Skill code	Skill
K1	Demonstrating knowledge and understanding of physics by making accurate statements
K2	Providing descriptions and explanations, and integrating knowledge
K3	Applying knowledge of physics to new situations, interpreting information, and solving problems
S1	Planning or designing experiments/investigations to test given hypotheses or to illustrate given effects
S2	Selecting information from a variety of sources
S3	Presenting information appropriately in a variety of forms
S4	Processing information/data (using calculations and units, where appropriate)
S5	Making predictions based on evidence/information
S6	Drawing valid conclusions and giving explanations supported by evidence/justification
S7	Identifying sources of uncertainty and suggesting improvements to experimental procedures

2016 Advanced Higher Physics Question Paper						
Question	Part	Course Content	Skills assessed	Maximum mark	A-type Marks	
1	(a)	Kinematic relationships	K3	3		
	(b)	Kinematic relationships	K3	3		
2	(a)(i)	Angular motion	K2	1		
	(a)(ii)	Angular motion	K1	1		
	(b)(i)(A)	Angular motion	K3	2		
	(b)(i)(B)	Angular motion	K3	3		
	(b)(i)(C)	Angular motion	\$4	3	2	
	(b)(ii)	Angular motion	S5	1		
3	(a)	Gravitation	K3 56	3		
	(b)(i)	Gravitation	K3	3	3	
	(b)(ii)	Gravitation	K2	3	3	
	(a)	Stellar physics	K3	3		
4	(b)	Stellar physics	K3	3		
5	(c)	Stellar physics	K1	1		
	(a)(i)	General relativity	K1	1		
	(a)(ii)	General relativity	K1	1		
5	(b)(i)	General relativity	S5	1		
5	(b)(ii)	General relativity	S5	1		
	(c)	General relativity	S6	2		
6		Introduction to quantum theory	K2	3	2	
7	(a)(i)	Introduction to quantum theory	S4	3		
	(a)(ii)	Introduction to guantum theory	S2	1		
	(b)(i)	Introduction to quantum theory	S6	2	2	
	(b)(ii)	Introduction to quantum theory	S3	1	1	
	(a)(i)	Introduction to quantum theory	K1	1		
	(a)(ii)	Introduction to quantum theory	K2	1	1	
8	(b)(i)	Introduction to quantum theory	K3	3		
	(b)(;;)	Introduction to quantum theory	32	1 2		
0	(D)(II)	Introduction to quantum theory	K3	3	2	
	(D)(111)	Particles from coope	K2	3	Ζ	
	(a)	Particles from space	K3	2		
9	(D)(1)	Particles from space	K3	4	Z	
	(D)(11)	Particles from space	K3	2		
	(D)(111)	Particles from space	56	2	Z	
	(a)(i)	Simple harmonic motion	K1	1		
	(a)(11)	Simple harmonic motion	54	2	1	
10	(D)(1)	Simple harmonic motion	K3	3		
10	(D)(11)	Simple harmonic motion	K3	3		
	(D)(111)	Simple harmonic motion	K3	3		
	(C)(1)	Simple harmonic motion	51	1	1	
	(C)(11)	Simple narmonic motion	53	1		
11	(a)	waves	K3 K3	4	1	
	(b)	Waves	S6	1	1	
	(a)	Polarisation	K2	1		
12	(b)	Polarisation	K2	2	1	
	(c)	Polarisation	K2	2	1	
	(d)	Polarisation	S6	1	1	
	(a)	Fields	K3	2		
	(b)(i)	Fields	K3	3	2	
13	(b)(ii)	Fields	K3	3		
	(b)(:::)	Fields	<u> </u>		1	
	(D)(111)	rie(us	22	L 7	1	

14	(a)	Fields	K3	3	
	(b)(i)	Uncertainties	K3	1	
	(b)(ii)	Uncertainties	K3	3	
	(b)(iii)	Uncertainties	S4	2	
	(c)	Fields	S7	1	1
	(a)(i)	Circuits	S4	3	2
15	(a)(ii)	Electromagnetic radiation	K3	3	
	(b)	Uncertainties	S7	1	1
	(a)	Rotational dynamics	K3	3	
16	(b)(i)	Rotational dynamics	S3	3	1
	(b)(ii)	Rotational dynamics	S4	3	2
	(C)	Rotational dynamics	K2	3	2

1. This question paper was set pre-2020, and so

i) the total number of extended-response marks is 140 rather than 155

ii) the targets for percentages of marks assigned to each skill area differ from those in post-2019 question papers

iii) the approach to marking changed for some question types following the publication of updated Physics:general marking principles in 2017.

		2017 Advanced Higher Physics Question	on Paper		
Question	Part	Course Content	Skills assessed	Maximum mark	A-type Marks
1	(a)	Kinematic relationships	K3	2	
•	(b)	Kinematic relationships	K3	3	
	(a)(i)	Angular motion	S3	1	
	(a)(ii)	Angular motion	S3	1	
2	(a)(iii)(A)	Angular motion	S4	2	1
	(a)(iii)(B)	Angular motion	S4	1	1
	(b)	Angular motion	K2	2	2
	(c)	Simple harmonic motion	S3	3	1
	(a)	Rotational dynamics	K3	3	
	(b)(i)	Rotational dynamics	K3	3	
3	(b)(ii)	Rotational dynamics	K3	3	
	(b)(iii)	Angular motion	K3	5	1
	(C)	Rotational dynamics	K3	5	2
	(a)(i)	Gravitation	K3	2	
	(a)(ii)	Gravitation	K3	3	
4	(b)(i)	Gravitation	K1	1	
	(b)(ii)	Cravitation	S4	1	1
	(D)(II)	Gravitation	K3	3	2
5		Gravitation	K2	3	2
	(a)	Stellar physics	K1	2	
	(b)(i)	Stellar physics	S6	1	1
,	(b)(ii)	Stellar physics	K1	1	
0	(h)(:::)	Ctaller shusies	S4	1	1
	(D)(III)	Stellar physics	K3	3	
	(c)	Stellar physics	S4	2	1
	(a)	Introduction to quantum theory	S6	2	1
7	(b)(i)	Introduction to quantum theory	K3	3	
	(b)(ii)	Introduction to quantum theory	K3	3	
	(a)	Simple harmonic motion	K2	1	
	(b)(i)	Simple harmonic motion	S4	2	
8	(b)(ii)	Simple harmonic motion	S4	3	
	(b)(iii)	Simple harmonic motion	S4	2	2
	(C)	Simple harmonic motion	S6	2	2
	(a)(i)	Waves	K3	1	
	(a)(ii)	Waves	K3	4	3
	(a)(iii)	Waves	K3	3	
9	(b)	Waves	S4	3	1
	(c)(i)	Waves	K2	1	1
	(c)(ii)	Waves	S4	1	
	(a)	Interference	K2	2	1
	(b)	Interference	K2	2	1
10	(c)(i)	Interference	K3	3	
	(c)(ii)	Uncertainties	K3	5	
	(c)(iii)	Uncertainties	S7	1	1
	(a)	Fields	K1	1	
	(b)(i)	Fields	K3	3	1

$11 \qquad \begin{array}{c} (b)(ii) & Fields \\ (b)(iii) & Fields \\ \hline (b)(iv) & Fields \\ \hline (b)(iv) & Fields \\ \end{array} \\ 12 \qquad \begin{array}{c} (a) & Particles from s \\ \hline (b) & Particles from s \\ \hline (c) & Particles from s \\ \hline (c) & Particles from s \\ \hline (d) & Circuits \\ \hline (b)(i) & Circuits \\ \hline (b)(i) & Circuits \\ \hline (b)(ii)(A) & Circuits \\ \hline (b)(ii)(B) & Circuits \\ \hline (c) & Circuits \\ \hline (a)(i) & Circuits \\ \hline (a)(i) & Circuits \\ \hline (b) & Circuits \\ \hline (c)(i) & Circ$	Fields	K3	3		
	(b)(iii)	Fields	S6	1	
	$(\mathbf{b})(\mathbf{i}_{1})$	Fields	S4	1	1
	(0)(10)	Fields	K3	3	2
	(a)	Particles from space	S6	1	
12	(b)	Particles from space	K3	3	
12	(C)	Particles from space	K2	2	2
	(d)	Particles from space	K2	2	2
	(a)	Circuits	K3	2	
	(b)(i)	Circuits	S1	1	
12	$(\mathbf{b})(\mathbf{i}\mathbf{i})(\mathbf{A})$	Circuits	S2	1	
13	(D)(II)(A)		S4	1	
	(b)(ii)(B)	Circuits	S6	1	
	(C)	Circuits	K2	3	2
	(a)(i)	Circuits	K2	1	1
	(a)(ii)	Circuits	K2	1	1
14	(b)	Circuits	K3	3	
14	(c)(i)	Circuite	S2	1	
			K3	3	
	(c)(ii)	Circuits	K2	1	1

1. This question paper was set pre-2020, and so

i) the total number of extended-response marks is 140 rather than 155

ii) the targets for percentages of marks assigned to each skill area differ from those in post-2019 question papers

iii) the approach to marking changed for some question types following the publication of updated Physics:general marking principles in 2017.

	2018 Advanced Higher Physics Question Paper						
Question	Part	Course Content	Skills assessed	Maximum mark	A-type Marks		
1	(a)	Kinematic relationships	K3	3			
	(b)	Kinematic relationships	K3	3			
	(a)(i)	Angular motion	K2	1			
2	(a)(ii)	Angular motion	K3	3			
	(a)(iii)	Angular motion	K3	3			
	(b)(i)	Angular motion	K3	2			
	(b)(ii)	Angular motion	S4	2			
	(b)(iii)	Angular motion	K2	2	1		
	(a)	Rotational dynamics	K3	2			
2	(b)	Rotational dynamics	K3	3			
3	(c)(i)	Rotational dynamics	K3	4			
	(c)(ii)	Rotational dynamics	K3	3			
	(a)(i)	Gravitation	K3	3			
4	(a)(ii)	Gravitation	S4	3	3		
	(b)	Gravitation	K3	3			
	(a)	General relativity	K2	1	1		
_	(b)(i)	General relativity	K3	3			
C	(b)(ii)	General relativity	K2	1			
	(C)	General relativity	S4	3	2		
6		Stellar physics	K2	3	2		
	(a)(i)	Introduction to quantum theory	S6	1			
	(a)(ii)	Introduction to quantum theory	K3	3			
7	(a)(iii)	Introduction to quantum theory	K2	1	1		
	(a)(iv)	Introduction to quantum theory	K3	4	3		
	(b)	Introduction to quantum theory	S6	2	2		
	(a)(i)	Stellar physics	K1	1			
	(a)(ii)	Stellar physics	S2	2	1		
	(b)	Particles from space	K1	1			
8	(c)(i)	Particles from space	S4	2	2		
	(c)(ii)(A)	Particles from space	S6	1	1		
	(c)(ii)(B)	Particles from space	S6	1	1		
	(d)	Particles from space	K2	2	2		
	(a)(i)	Simple harmonic motion	K3	2			
	(a)(ii)	Simple harmonic motion	K3	3	2		
9	(a)(iii)	Simple harmonic motion	K3	3			
	(a)(iv)	Simple harmonic motion	S4	3			
	(b)	Simple harmonic motion	S3	2	2		
	(a)(i)	Waves	K3	3			
10	(a)(ii)	Waves	S6	1	1		
10	(b)(i)	Waves	K3	2			
	(b)(ii)	Electromagnetic radiation	S4	2			
	(a)	Interference	K1	1			
4.4	(b)	Interference	K3	4			
	(C)	Uncertainties	S7	1	1		
	(d)	Interference	S6	2	2		
	(a)(i)	Polarisation	K2	2			

12	(a)(ii)	Polarisation	S5	1	
	(b) (i)	Polarisation	K3	3	
	(b)(ii)	Polarisation	S6	1	1
13	(a)	Fields	K1	1	
	(b)(i)	Fields	S4	2	2
	(b)(ii)	Fields	K3	3	
	(b)(iii)	Fields	K3	3	
	(b)(iii)		S4	2	2
	(a)	Circuits	S4	1	
	(b)(i)	Circuits	S4	2	
14	(b)(ii)	Uncertainties	K3	4	3
	(C)	Data Analysis	S2	1	1
	(d)	Uncertainties	K2	3	2
	(a)	Circuits	K3	3	
15	(b)	Circuits	K3	2	
15	(c)(i)	Circuits	K3	3	
	(c)(ii)	Circuits	<u>S</u> 6	2	2

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iii) the approach to marking changed for some question types following the publication of updated Physics:general marking principles in 2017.

		2019 Advanced Higher Physics Question Pa	aper		
Question	Part	Course Content	Skills assessed	Maximum mark	A-type Marks
1	(a)	Kinematic relationships	K3	3	
1	(b)	Kinematic relationships	K3	3	
	(a)(i)	Angular motion	K3	3	
2	(a)(ii)	Angular motion	K2	1	1
	(b)(i)	Angular motion	S3	2	
	(b)(ii)	Angular motion	K2	2	2
	(a)	Rotational dynamics	K3	2	
3	(b)(i)	Rotational dynamics	K2	1	1
4 5 6	(b)(ii)	Rotational dynamics	K3	3	
4		Angular motion/Rotational dynamics	K2	3	2
5	(a)	Gravitation	K1`	1	
	(b)	Gravitation	K3	3	
	(C)	Gravitation	K3	4	2
	(a)	General relativity	K1	1	
	(b)(i)	General relativity	K1	1	
6	(b)(ii)	General relativity	S3	1	
	(c)(i)	General relativity	S4	2	
	(c)(ii)(A)	General relativity	S4	2	
	(c)(ii)(B)	General relativity	S3	2	2
	(a)(i)	Stellar physics	S5	1	
	(a)(ii)(A)	Stellar physics	K1	1	
7	(a)(ii)(B)	Stellar physics	K2	1	1
/	(b)(i)	Stellar physics	K3	3	
	(b)(ii)	Stellar physics	K3	3	
	(C)	Stellar physics	K1	1	
	(a)	Introduction to quantum theory	K3	3	
8	(b)	Units, prefixes and scientific notation	S4	3	1
0	(c)	Introduction to quantum theory	K3	3	
	(C)		K2	1	1
9		Introduction to quantum theory	K2	3	2
	(a)(i)(A)	Particles from space	K3	3	
	(a)(i)(B)	Angular motion	K3	3	
10	(a)(ii)	Particles from space	S5	3	2
	(b)	Particles from space	K2	2	2
	(C)	Particles from space	S6	2	2
	(a)(i)	Simple harmonic motion	K3	2	
	(a)(ii)	Simple harmonic motion	K3	3	
11	(a)(iii)	Simple harmonic motion	S3	3	1
	(b)(i)	Simple harmonic motion	S6	1	1
	(b)(ii)	Simple harmonic motion	K3	3	2
	(a)(i)	Interference	K2	1	1
	(a)(ii)	Waves	S5	2	2
	(b)(i)	Waves	S4	2	
17	(b)(ii)	Uncertainties	S4	4	
	(c)(i)	Waves	S4	3	
	(c)(ii)(A)	Uncertainties	S7	1	
	(c)(ii)(B)	Uncertainties	S7	1	
	(c)(iii)	Uncertainties	S7	1	1

	(a)(i)	Interference	K3	4	
	(a)(ii)	Interference	S7	1	1
13	(b)	Interference	K2	2	2
	(c)(i)	Interference	K3	3	
	(c)(ii)	Interference	S4	1	1
	(a)(i)	Fields	K3	2	
14	(a)(ii)	Fields	K3	3	2
	(b)	Fields	K2	2	2
	(a)	Fields	S6	1	
15	(b)(i)	Fields	K3	3	
1.5	(b)(ii)	Fields	S4	2	
	(b)(iii)	Fields	S6	2	2
	(a)(i)	Circuits	S1	1	
16	(a)(ii)	Circuits	S4	2	
	(a)(iii)	Circuits	K3	3	
	(b)(i)	Circuits	K3	3	
	(b)(ii)	Circuits	S5	2	2

1. This question paper was set pre-2020, and so

i) the total number of extended-response marks is 140 rather than 155

ii) the targets for percentages of marks assigned to each skill area differ from those in post-2019 question papers

iii) the approach to marking changed for some question types following the publication of updated Physics:general marking principles in 2017.

2022 Advanced Higher Physics Question Paper						
Question	Part	Course Content	Skills assessed	Maximum mark	A-type Marks	
	(a)(i)	Kinematic relationships	K3	3		
1	(a)(ii)	Kinematic relationships	K3	3		
	(b)	Kinematic relationships	S3	1	1	
	(a)(i)	Angular motion	K3	3		
2	(a)(ii)	Angular motion	K3	3		
Ζ	(b)(i)	Angular motion	K2	2	1	
	(b)(ii)	Angular motion	K2	2	2	
3 4 5	(a)	Rotational dynamics	K3	3		
	(b)(i)	Rotational dynamics	K3	3		
	(b)(ii)	Rotational dynamics	K3	4		
	(C)	Angular motion	K2	2	1	
	(a)	Gravitation	K3	2		
4 5 6 7	(b)	Gravitation	K3	3		
	(C)	Gravitation	K3	3	2	
	(d)	Gravitation	S6	1	1	
	(e)	Gravitation	S4	2		
	(a)	General relativity	K3	3		
5	(b)	Stellar physics	K1	1		
	(c)	Challen abusias Units, profiles and esignific notation	K3	4	2	
	(C)	stellar physics, onits, prenxes and scientific notation	S4	1		
	(d)	Stellar physics	K2	3	2	
6	(a)	Introduction to quantum theory	K1	1		
	(b)	Introduction to quantum theory	K2	2	2	
	(C)	Introduction to quantum theory	K3	3		
7		Introduction to quantum theory	K2	3	2	
	(a)(i)	Introduction to quantum theory	K3	3		
0	(a)(ii)(A)	Introduction to quantum theory	S6	1	1	
ð	(a)(ii)(B)	Introduction to quantum theory	K2	2	2	
ŏ	(b)	Introduction to quantum theory	S5	1	1	
	(a)(i)	Particles from space	S4	1		
	(a)(il)	Particles from space	S4	1		
	(b)(i)	Particles from space	K3	2		
9	(b)(ii)(A)	Particles from space	K3	3		
	(b)(ii)(B)	Angular motion	K3	3		
	(b)(iii)	Angular motion	K3	3		
	(C)	Particles from space	S6	2	2	
	(a)	Simple harmonic motion	K1	1		
	(b)	Simple harmonic motion	K3	2	2	
10	(c)(i)	Simple harmonic motion	S4	2		
	(c)(ii)	Simple harmonic motion	K3	3		
	(c)(iii)	Simple harmonic motion	S3	2	1	
	(a)(i)	Waves	K3	3		
11	(a)(il)	Waves	K1	2		
	(b)	Wayes	K3	2	1	
			S4	1	1	
	(a)(i)	Interference	K3	3		
	(a)(il)	Data Analysis	K3	3		
12	(b)	Uncertainties	S4	1	1	
	(c)	Uncertainties	S6	2	2	
	(d)	Interference	K2	2	2	
	(a)	Polarisation	K1	1		
	(b)(i)	Polarisation	S4	1		

13 14 15 16 Note	(b)(ii)	Polarisation	S3	3	
	(b)(jiji)	Polarication	S2	1	1
12	(0)(11)	Fotal Isation	S4	1	1
10	$(\mathbf{b})(\mathbf{i}_{\mathbf{i}})$	Polarication	S2	1	
13 14 15 16	(D)(IV)	Fotal Isation	S4	1	
	(b)(v)	Polarisation	S5	1	1
	(c)(i)	Evaluation and significance of experimental uncertaintie	S7	1	
	(c)(ii)	Evaluation and significance of experimental uncertaintie	S7	1	1
14 15	(a)	Fields	K3	3	
	(b)	Fields	S3	1	
	(C)	Fields	K2	2	1
	(d)(i)	Kinematic relationships	K3	2	
	(d)(ii)	Fields	K3	4	4
	(a)(i)	Fields	K3	3	
15	(a)(ii)	Fields	S4	3	1
13 14 15 16 Note	(b)	Electromagnetic radiation	S4	2	1
	(a)	Circuits	K1	1	
	(b)(i)	Circuits	K3	2	1
	(b)(jj)	Circuite	S2	1	
16	(0)(11)	circuits	S4	2	1
	(c)(i)	Circuits	K3	3	
	(c)(ii)	Circuits	S2	1	
	(C)(II)	Circuits	S4	1	
Note				-	

The project was not part of the course assessment in this year.