Post Year 11 Winter Exam 2017 Extra work – MARK SCHEME

2014 H1

6 **(a)** **(i)** A – Nucleus; [1]
B – Cytoplasm; [1] [2]

2014 F1

4 Chloroplast – ✗; ✓; [2]
Cell wall – ✗; ✓; [2]
Cell membrane – ✓; [1]
Nucleus – ✗; [1] [6]

2017H1

(b) **(i)** Many branched ends; [1]

2017F1

7 **(a)** **(i)** **A** – Plant; [1]
B – Animal; [1] [2]

(ii) Nucleus; [1]

(b) **B** – cell wall; [1]
permanent vacuole; [1]
chloroplasts; [1] [3]

(c) (50 000 × 2) ÷ 500; [1]
200 (micrometres); [1] [2]

2016F1

1 **(a)** A – Objective [lens]; [1]
B – Focus [knob]; [1] [2]

(b) Eyepiece [lens]; [1]

(c) Stage would move (up or down); [1]

3 **(c)** **(i)** Cells clearly visible/seen; [1]

(ii) Animal; [1]

2016F2

(c) **(i)** **A** – nuclear membrane; [1]
B – chromosome; [1] [2]

(ii) Same number/4 chromosomes; [1]
Identical; [1] [2]

2016H2

6 **(a)** Nucleus; [1] **Accept**: Head;
Tail; [1] [2]

(b) **(i)** Sperm [head] entering/touching egg;
Accept: Described, e.g. Sperm attached to egg; [1]

2015F1

5 **(a)** A – cell wall; [1]

(b) **(i)** 80 (mm); [1]

(ii) 80 ÷ 200; Accept ECT using candidate's answer from **(b)(i)** ÷ 200 [1]
= 0.4 (mm); Accept correct computation using candidate's answer from **(b)(i)** [1] [2]

(c) Smaller; [1]

(d) Any **two** from:
Non-cellulose cell wall;
No nucleus/has loop of DNA;
Plasmids; (accept converse for onion cell) [2]

(e) Bacterium/bacterial; [1]

2015F2

1 **(a)** **(i)** A – tail; [1]

B – cell membrane; [1]

(ii) Enable sperm to swim (to egg); [1]

(b) oviduct; [1]

(c) zygote; [1]

6 **(a)** **(i)** red blood cell [1]

(ii) haemoglobin; no nucleus; biconcave/large surface area; (Any **two**) [2]

7 **(a)** Allele is a form of a gene/type of the same gene; [1]

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Different genders (A male, B female)/different sex chromosomes/
A–XY B–XX/different numbers of chromosomes (described); [1]

2014H2

7 **(a)** **(i)** Down syndrome; [1]

(ii) Extra chromosome; chromosome 21; [2]

(iii) 23 pairs of chromosomes; [1]

(iv) (X and Y) chromosomes present; [1]