UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2009 question paper

for the guidance of teachers

0652 PHYSICAL SCIENCE

0652/05 Paper 5 (Practical Test), maximum raw mark 30

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1 **(a)** recording the refractive index ; [1]

(d) 5 suitable drawings ;
   Give ONE mark if only 4 ; [2]

   Table
   angles of **i** are about 60, 55, 40, 30 and 20 and **r** values ;
   ONE mark if only 4 values ; [2]

   angles of **r** decrease appropriately ; [1]

(e) Graph
   scale ;
   plotting ;
   suitable curve ; [3]

(f) correctly read from graph ; [1]

(g) both sines correct, estimating if necessary ;
   if clearly not from the table provided do not allow ratio correctly calculated ; [2]

(h) suitable comment ; looking for some idea of accuracy of experiment. [1]

(i) if the refractive index is greater, then angles of refraction would be smaller ; or vice versa
   the denser the medium the greater the ray is bent ; [2]

[Total: 15]

2 **(a)** accept anything between 0.03 and 0.08 ;   [1]

(c) results for all three ;
value for **B** is half **A** within 2 drops ;
value for **C** is half **B** within 2 drops ;
value for **C** within 2 drops of Supervisors value ;

if **A** is larger than 20, 2 drops becomes 3 drops   [4]

(d) most concentrated is **A** ;
needs the largest no. of drops ;   [2]

(e) brown ppt. ;   [1]

(f) **(i)** white ppt. ;   [1]

    (ii) dirty white, grey or cloudy (ppt. not necessary here as reaction is slow) ;   [1]

   (iii) green ppt. ;   [1]

(g) one mark for iron(II) and one for sulfate ;   [2]

(h) count drops into a measuring cylinder to suitable volume (at least 5 cm^3) ;
divide by number of drops ;   [2]

[Total: 15]