantity is represented by the gradient of the graph of mass against volume?

[1]

[Total: 10 marks]