

A-Level Biology

Past-Paper Exercise Sheets — Question Index

42 subtopics • 223 questions • 1067 marks

1.1 The microscope in cell studies

7 questions, 44 marks • multiple choice x5, long answer x2

Source	Q	Type	Marks
9700/11 N25	1	multiple choice	1
9700/12 N25	1	multiple choice	1
9700/13 N25	1	multiple choice	1
9700/14 N25	1	multiple choice	1
9700/14 N25	2	multiple choice	1
9700/33 N25	2	long answer	20
9700/34 N25	2	long answer	19

1.2 Cells as the basic units of living organisms

10 questions, 34 marks • multiple choice x8, calculation x2

Source	Q	Type	Marks
9700/11 N25	3	multiple choice	1
9700/11 N25	4	multiple choice	1
9700/12 N25	2	multiple choice	1
9700/12 N25	5	multiple choice	1
9700/13 N25	2	multiple choice	1
9700/13 N25	7	multiple choice	1
9700/14 N25	3	multiple choice	1
9700/14 N25	4	multiple choice	1
9700/22 N25	1	calculation	14
9700/24 N25	1	calculation	12

2.1 Testing for biological molecules

5 questions, 24 marks • multiple choice x4, short answer

Source	Q	Type	Marks
9700/11 N25	6	multiple choice	1
9700/12 N25	6	multiple choice	1
9700/13 N25	8	multiple choice	1
9700/14 N25	6	multiple choice	1
9700/33 N25	1	short answer	20

2.2 Carbohydrates and lipids

10 questions, 10 marks • multiple choice x10

Source	Q	Type	Marks
9700/11 N25	7	multiple choice	1
9700/11 N25	8	multiple choice	1
9700/11 N25	9	multiple choice	1
9700/11 N25	10	multiple choice	1
9700/12 N25	7	multiple choice	1
9700/13 N25	9	multiple choice	1
9700/13 N25	11	multiple choice	1
9700/13 N25	13	multiple choice	1
9700/14 N25	7	multiple choice	1
9700/14 N25	9	multiple choice	1

2.3 Proteins

7 questions, 20 marks • multiple choice x6, calculation

Source	Q	Type	Marks
9700/11 N25	11	multiple choice	1
9700/12 N25	10	multiple choice	1
9700/12 N25	11	multiple choice	1
9700/12 N25	12	multiple choice	1
9700/14 N25	11	multiple choice	1
9700/14 N25	12	multiple choice	1
9700/23 N25	2	calculation	14

3.1 Mode of action of enzymes

9 questions, 26 marks • multiple choice x7, calculation x2

Source	Q	Type	Marks
9700/11 N25	13	multiple choice	1
9700/11 N25	14	multiple choice	1
9700/12 N25	9	multiple choice	1
9700/12 N25	13	multiple choice	1
9700/13 N25	15	multiple choice	1
9700/14 N25	13	multiple choice	1
9700/14 N25	14	multiple choice	1
9700/21 N25	3	calculation	10
9700/23 N25	3	calculation	9

3.2 Factors that affect enzyme action

8 questions, 29 marks • multiple choice x7, short answer

Source	Q	Type	Marks
9700/11 N25	12	multiple choice	1
9700/12 N25	14	multiple choice	1
9700/12 N25	15	multiple choice	1
9700/12 N25	16	multiple choice	1
9700/13 N25	16	multiple choice	1
9700/13 N25	17	multiple choice	1
9700/14 N25	15	multiple choice	1
9700/31 N25	1	short answer	22

4.1 Fluid mosaic membranes

7 questions, 15 marks • multiple choice x6, calculation

Source	Q	Type	Marks
9700/11 N25	15	multiple choice	1
9700/12 N25	17	multiple choice	1
9700/12 N25	18	multiple choice	1
9700/13 N25	14	multiple choice	1
9700/13 N25	18	multiple choice	1
9700/14 N25	16	multiple choice	1
9700/21 N25	1	calculation	9

4.2 Movement into and out of cells

10 questions, 28 marks • multiple choice x8, calculation x2

Source	Q	Type	Marks
9700/11 N25	16	multiple choice	1
9700/11 N25	17	multiple choice	1
9700/11 N25	18	multiple choice	1
9700/12 N25	19	multiple choice	1
9700/13 N25	19	multiple choice	1
9700/13 N25	20	multiple choice	1
9700/14 N25	17	multiple choice	1
9700/14 N25	18	multiple choice	1
9700/23 N25	1	calculation	7
9700/54 N25	1	calculation	13

5.1 Replication and division of nuclei and cells

6 questions, 6 marks • multiple choice x6

Source	Q	Type	Marks
9700/11 N25	20	multiple choice	1
9700/12 N25	21	multiple choice	1
9700/13 N25	21	multiple choice	1
9700/13 N25	22	multiple choice	1
9700/14 N25	19	multiple choice	1
9700/14 N25	20	multiple choice	1

5.2 Chromosome behaviour in mitosis

7 questions, 20 marks • multiple choice x6, calculation

Source	Q	Type	Marks
9700/11 N25	19	multiple choice	1
9700/11 N25	21	multiple choice	1
9700/12 N25	22	multiple choice	1
9700/12 N25	23	multiple choice	1
9700/13 N25	23	multiple choice	1
9700/14 N25	21	multiple choice	1
9700/22 N25	1	calculation	14

6.1 Structure of nucleic acids and replication of DNA

7 questions, 21 marks • multiple choice x5, calculation x2

Source	Q	Type	Marks
9700/11 N25	23	multiple choice	1
9700/11 N25	24	multiple choice	1
9700/12 N25	24	multiple choice	1
9700/13 N25	25	multiple choice	1
9700/14 N25	22	multiple choice	1
9700/23 N25	4	calculation	6
9700/24 N25	3	calculation	10

6.2 Protein synthesis

10 questions, 22 marks • multiple choice x9, calculation

Source	Q	Type	Marks
9700/11 N25	22	multiple choice	1
9700/11 N25	25	multiple choice	1
9700/12 N25	25	multiple choice	1
9700/12 N25	26	multiple choice	1
9700/12 N25	27	multiple choice	1
9700/13 N25	26	multiple choice	1
9700/13 N25	27	multiple choice	1
9700/14 N25	23	multiple choice	1
9700/14 N25	24	multiple choice	1
9700/22 N25	3	calculation	13

7.1 Structure of transport tissues

8 questions, 32 marks • multiple choice x6, calculation, long answer

Source	Q	Type	Marks
9700/11 N25	26	multiple choice	1
9700/11 N25	27	multiple choice	1
9700/12 N25	28	multiple choice	1
9700/13 N25	28	multiple choice	1
9700/14 N25	26	multiple choice	1
9700/14 N25	27	multiple choice	1
9700/21 N25	5	calculation	8
9700/31 N25	2	long answer	18

7.2 Transport mechanisms

10 questions, 15 marks • multiple choice x9, calculation

Source	Q	Type	Marks
9700/11 N25	28	multiple choice	1
9700/11 N25	29	multiple choice	1
9700/12 N25	29	multiple choice	1
9700/12 N25	30	multiple choice	1
9700/12 N25	31	multiple choice	1
9700/13 N25	29	multiple choice	1
9700/13 N25	30	multiple choice	1
9700/14 N25	28	multiple choice	1
9700/14 N25	30	multiple choice	1
9700/24 N25	6	calculation	6

8.1 The circulatory system

7 questions, 31 marks • multiple choice x5, calculation, short answer

Source	Q	Type	Marks
9700/11 N25	30	multiple choice	1
9700/11 N25	33	multiple choice	1
9700/12 N25	32	multiple choice	1
9700/13 N25	31	multiple choice	1
9700/14 N25	31	multiple choice	1
9700/23 N25	6	calculation	20
9700/24 N25	5	short answer	6

8.2 Transport of oxygen and carbon dioxide

7 questions, 26 marks • multiple choice x5, calculation x2

Source	Q	Type	Marks
9700/11 N25	31	multiple choice	1
9700/12 N25	33	multiple choice	1
9700/12 N25	34	multiple choice	1
9700/13 N25	32	multiple choice	1
9700/14 N25	33	multiple choice	1
9700/21 N25	2	calculation	12
9700/22 N25	6	calculation	9

8.3 The heart

5 questions, 24 marks • multiple choice x4, calculation

Source	Q	Type	Marks
9700/11 N25	32	multiple choice	1
9700/12 N25	35	multiple choice	1
9700/13 N25	33	multiple choice	1
9700/14 N25	34	multiple choice	1
9700/23 N25	6	calculation	20

9.1 The gas exchange system

8 questions, 23 marks • multiple choice x6, calculation x2

Source	Q	Type	Marks
9700/11 N25	34	multiple choice	1
9700/11 N25	35	multiple choice	1
9700/12 N25	36	multiple choice	1
9700/12 N25	37	multiple choice	1
9700/13 N25	34	multiple choice	1
9700/14 N25	35	multiple choice	1
9700/21 N25	6	calculation	9
9700/24 N25	4	calculation	8

10.1 Infectious diseases

9 questions, 37 marks • multiple choice x7, calculation x2

Source	Q	Type	Marks
9700/11 N25	5	multiple choice	1
9700/11 N25	36	multiple choice	1
9700/11 N25	37	multiple choice	1
9700/12 N25	38	multiple choice	1
9700/13 N25	36	multiple choice	1
9700/13 N25	37	multiple choice	1
9700/14 N25	36	multiple choice	1
9700/22 N25	2	calculation	12
9700/24 N25	2	calculation	18

10.2 Antibiotics

4 questions, 13 marks • multiple choice x2, calculation x2

Source	Q	Type	Marks
9700/11 N25	38	multiple choice	1
9700/14 N25	37	multiple choice	1
9700/22 N25	4	calculation	7
9700/23 N25	5	calculation	4

11.1 The immune system

2 questions, 2 marks • multiple choice x2

Source	Q	Type	Marks
9700/11 N25	40	multiple choice	1
9700/12 N25	39	multiple choice	1

11.2 Antibodies and vaccination

7 questions, 7 marks • multiple choice x7

Source	Q	Type	Marks
9700/11 N25	39	multiple choice	1
9700/12 N25	40	multiple choice	1
9700/13 N25	39	multiple choice	1
9700/13 N25	40	multiple choice	1
9700/14 N25	38	multiple choice	1
9700/14 N25	39	multiple choice	1
9700/14 N25	40	multiple choice	1

12.1 Energy

3 questions, 21 marks • calculation x2, multiple choice

Source	Q	Type	Marks
9700/13 N25	24	multiple choice	1
9700/41 N25	7	calculation	9
9700/41 J25	1	calculation	11

12.2 Respiration

4 questions, 37 marks • calculation x3, short answer

Source	Q	Type	Marks
9700/42 N25	1	short answer	9
9700/44 N25	9	calculation	12
9700/41 J25	1	calculation	11
9700/41 J25	2	calculation	5

13.1 Photosynthesis as an energy transfer process

3 questions, 34 marks • calculation x3

Source	Q	Type	Marks
9700/41 N25	3	calculation	13
9700/44 N25	10	calculation	7
9700/41 J25	4	calculation	14

14.1 Homeostasis in mammals

6 questions, 62 marks • calculation x4, long answer, short answer

Source	Q	Type	Marks
9700/41 N25	5	calculation	13
9700/41 N25	9	calculation	6
9700/42 N25	6	long answer	11
9700/44 N25	6	calculation	13
9700/41 J25	6	short answer	9
9700/41 J25	7	calculation	10

14.2 Homeostasis in plants

4 questions, 38 marks • calculation x3, short answer

Source	Q	Type	Marks
9700/22 N25	5	calculation	5
9700/44 N25	8	calculation	8
9700/52 N25	1	short answer	18
9700/52 N25	2	calculation	7

15.1 Control and coordination in mammals

4 questions, 37 marks • calculation x2, short answer, long answer

Source	Q	Type	Marks
9700/41 N25	5	calculation	13
9700/42 N25	10	short answer	10
9700/44 N25	1	long answer	8
9700/41 J25	10	calculation	6

15.2 Control and coordination in plants

2 questions, 23 marks • calculation x2

Source	Q	Type	Marks
9700/51 N25	1	calculation	18
9700/52 N25	3	calculation	5

16.1 Passage of information from parents to offspring

5 questions, 56 marks • calculation x3, short answer x2

Source	Q	Type	Marks
9700/41 N25	1	short answer	9
9700/41 N25	4	calculation	11
9700/42 N25	5	short answer	14
9700/44 N25	2	calculation	10
9700/44 N25	5	calculation	12

16.2 The roles of genes in determining the phenotype

1 question, 13 marks • calculation

Source	Q	Type	Marks
9700/41 J25	3	calculation	13

16.3 Gene control

2 questions, 19 marks • calculation, short answer

Source	Q	Type	Marks
9700/24 N25	3	calculation	10
9700/41 N25	1	short answer	9

17.1 Variation

1 question, 13 marks • calculation

Source	Q	Type	Marks
9700/41 N25	2	calculation	13

17.2 Natural and artificial selection

3 questions, 33 marks • calculation x2, short answer

Source	Q	Type	Marks
9700/41 N25	4	calculation	11
9700/42 N25	4	short answer	6
9700/41 J25	5	calculation	16

17.3 Evolution

2 questions, 22 marks • short answer, calculation

Source	Q	Type	Marks
9700/44 N25	4	short answer	9
9700/41 J25	3	calculation	13

18.1 Classification

3 questions, 33 marks • calculation x3

Source	Q	Type	Marks
9700/41 N25	2	calculation	13
9700/44 N25	7	calculation	10
9700/41 J25	9	calculation	10

18.2 Biodiversity

2 questions, 28 marks • short answer, calculation

Source	Q	Type	Marks
9700/42 N25	8	short answer	12
9700/41 J25	5	calculation	16

18.3 Conservation

3 questions, 33 marks • calculation x2, short answer

Source	Q	Type	Marks
9700/41 N25	6	calculation	11
9700/42 N25	8	short answer	12
9700/44 N25	7	calculation	10

19.1 Principles of genetic technology

3 questions, 34 marks • calculation x2, short answer

Source	Q	Type	Marks
9700/41 N25	8	calculation	9
9700/42 N25	5	short answer	14
9700/44 N25	3	calculation	11

19.2 Genetic technology applied to medicine

1 question, 13 marks • calculation

Source	Q	Type	Marks
9700/41 J25	3	calculation	13

19.3 Genetically modified organisms in agriculture

1 question, 9 marks • calculation

Source	Q	Type	Marks
9700/41 N25	8	calculation	9