| 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 | Applying knowledge of physics to new situations, interpreting information, and solving problems |

| 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 | S4 | 3 | 2 |
| | (b)(ii) | Angular motion | S5 | 1 | |
| 3 | (a) | Gravitation | K3 | 3 | |
| | | | S6 | 1 | |
| | (b)(i) | Gravitation | K3 | 3 | 3 |
| | (b)(ii) | Gravitation | K2 | 3 | 3 |
| 4 | (a) | Stellar physics | K3 | 3 | |
| | (b) | Stellar physics | K3 | 3 | |
| | (c) | Stellar physics | K1 | 1 | |
| 5 | (a)(i) | General relativity | K1 | 1 | |
| | (a)(ii) | General relativity | K1 | 1 | |
| | (b)(i) | General relativity | S5 | 1 | |
| | (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 quantum theory | S2 | 1 | |
| | (b)(i) | Introduction to quantum theory | S6 | 2 | 2 |
| | (b)(ii) | Introduction to quantum theory | S3 | 1 | 1 |
| 8 | (a)(i) | Introduction to quantum theory | K1 | 1 | |
| | (a)(ii) | Introduction to quantum theory | K2 | 1 | 1 |
| | (b)(i) | Introduction to quantum theory | K3 | 3 | |
| | | | S2 | 1 | |
| | (b)(ii) | Introduction to quantum theory | K3 | 3 | |
| | (b)(iii) | Introduction to quantum theory | K2 | 3 | 2 |
| 9 | (a) | Particles from space | K3 | 2 | |
| | (b)(i) | Particles from space | K3 | 4 | 2 |
| | (b)(ii) | Particles from space | K3 | 2 | |
| | (b)(iii) | Particles from space | S6 | 2 | 2 |
| 10 | (a)(i) | Simple harmonic motion | K1 | 1 | |
| | (a)(ii) | Simple harmonic motion | S4 | 2 | 1 |
| | (b)(i) | Simple harmonic motion | K3 | 3 | |
| | (b)(ii) | Simple harmonic motion | K3 | 3 | |
| | (b)(iii) | Simple harmonic motion | K3 | 3 | |
| | (c)(i) | Simple harmonic motion | S1 | 1 | 1 |
| | (c)(ii) | Simple harmonic motion | S3 | 1 | |
| 11 | (a) | Waves | K3 | 4 | 1 |
| | (b) | Waves | K3 | 3 | 2 |
| | | | S6 | 1 | 1 |
| 12 | (a) | Polarisation | K2 | 1 | |
| | (b) | Polarisation | K2 | 2 | 1 |
| | (c) | Polarisation | K2 | 2 | 1 |

| | | | | | |
|---|---|---|---|---|---|
| | (d) | Polarisation | S6 | 1 | 1 |
| 13 | (a) | Fields | K3 | 2 | |
| | (b)(i) | Fields | K3 | 3 | 2 |
| | (b)(ii) | Fields | K3 | 3 | |
| | | | S4 | 1 | 1 |
| | (b)(iii) | Fields | S3 | 2 | 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 |
| 15 | (a)(i) | Circuits | S4 | 3 | 2 |
| | (a)(ii) | Electromagnetic radiation | K3 | 3 | |
| | (b) | Uncertainties | S7 | 1 | 1 |
| 16 | (a) | Rotational dynamics | K3 | 3 | |
| | (b)(i) | Rotational dynamics | S3 | 3 | 1 |
| | (b)(ii) | Rotational dynamics | S4 | 3 | 2 |
| | (c) | Rotational dynamics | K2 | 3 | 2 |

Notes

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.

2. The project was part of the course assessment in this year, and the target of 30% A-type marks was taken over both project and question paper components of the course assessment, rather than the question paper alone.

| 2017 Advanced Higher Physics Question Paper | | | | | |
|---|---|---|---|---|---|
| **Question** | **Part** | **Course Content** | **Skills assessed** | **Maximum mark** | **A-type Marks** |
| 1 | (a) | Kinematic relationships | K3 | 2 | |
| | (b) | Kinematic relationships | K3 | 3 | |
| 2 | (a)(i) | Angular motion | S3 | 1 | |
| | (a)(ii) | Angular motion | S3 | 1 | |
| | (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 |
| 3 | (a) | Rotational dynamics | K3 | 3 | |
| | (b)(i) | Rotational dynamics | K3 | 3 | |
| | (b)(ii) | Rotational dynamics | K3 | 3 | |
| | (b)(iii) | Angular motion | K3 | 5 | 1 |
| | (c) | Rotational dynamics | K3 | 5 | 2 |
| 4 | (a)(i) | Gravitation | K3 | 2 | |
| | (a)(ii) | Gravitation | K3 | 3 | |
| | (b)(i) | Gravitation | K1 | 1 | |
| | (b)(ii) | Gravitation | S4 | 1 | 1 |
| | | | K3 | 3 | 2 |
| 5 | | Gravitation | K2 | 3 | 2 |
| 6 | (a) | Stellar physics | K1 | 2 | |
| | (b)(i) | Stellar physics | S6 | 1 | 1 |
| | (b)(ii) | Stellar physics | K1 | 1 | |
| | (b)(iii) | Stellar physics | S4 | 1 | 1 |
| | | | K3 | 3 | |
| | (c) | Stellar physics | S4 | 2 | 1 |
| 7 | (a) | Introduction to quantum theory | S6 | 2 | 1 |
| | (b)(i) | Introduction to quantum theory | K3 | 3 | |
| | (b)(ii) | Introduction to quantum theory | K3 | 3 | |
| 8 | (a) | Simple harmonic motion | K2 | 1 | |
| | (b)(i) | Simple harmonic motion | S4 | 2 | |
| | (b)(ii) | Simple harmonic motion | S4 | 3 | |
| | (b)(iii) | Simple harmonic motion | S4 | 2 | 2 |
| | (c) | Simple harmonic motion | S6 | 2 | 2 |
| 9 | (a)(i) | Waves | K3 | 1 | |
| | (a)(ii) | Waves | K3 | 4 | 3 |
| | (a)(iii) | Waves | K3 | 3 | |
| | (b) | Waves | S4 | 3 | 1 |
| | (c)(i) | Waves | K2 | 1 | 1 |
| | (c)(ii) | Waves | S4 | 1 | |
| 10 | (a) | Interference | K2 | 2 | 1 |
| | (b) | Interference | K2 | 2 | 1 |
| | (c)(i) | Interference | K3 | 3 | |
| | (c)(ii) | Uncertainties | K3 | 5 | |
| | (c)(iii) | Uncertainties | S7 | 1 | 1 |
| 11 | (a) | Fields | K1 | 1 | |
| | (b)(i) | Fields | K3 | 3 | 1 |
| | (b)(ii) | Fields | K3 | 3 | |
| | (b)(iii) | Fields | S6 | 1 | |
| | (b)(iv) | Fields | S4 | 1 | 1 |
| | | | K3 | 3 | 2 |

| | | | | | |
|---|---|---|---|---|---|
| 12 | (a) | Particles from space | S6 | 1 | |
| | (b) | Particles from space | K3 | 3 | |
| | (c) | Particles from space | K2 | 2 | 2 |
| | (d) | Particles from space | K2 | 2 | 2 |
| 13 | (a) | Circuits | K3 | 2 | |
| | (b)(i) | Circuits | S1 | 1 | |
| | (b)(ii)(A) | Circuits | S2 | 1 | |
| | | | S4 | 1 | |
| | (b)(ii)(B) | Circuits | S6 | 1 | |
| | (c ) | Circuits | K2 | 3 | 2 |
| 14 | (a)(i) | Circuits | K2 | 1 | 1 |
| | (a)(ii) | Circuits | K2 | 1 | 1 |
| | (b) | Circuits | K3 | 3 | |
| | (c)(i) | Circuits | S2 | 1 | |
| | | | K3 | 3 | |
| | (c)(ii) | Circuits | K2 | 1 | 1 |

Notes

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.

2. The project was part of the course assessment in this year, and the target of 30% A-type marks was taken over both project and question paper components of the course assessment, rather than the question paper alone.

| 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 | |
| 2 | (a)(i) | Angular motion | K2 | 1 | |
| | (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 |
| 3 | (a) | Rotational dynamics | K3 | 2 | |
| | (b) | Rotational dynamics | K3 | 3 | |
| | (c)(i) | Rotational dynamics | K3 | 4 | |
| | (c)(ii) | Rotational dynamics | K3 | 3 | |
| 4 | (a)(i) | Gravitation | K3 | 3 | |
| | (a)(ii) | Gravitation | S4 | 3 | 3 |
| | (b) | Gravitation | K3 | 3 | |
| 5 | (a) | General relativity | K2 | 1 | 1 |
| | (b)(i) | General relativity | K3 | 3 | |
| | (b)(ii) | General relativity | K2 | 1 | |
| | (c) | General relativity | S4 | 3 | 2 |
| 6 | | Stellar physics | K2 | 3 | 2 |
| 7 | (a)(i) | Introduction to quantum theory | S6 | 1 | |
| | (a)(ii) | Introduction to quantum theory | K3 | 3 | |
| | (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 |
| 8 | (a)(i) | Stellar physics | K1 | 1 | |
| | (a)(ii) | Stellar physics | S2 | 2 | 1 |
| | (b) | Particles from space | K1 | 1 | |
| | (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 |
| 9 | (a)(i) | Simple harmonic motion | K3 | 2 | |
| | (a)(ii) | Simple harmonic motion | K3 | 3 | 2 |
| | (a)(iii) | Simple harmonic motion | K3 | 3 | |
| | (a)(iv) | Simple harmonic motion | S4 | 3 | |
| | (b) | Simple harmonic motion | S3 | 2 | 2 |
| 10 | (a)(i) | Waves | K3 | 3 | |
| | (a)(ii) | Waves | S6 | 1 | 1 |
| | (b)(i) | Waves | K3 | 2 | |
| | (b)(ii) | Electromagnetic radiation | S4 | 2 | |
| 11 | (a) | Interference | K1 | 1 | |
| | (b) | Interference | K3 | 4 | |
| | (c) | Uncertainties | S7 | 1 | 1 |
| | (d) | Interference | S6 | 2 | 2 |
| 12 | (a)(i) | Polarisation | K2 | 2 | |
| | (a)(ii) | Polarisation | S5 | 1 | |
| | (b) (i) | Polarisation | K3 | 3 | |
| | (b)(ii) | Polarisation | S6 | 1 | 1 |
| | (a) | Fields | K1 | 1 | |
| | (b)(i) | Fields | S4 | 2 | 2 |

| | | | | | |
|---|---|---|---|---|---|
| 13 | (b)(ii) | Fields | K3 | 3 | |
| | (b)(iii) | Fields | K3 | 3 | |
| | | | S4 | 2 | 2 |
| 14 | (a) | Circuits | S4 | 1 | |
| | (b)(i) | Circuits | S4 | 2 | |
| | (b)(ii) | Uncertainties | K3 | 4 | 3 |
| | (c) | Data Analysis | S2 | 1 | 1 |
| | (d ) | Uncertainties | K2 | 3 | 2 |
| 15 | (a) | Circuits | K3 | 3 | |
| | (b) | Circuits | K3 | 2 | |
| | (c)(i) | Circuits | K3 | 3 | |
| | (c)(ii) | Circuits | S6 | 2 | 2 |

Notes

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.

2. The project was part of the course assessment in this year, and the target of 30% A-type marks was taken over both project and question paper components of the course assessment, rather than the question paper alone.

| 2019 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 | K3 | 3 | |
| | (a)(ii) | Angular motion | K2 | 1 | 1 |
| | (b )(i) | Angular motion | S3 | 2 | |
| | (b)(ii) | Angular motion | K2 | 2 | 2 |
| 3 | (a) | Rotational dynamics | K3 | 2 | |
| | (b)(i) | Rotational dynamics | K2 | 1 | 1 |
| | (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 |
| 6 | (a) | General relativity | K1 | 1 | |
| | (b)(i) | General relativity | K1 | 1 | |
| | (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 |
| 7 | (a)(i) | Stellar physics | S5 | 1 | |
| | (a)(ii)(A) | Stellar physics | K1 | 1 | |
| | (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 | |
| 8 | (a) | Introduction to quantum theory | K3 | 3 | |
| | (b) | Units, prefixes and scientific notation | S4 | 3 | 1 |
| | (c) | Introduction to quantum theory | K3 | 3 | |
| | | | K2 | 1 | 1 |
| 9 | | Introduction to quantum theory | K2 | 3 | 2 |
| 10 | (a)(i)(A) | Particles from space | K3 | 3 | |
| | (a)(i)(B) | Angular motion | K3 | 3 | |
| | (a)(ii) | Particles from space | S5 | 3 | 2 |
| | (b) | Particles from space | K2 | 2 | 2 |
| | (c ) | Particles from space | S6 | 2 | 2 |
| 11 | (a)(i) | Simple harmonic motion | K3 | 2 | |
| | (a)(ii) | Simple harmonic motion | K3 | 3 | |
| | (a)(iii) | Simple harmonic motion | S3 | 3 | 1 |
| | (b)(i) | Simple harmonic motion | S6 | 1 | 1 |
| | (b)(ii) | Simple harmonic motion | K3 | 3 | 2 |
| 12 | (a)(i) | Interference | K2 | 1 | 1 |
| | (a)(ii) | Waves | S5 | 2 | 2 |
| | (b)(i) | Waves | S4 | 2 | |
| | (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 |
| 13 | (a)(i) | Interference | K3 | 4 | |
| | (a)(ii) | Interference | S7 | 1 | 1 |
| | (b) | Interference | K2 | 2 | 2 |
| | (c)(i) | Interference | K3 | 3 | |

| | | | | | |
|---|---|---|---|---|---|
| | (c)(ii) | Interference | S4 | 1 | 1 |
| 14 | (a)(i) | Fields | K3 | 2 | |
| | (a)(ii) | Fields | K3 | 3 | 2 |
| | (b) | Fields | K2 | 2 | 2 |
| 15 | (a) | Fields | S6 | 1 | |
| | (b)(i) | Fields | K3 | 3 | |
| | (b)(ii) | Fields | S4 | 2 | |
| | (b)(iii) | Fields | S6 | 2 | 2 |
| 16 | (a)(i) | Circuits | S1 | 1 | |
| | (a)(ii) | Circuits | S4 | 2 | |
| | (a)(iii) | Circuits | K3 | 3 | |
| | (b)(i) | Circuits | K3 | 3 | |
| | (b)(ii) | Circuits | S5 | 2 | 2 |

Notes

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.

2. The project was part of the course assessment in this year, and the target of 30% A-type marks was taken over both project and question paper components of the course assessment, rather than the question paper alone.

| 2022 Advanced Higher Physics Question Paper | | | | | |
|---|---|---|---|---|---|
| Question | Part | Course Content | Skills assessed | Maximum mark | A-type Marks |
| 1 | (a)(i) | Kinematic relationships | K3 | 3 | |
| | (a)(ii) | Kinematic relationships | K3 | 3 | |
| | (b) | Kinematic relationships | S3 | 1 | 1 |
| 2 | (a)(i) | Angular motion | K3 | 3 | |
| | (a)(ii) | Angular motion | K3 | 3 | |
| | (b)(i) | Angular motion | K2 | 2 | 1 |
| | (b)(ii) | Angular motion | K2 | 2 | 2 |
| 3 | (a) | Rotational dynamics | K3 | 3 | |
| | (b)(i) | Rotational dynamics | K3 | 3 | |
| | (b)(ii) | Rotational dynamics | K3 | 4 | |
| | (c) | Angular motion | K2 | 2 | 1 |
| 4 | (a) | Gravitation | K3 | 2 | |
| | (b) | Gravitation | K3 | 3 | |
| | (c) | Gravitation | K3 | 3 | 2 |
| | (d) | Gravitation | S6 | 1 | 1 |
| | (e) | Gravitation | S4 | 2 | |
| 5 | (a) | General relativity | K3 | 3 | |
| | (b) | Stellar physics | K1 | 1 | |
| | (c) | Stellar physics, Units, prefixes and scientific notation | K3 | 4 | 2 |
| | | | 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 |
| 8 | (a)(i) | Introduction to quantum theory | K3 | 3 | |
| | (a)(ii)(A) | Introduction to quantum theory | S6 | 1 | 1 |
| | (a)(ii)(B) | Introduction to quantum theory | K2 | 2 | 2 |
| | (b) | Introduction to quantum theory | S5 | 1 | 1 |
| 9 | (a)(i) | Particles from space | S4 | 1 | |
| | (a)(il) | Particles from space | S4 | 1 | |
| | (b)(i) | Particles from space | K3 | 2 | |
| | (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 |
| 10 | (a) | Simple harmonic motion | K1 | 1 | |
| | (b) | Simple harmonic motion | K3 | 2 | 2 |
| | (c)(i) | Simple harmonic motion | S4 | 2 | |
| | (c)(ii) | Simple harmonic motion | K3 | 3 | |
| | (c)(iii) | Simple harmonic motion | S3 | 2 | 1 |
| 11 | (a)(i) | Waves | K3 | 3 | |
| | (a)(il) | Waves | K1 | 2 | |
| | (b) | Waves | K3 | 2 | 1 |
| | | | S4 | 1 | 1 |
| 12 | (a)(i) | Interference | K3 | 3 | |
| | (a)(il) | Data Analysis | K3 | 3 | |
| | (b) | Uncertainties | S4 | 1 | 1 |
| | (c) | Uncertainties | S6 | 2 | 2 |
| | (d) | Interference | K2 | 2 | 2 |
| 13 | (a) | Polarisation | K1 | 1 | |
| | (b)(i) | Polarisation | S4 | 1 | |
| | (b)(ii) | Polarisation | S3 | 3 | |
| | (b)(iii) | Polarisation | S2 | 1 | 1 |
| | | | S4 | 1 | 1 |
| | (b)(iv) | Polarisation | S2 | 1 | |

| | | | | | |
|---|---|---|---|---|---|
| | (b)(iv) | Polarisation | S4 | 1 | |
| | (b)(v) | Polarisation | S5 | 1 | 1 |
| | (c)(i) | Evaluation and significance of experimental uncertainties | S7 | 1 | |
| | (c)(ii) | Evaluation and significance of experimental uncertainties | S7 | 1 | 1 |
| 14 | (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 |
| 15 | (a)(i) | Fields | K3 | 3 | |
| | (a)(ii) | Fields | S4 | 3 | 1 |
| | (b) | Electromagnetic radiation | S4 | 2 | 1 |
| 16 | (a) | Circuits | K1 | 1 | |
| | (b)(i) | Circuits | K3 | 2 | 1 |
| | (b)(ii) | Circuits | S2 | 1 | |
| | | | S4 | 2 | 1 |
| | (c)(i) | Circuits | K3 | 3 | |
| | (c)(ii) | Circuits | S2 | 1 | |
| | | | S4 | 1 | |

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

| 2023 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 | K3 | 2 | |
| | (b)(i) | Angular motion | K3 | 3 | |
| | (b)(ii) | Angular motion | K1 | 1 | |
| | (c) | Angular motion | K2 | 2 | 1 |
| 3 | (a) | Rotational dynamics | K3 | 2 | |
| | (b)(i) | Rotational dynamics | K3 | 4 | |
| | (b)(ii) | Rotational dynamics | K3 | 3 | |
| | | | S4 | 1 | |
| | (b)(iii) | Rotational dynamics | S6 | 1 | 1 |
| 4 | (a) | Gravitation | K3 | 2 | |
| | (b) | Gravitation | K3 | 4 | 2 |
| | (c)(i) | Gravitation | K3 | 3 | |
| | (c)(ii) | Gravitation | K2 | 1 | |
| | (c)(iii) | Gravitation | K3 | 3 | |
| | (c)(iv) | Gravitation | S5 | 1 | 1 |
| 5 | | General relativity | K2 | 3 | 2 |
| 6 | (a) | Stellar physics | K1 | 1 | |
| | (b)(i) | Stellar physics | K3 | 3 | |
| | (b)(ii) | Stellar physics | K1 | 1 | |
| | (c) | Stellar physics | K2 | 2 | 1 |
| | (d) | Stellar physics | K3 | 3 | |
| | | | S4 | 1 | |
| | (e) | Stellar physics | S3 | 1 | |
| 7 | (a)(i) | Introduction to quantum theory | K1 | 1 | |
| | (a)(ii) | Introduction to quantum theory | K3 | 3 | |
| | (a)(iii) | Introduction to quantum theory | S4 | 3 | |
| | (b) | Introduction to quantum theory | S4 | 2 | |
| 8 | (a)(i) | Introduction to quantum theory | S4 | 2 | |
| | (a)(ii) | Introduction to quantum theory | S4 | 3 | 3 |
| | (b)(i) | Fields | K3 | 2 | |
| | (b)(ii) | Introduction to quantum theory | K2 | 2 | 1 |
| 9 | (a)(i) | Particles from space | K3 | 2 | |
| | (a)(ii) | Particles from space | K2 | 1 | 1 |
| | (a)(iii) | Particles from space | K2 | 2 | 2 |
| | (b) | Introduction to quantum theory | K3 | 3 | 3 |
| | | Units, prefixes, and scientific notation | S4 | 1 | |
| 10 | (a) | Simple harmonic motion | K1 | 1 | |
| | (b)(i) | Simple harmonic motion | K3 | 2 | |
| | (b)(ii) | Simple harmonic motion | K3 | 3 | |
| | (c) | Fields | K3 | 4 | 4 |
| | (d) | Waves | K3 | 3 | |
| | (e) | Waves | K3 | 3 | |
| | (f) | Simple harmonic motion | S3 | 1 | 1 |
| 11 | (a)(i) | Interference | K1 | 1 | |
| | (a)(ii) | Interference | K1 | 1 | |
| | (b) | Interference | K3 | 3 | |
| | (c)(i) | Interference | S3 | 1 | 1 |
| | (c)(ii) | Interference | K2 | 1 | 1 |
| 12 | (a) | Polarisation | K1 | 1 | |
| | (b) | Polarisation | K3 | 3 | |
| | (c)(i) | Polarisation | K3 | 1 | |
| | | | S4 | 2 | 2 |
| | (c)(ii) | Polarisation | S6 | 1 | 1 |
| | (d) | Polarisation | S6 | 2 | 2 |

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|---|---|---|---|---|---|
| 13 | (a) | Fields | K3 | 4 | |
| | (b) | Fields | S3 | 2 | |
| | (c)(i) | Fields | K3 | 3 | |
| | (c)(ii)(A) | Rotational dynamics | S4 | 1 | |
| | | | K3 | 3 | 3 |
| | (c)(ii)(B) | Rotational dynamics | S6 | 2 | 1 |
| 14 | (a) | Fields | K3 | 2 | |
| | (b)(i) | Fields | S2 | 1 | |
| | | | S4 | 2 | 2 |
| | (b)(ii) | Data analysis | K2 | 1 | 1 |
| | (b)(iii) | Data analysis | K3 | 3 | |
| | (b)(iv) | Uncertainties | S7 | 1 | 1 |
| 15 | (a) | Circuits | K2 | 1 | 1 |
| | (b)(i) | Circuits | S4 | 2 | |
| | (b)(ii) | Circuits | S2 | 1 | |
| | | | K3 | 3 | |
| | (c) | Circuits | K2 | 1 | 1 |
| | (d)(i) | Circuits | S4 | 2 | |
| | (d)(ii) | Circuits | S6 | 2 | 2 |
| 16 | | Uncertainties/Data analysis/non-specific | K2 | 3 | 2 |

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

| 2024 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) | Angular motion | K3 | 2 | |
| | (b)(i) | Angular motion | S3 | 2 | |
| | (b)(ii) | Angular motion | K3 | 2 | |
| | (b)(iii) | Angular motion | K3 | 2 | |
| | (c) | Angular motion | K2 | 2 | 2 |
| 3 | (a) | Rotational dynamics | K3 | 2 | |
| | (b)(i) | Angular motion | K3 | 3 | |
| | (b)(ii) | Rotational dynamics | K3 | 3 | |
| | (c)(i) | Angular motion | S3 | 1 | |
| | (c)(ii) | Rotational dynamics | K2 | 1 | 1 |
| | (d) | Rotational dynamics | S4 | 2 | |
| 4 | (a) | Gravitation | K3 | 3 | |
| | (b)(i) | Gravitation | K3 | 3 | |
| | (b)(ii) | Gravitation | K2 | 2 | 2 |
| | (c) | Gravitation | S6 | 1 | 1 |
| 5 | (a)(i) | General relativity | K3 | 3 | |
| | (a)(ii) | General relativity | S4 | 2 | |
| | (b) | General relativity | S4 | 1 | |
| | (c)(i) | Angular motion | K3 | 3 | 3 |
| | (c)(ii) | General relativity | K2 | 2 | 2 |
| 6 | (a)(i) | Stellar physics | K3 | 3 | |
| | (a)(ii) | Stellar physics | K3 | 3 | |
| | (b)(i) | Stellar physics | K1 | 1 | |
| | (b)(ii) | Stellar physics | S6 | 1 | 1 |
| | (c) | Stellar physics | S6 | 1 | 1 |
| 7 | (a) | Introduction to quantum theory | K1 | 1 | |
| | (b)(i) | Introduction to quantum theory | K3 | 3 | |
| | (b)(ii) | Introduction to quantum theory | K2 | 1 | |
| | (c)(i) | Introduction to quantum theory | S2 | 1 | |
| | | | S4 | 2 | |
| | (c)(ii) | Introduction to quantum theory | S6 | 2 | 1 |
| 8 | (a)(i) | Particles from space | K2 | 2 | |
| | (a)(ii) | Particles from space | S4 | 1 | 1 |
| | | | K3 | 4 | 2 |
| | (b) | Particles from space | S2 | 1 | |
| | | | K2 | 1 | 1 |
| 9 | (a) | Simple harmonic motion (SHM) | K3 | 3 | |
| | (b)(i) | Simple harmonic motion (SHM) | K3 | 3 | |
| | (b)(ii) | Simple harmonic motion (SHM) | K3 | 2 | |
| | (b)(iii) | Simple harmonic motion (SHM) | K2 | 2 | 2 |
| | (c)(i) | Simple harmonic motion (SHM) | K1 | 1 | |
| | (c)(ii) | Simple harmonic motion (SHM) | S7 | 1 | 1 |
| 10 | (a)(i) | Waves | K3 | 4 | |
| | (a)(ii) | Waves | K3 | 3 | |
| | (a)(iii) | Waves | S6 | 1 | |
| | (b) | Angular motion | K3 | 2 | |
| | | | S4 | 1 | |
| 11 | (a) | Interference | K2 | 2 | 1 |
| | (b)(i) | Interference | K3 | 3 | |
| | | | S4 | 1 | |
| | (b)(ii) | Evaluation of significance of experimental uncertainties | S7 | 1 | 1 |
| | (c)(i) | Interference | K2 | 2 | 1 |
| | (c)(ii)(A) | Evaluation of significance of experimental uncertainties | K2 | 1 | 1 |
| | (c)(ii)(B) | Evaluation of significance of experimental uncertainties | K2 | 1 | 1 |
| 12 | (a) | Polarisation | S1 | 2 | |
| | (b) | Polarisation | K2 | 3 | 2 |

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|---|---|---|---|---|---|
| 13 | (a)(i) | Fields | K1 | 1 | |
| | (a)(ii) | Fields | K3 | 3 | |
| | (b)(i) | Fields | S4 | 2 | |
| | (b)(ii) | Fields | S6 | 1 | 1 |
| | (c)(i) | Fields | K3 | 4 | 2 |
| | (c)(ii) | Fields | S6 | 1 | 1 |
| 14 | (a) | Fields | S3 | 2 | 1 |
| | (b) | Fields | S4 | 2 | |
| | (c)(i) | Fields | K1 | 1 | |
| | (c)(ii) | Fields | K1 | 1 | |
| | (c)(iii) | Fields | S5 | 1 | 1 |
| 15 | | Fields | K2 | 3 | 2 |
| 16 | (a)(i) | Circuits | K1 | 1 | |
| | (a)(ii) | Circuits | K3 | 2 | |
| | | | S4 | 1 | |
| | (b) | Circuits | K2 | 2 | 2 |
| | (c)(i) | Circuits | K1 | 1 | |
| | (c)(ii) | Circuits | K3 | 3 | |
| 17 | (a)(i) | Uncertainties | K3 | 1 | |
| | (a)(ii) | Uncertainties | K3 | 2 | |
| | (b) | Data analysis | S4 | 3 | 2 |
| | (c) | Data analysis | K2 | 2 | 1 |

| 2025 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 | 4 | |
| 2 | (a)(i) | Angular motion | K3 | 3 | |
| | (a)(ii) | Rotational dynamics | K3 | 3 | |
| | (b) | Rotational dynamics | K2 | 2 | |
| | (c) | Rotational dynamics | K2 | 1 | 1 |
| 3 | (a) | Angular motion | K3 | 2 | |
| | (b) | Rotational dynamics | K3 | 3 | |
| | (c)(i) | Rotational dynamics | K1 | 1 | |
| | (c)(ii) | Rotational dynamics | K3 | 3 | |
| | (d) | Stellar physics | K2 | 3 | 2 |
| 4 | (a)(i) | Gravitation | K3 | 3 | |
| | (a)(ii) | Gravitation | S6 | 1 | 1 |
| | (b) | Gravitation | S4 | 3 | 2 |
| | (c) | General relativity | K2 | 2 | 2 |
| 5 | (a) | Stellar physics | K3 | 3 | |
| | (b)(i) | Stellar physics | K3 | 2 | |
| | (b)(ii) | Stellar physics | K2 | 2 | 1 |
| | (c) | Stellar physics | S6 | 3 | 2 |
| 6 | (a)(i) | Introduction to quantum theory | K1 | 1 | |
| | (a)(ii) | Introduction to quantum theory | S3 | 1 | 1 |
| | (b)(i) | Introduction to quantum theory | S2 | 1 | |
| | (b)(ii) | Stellar physics | K3 | 3 | |
| | (b)(iii) | Stellar physics | S6 | 1 | 1 |
| | (c)(i) | Introduction to quantum theory | K3 | 3 | |
| | (c)(ii) | Introduction to quantum theory | K2 | 1 | 1 |
| 7 | (a) | Particles from space | K1 | 1 | |
| | (b) | Particles from space | K2 | 2 | |
| | (c)(i) | Introduction to quantum theory | K3 | 1 | |
| | (c)(ii) | Introduction to quantum theory | K3 | 3 | |
| 8 | | Introduction to quantum theory | K2 | 3 | 2 |
| 9 | (a) | Rotational dynamics | K3 | 4 | |
| | (b)(i) | Simple harmonic motion (SHM) | K3 | 3 | |
| | (b)(ii) | Simple harmonic motion (SHM) | K3 | 3 | |
| | (b)(iii) | Simple harmonic motion (SHM) | K3 | 3 | |
| | (b)(iv) | Simple harmonic motion (SHM) | S3 | 3 | 1 |
| | (c) | Simple harmonic motion (SHM) | S6 | 1 | 1 |
| 10 | (a) | Waves | K3 | 2 | 2 |
| | | | S6 | 1 | 1 |
| | (b) | Waves | K3 | 3 | |
| | | | S3 | 1 | |
| | (c) | Circuits | K2 | 1 | 1 |
| 11 | (a)(i) | Interference | K1 | 1 | |
| | (a)(ii) | Interference | S1 | 1 | 1 |
| | (a)(iii) | Interference | K3 | 3 | |
| | (b)(i)(A) | Interference | K1 | 1 | |
| | (b)(i)(B) | Interference | K1 | 1 | |
| | (b)(ii) | Interference | K3 | 2 | |
| | (c)(i) | Interference | K3 | 2 | |
| | (c)(ii) | Interference | S7 | 1 | 1 |
| 12 | (a) | Polarisation | K1 | 1 | |
| | (b)(i) | Polarisation | K3 | 3 | 2 |
| | | | S4 | 1 | 1 |
| | (b)(ii) | Data analysis | S7 | 1 | |
| 13 | (a) | Fields | S3 | 1 | |
| | (b) | Fields | K3 | 2 | |
| | (c)(i) | Rotational dynamics | S4 | 3 | 3 |
| | (c)(ii) | Fields | K3 | 3 | |

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|---|---|---|---|---|---|
| | (d) | Fields | S6 | 2 | 1 |
| 14 | (a)(i) | Fields | K3 | 2 | |
| | (a)(ii) | Fields | S4 | 2 | |
| | | | K3 | 1 | |
| | (a)(iii) | Fields | K2 | 1 | 1 |
| | (b) | Fields | S4 | 4 | 2 |
| | (c) | Fields | K2 | 2 | |
| 15 | (a)(i) | Circuits | K2 | 2 | 1 |
| | (a)(ii) | Circuits | K3 | 3 | 2 |
| | (a)(iii) | Circuits | K3 | 3 | |
| | (b) | Circuits | S6 | 2 | 1 |
| | (c) | Circuits | S4 | 3 | |
| 16 | (a) | Data analysis | S2 | 1 | |
| | | | S4 | 2 | |
| | (b)(i) | Uncertainties | K3 | 3 | 3 |
| | | | S4 | 1 | |
| | (b)(ii) | Uncertainties | S7 | 1 | 1 |