ISEB
Independent Schools Examinations Board

COMMON ENTRANCE EXAMINATION AT 11+

SCIENCE

MARK SCHEME

Specimen Paper Mark Scheme

(for first examination in Autumn 2018)

This is a suggested, not a prescriptive, mark scheme.

28115SM04

Q.	Answer	Mark	Additional Guidance
1. (a)	skin covering	**1**	
(b)	air resistance	**1**	
(c)	Earth rotating on its axis	**1**	
(d)	a banana turning black	**1**	
(e)	residue	**1**	
(f)	translucent	**1**	
(g)	nocturnal	**1**	
(h)	frog	**1**	

<table>
<tr><th>Q.</th><th>Answer</th><th>Mark</th><th>Additional Guidance</th></tr>
<tr><td>2. (a)</td><td>
<table>
<tr><th rowspan="2">organism</th><th rowspan="2">description</th><th colspan="3">method of reproduction</th></tr>
<tr><th>sexual</th><th>asexual</th><th>sexual and asexual</th></tr>
<tr><td>amoeba</td><td>a single-celled animal

when it reaches a certain size it splits into two</td><td></td><td>✓</td><td></td></tr>
<tr><td>potato plant</td><td>a flowering plant

it produces tubers which can grow into new potato plants</td><td></td><td></td><td>✓</td></tr>
<tr><td>sheep</td><td>a mammal

gives birth to live young</td><td>✓</td><td></td><td></td></tr>
<tr><td>oak tree</td><td>a flowering plant

seeds are called acorns</td><td>✓</td><td></td><td></td></tr>
<tr><td>yeast</td><td>a single-celled fungus

reproduces by budding new cells</td><td></td><td>✓</td><td></td></tr>
</table>
</td><td>5</td><td></td></tr>
<tr><td>(b)</td><td>fertilisation</td><td>1</td><td></td></tr>
<tr><td>(c) (i)

(ii)</td><td>gestation

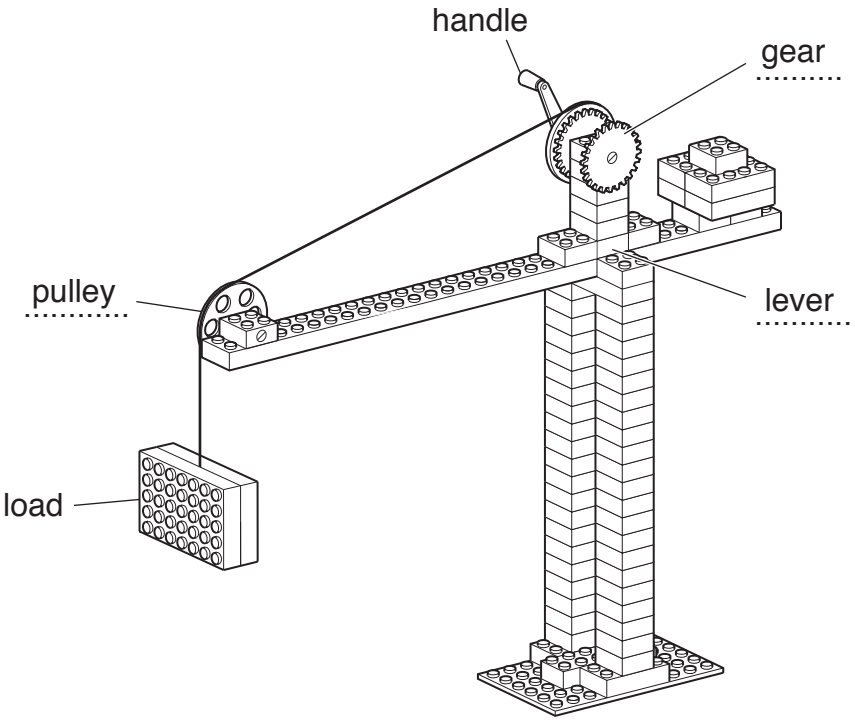
9 months/40 weeks</td><td>1

1</td><td></td></tr>
<tr><td>(d)</td><td>the elephant baby is much larger than the mouse

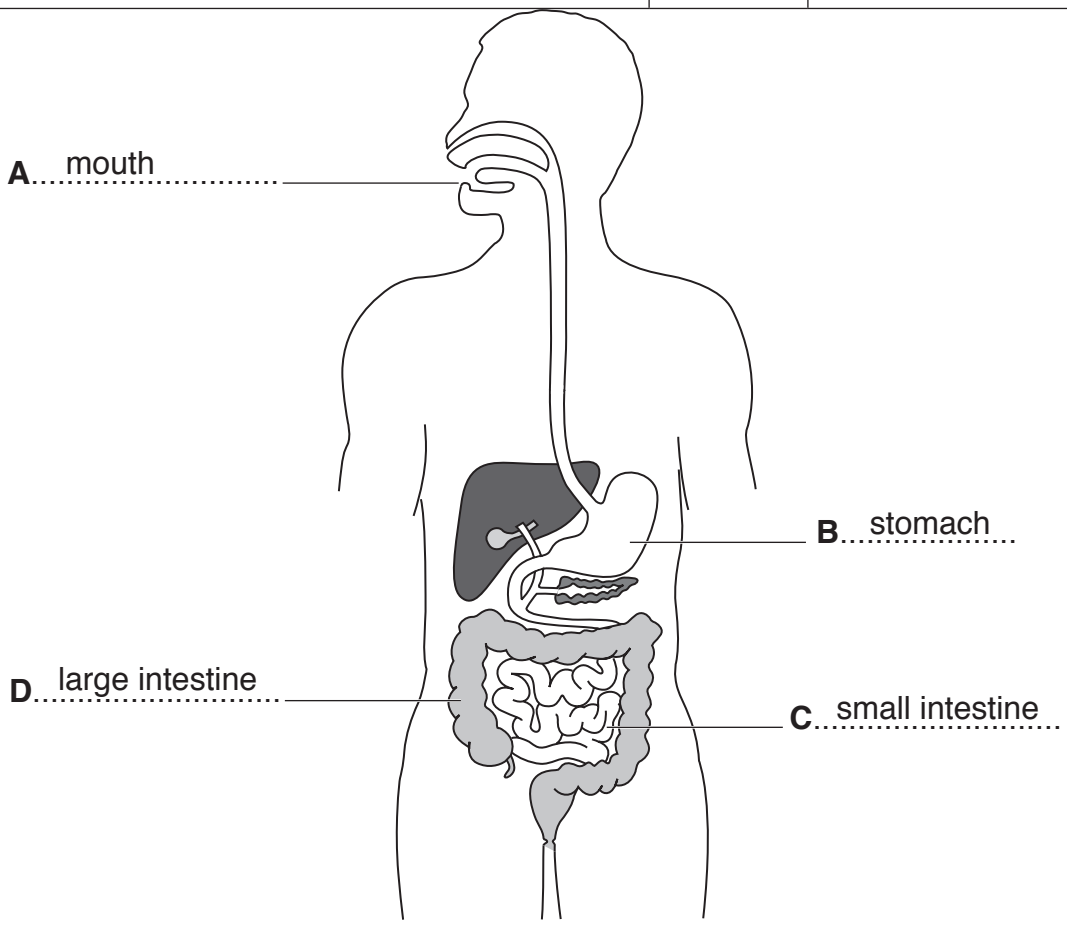
the elephant baby takes longer to grow than the mouse

the elephant baby has to be fully formed when born to move with the herd

the mouse is cared for in a nest when it is born</td><td>3</td><td>any three suggestions</td></tr>
</table>

Q.	Answer	Mark	Additional Guidance
3. (a) (i)	dissolves	**6**	
(ii)	soluble		
(iii)	solution		
(iv)	solute solvent		
(v)	insoluble		
(b)	use hotter water stir	**2**	
(c)	vitamins, fibre, water	**2**	any two suggestions
4. (a)		**3**	
(b)	*gear:* the cog turned by the handle engages with the cog which reels in the cable *lever:* the load a long way from a pivot is balanced by a weight close to the pivot on the other side *pulley:* the horizontal pull of the cable is changed to a vertical upward force	**6**	accept answers showing an understanding of the components
(c)	scissors, crowbar	**2**	any two everyday objects

Q.	Answer	Mark	Additional Guidance
5. (a) (i)	thermometer shaded to 24 °C	**1**	
(ii)	keep her eyes level with reading on the thermometer take a correct reading of the scale measure at the flat part of meniscus	**2**	any two sensible suggestions
(b) (i)	points correctly plotted	**5**	$\frac{1}{2}$ mark each
(ii)	curve of best fit	**1**	
(c)	evaporation	**1**	
6. (a)	nylon polyester	**2**	accept 'wrinkle free cotton' if argued for in part (b)
(b)	*Yes:* wrinkled free cotton has been changed by man into a different material *or* *No:* cotton is a natural material produced by the cotton plant	**2**	either answer well argued
(c) (i)	*I am going to change* the cotton fibres, one before and one after treatment *I am going to measure* the load that can be added to the breaking point of the fibre *I am going to keep* the length of the fibre and width of the fibre *the same*	**4**	
(ii)	to ensure that the results are reliable	**1**	

Q.	Answer	Mark	Additional Guidance
7. (a)		4	
(b)	**A:** food chewed/saliva moistens/digestion starts	**2**	two suggestions for each part
	B: food churned/acid added/digestion continues	**2**	
	C: digestion continues/absorption begins	**2**	
	D: water absorbed/faeces stored	**2**	

Q.	Answer	Mark	Additional Guidance
8. (a)	**B** brightest **C** normal **D** bright **E** normal **F** out **G** out **H** dim	**7**	
(b)	adding a fuse using insulating materials around the wires using insulating materials in plugs keeping water away from electricity	**2**	any two sensible suggestions
Total		**80**	