2015 AUSTRALIAN SCIENCE OLYMPIAD EXAM  
PHYSICS – ANSWER BOOKLET FOR SECTION B

TO BE COMPLETED BY THE STUDENT. USE CAPITAL LETTERS.

**Student Name:** ...........................................................................................................

**Home Address:** ...........................................................................................................

......................................................................................................................... Post Code: ............

**Telephone:** (........) ............................................................................................... **Mobile:** ...................

**E-Mail:** ...................................................................................................................... Date of Birth: ....../....../......

□ Male □ Female  

**Year 10 □ Year 11 □ Other: .......**

**Name of School:** ...................................................................................................... **State:** ...........

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To be eligible for selection for the Australian Science Olympiad Summer School, students must be able to hold an Australian passport by the time of team selection (January 2016).

If you do not complete your contact details above it may not be possible for you to get an offer of a place at the Australian Science Olympiad Summer School.

The Australian Olympiad teams in Biology, Chemistry, Earth and Environmental Science and Physics will be selected from students participating in the Australian Science Olympiad Science Summer School.

Please note - students in Year 12 in 2015 are not eligible to attend the 2016 Australian Science Olympiad Summer School.

□ I am an Australian public high school student and would like to be considered for the Australian Science Olympiad Summer School Scholarship.

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Data is collected solely for the purpose of Science Summer School offers.  
To view the privacy policy:  
www.asi.edu.au

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**Examiners’ Use Only:**

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<tr>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
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Question 11
Question 11
Question 12

12(a)(i) 12(a)(ii)

12(b)
Question 12

12(c)

12(d)(i)

12(d)(ii)
Question 13

13(a)(i)

13(a)(ii)

13(b)(i)

Logarithm base 10 of increase in inside temperature

13(b)(ii)

13(b)(iii)
Question 13

13(b)(iv)

13(c)
14(a) Question 14

(i) slit width = 

(ii) wavelength = 

(iii) distance to screen = 

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Slit/Aperture</th>
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<tr>
<td>14(b)</td>
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<td>Example</td>
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<td>14(c)(i)</td>
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## Question 14

<table>
<thead>
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<th>Pattern</th>
<th>Slit/Aperture</th>
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<tr>
<td><img src="14(c)(ii).png" alt="Image" /></td>
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<td><img src="14(d).png" alt="Image" /></td>
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Integrity of Competition

If there is evidence of collusion or other academic dishonesty, students will be disqualified. Markers’ decisions are final.