A-LEVEL

General Studies A

Unit 4 (GENA4) A2 Science and Society
Mark scheme

2760
June 2015

Version V1 Final Mark Scheme

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk

Unit 4 (A2 Science and Society)

INTRODUCTION

The nationally agreed assessment objectives in the QCA Subject Criteria for General Studies are:

AO1	Demonstrate relevant knowledge and understanding applied to a range of issues, using skills from different disciplines.
AO2	Marshal evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.
AO3	Demonstrate understanding of different types of knowledge, appreciating their strengths and limitations.
AO4	Communicate clearly and accurately in a concise, logical and relevant way.

- The mark scheme will allocate a number or distribution of marks for some, or all, of the above objectives for each question according to the nature of the question and what it is intended to test.

- Mark schemes for individual questions worth more than just a few marks are usually based on **levels** (see further guidance below) which indicate different qualities that might be anticipated in the candidates' responses. The levels take into account a candidate's knowledge, understanding, arguments, evaluation and communication skills as appropriate.

- **Answers given in the mark scheme are not necessarily definitive. Other valid points must be credited, even if they do not appear in the mark scheme.**

Approximate distribution of marks across the questions and assessment objectives
for this unit (**GENA4**)

Question Numbers		Q1	Q2	Q3	Q4	AO marks for Sec. A	AO marks for Sec. B	AO marks for A+B
Assessment Objectives	**AO1**	3	3	2	2	10	8	18
	AO2	5	4	4	5	18	7	25
	AO3	2	2	3	2	9	5	14
	AO4	2	2	2	2	8	5	13
Total marks per question		**12**	**11**	**11**	**11**	**45**	**25**	**70**

Levels of Response marking

1. It is essential the **whole response is read** and allocated the level it **best fits**.

2. Marking should be positive, rewarding achievement rather than penalising for failure or omissions. The award of marks must be directly related to the marking criteria.

3. Levels are tied to specific skills. Examiners should **refer to the stated assessment objectives** (see above) when there is any doubt as to the relevance of a student's response. When deciding upon a mark in a level examiners should bear in mind the relative weightings of AOs (see AO grid above). For example, in Sections B essays, more weight should be given to AOs 1 and 2 than to AOs 3 and 4.

4. Use your professional judgement to select the level that **best** describes a student's work; assign each of the responses to the most appropriate level according to **its overall quality**, then allocate a single mark within the level. Levels of response mark schemes enable examiners to reward valid, high-ability responses which do not conform exactly to the requirements of a particular level. Length of response should be not be confused with quality: a short answer which shows a high level of conceptual ability, for example, must be recognised and credited at that level.

5. **Credit good specialist knowledge when it is applied appropriately to the question, but be aware that the subject is General Studies and responses should be addressed to the general reader. Relevant points that are well developed and substantiated should be well rewarded, as should be arguments that are supported with examples, and not just asserted.**

6. **Answers should be assessed at the level that is appropriate to the expected knowledge and skills of a post-16 General Studies student. Avoid applying greater demands to responses on topics that are more closely related to your own specialist knowledge.**

7. Levels of response mark schemes include either examples of possible students' responses or material which students typically might use. *Indicative content* is provided only as a guide for examiners, as students will produce a wide range of responses to each question. The *indicative content* is not intended to be exhaustive and any other valid points must be credited. Equally, candidates do not have to cover all points mentioned to reach the highest level.

Assessment of Quality of Written Communication (QWC)

Quality of written communication will be assessed in all units where longer responses are required by means of **Assessment Objective 4**. If you are hesitating between two levels, however, QWC may help you to decide.

Marking methods

All examiners **must** use the same marking methods. The following advice may seem obvious, but all examiners **must** follow it as closely as possible.

1. If you have any doubt about which mark to award, consult your Team Leader.

2. Refer constantly to the mark scheme throughout marking.

3. **Always** credit **accurate, relevant and appropriate** answers which are not given in the mark scheme.

4. Do **not** credit material irrelevant to the question, however impressive it might be.

5. If you are considering whether or not to award a mark, ask yourself… 'Is this student nearer those who have given a correct answer or those who have little idea?'

6. Read the guidance on the previous page about **Levels of Response marking**, and constantly refer to the **specific Level Descriptors** in the mark scheme.

7. **Use the full range of marks**. Don't hesitate to give full marks when the answer merits them (a maximum mark does not necessarily mean the 'perfect answer') or give no marks where there is nothing creditable.

8. No half marks or bonus marks can be given under any circumstances.

9. The key to good and fair marking is **consistency**. Once approved by your Team Leader, do **not** change your standard of marking.

Marking using QMS+ (red pen on script)

This unit will be marked on the actual script using a red pen. Scripts in your allocation will be posted to you from the school. The marks you award are recorded on the scripts and the marks for each question are entered into the QMS+ software.

1. Mark the full script in red pen.

2. **You must** annotate in the body of the response to acknowledge a creditworthy point.

3. At the end of the response **you must** indicate the level and mark and write a summative comment (see MMS).

    NB. Schools/Colleges can request scripts back post results (via Access to Scripts); it is therefore **essential** that the annotation/comments are appropriate, relevant and relate to the mark scheme.

4. Enter the marks for each question in to the QMS+ software.

5. Your assessments will be monitored to ensure you are marking to a consistent standard.

6. Any blank pages in the answer book should be 'ticked' to indicate you have checked the whole booklet for a response.

7. Your administration and meeting deadlines will also be monitored.

Levels mark scheme for SECTION A (for Qu's 01 to 04)

Level of response	Mark range	Criteria and descriptors for Assessment Objectives 1–4
LEVEL 3	**10 – 11 (12)**	**Good response to question** Good to comprehensive knowledge and understanding demonstrating overall grasp of the range and nature of issues (AO1); capacity to interpret evidence and sustained ability to present relevant arguments, analysis and exemplification, focusing on the main points of the question (AO2); some understanding of different types of knowledge, with some appreciation of their limitation in seeking to reach a reasoned and logical conclusion (AO3); ability to communicate clearly and accurately in a fluent and organised manner (AO4).
LEVEL 2	**5 – 9**	**Reasonable attempt to answer question** Modest to quite good knowledge and understanding demonstrating some grasp of the nature of some key issues (AO1); moderate range of arguments, analysis and exemplification covering some of the main points of the question (AO2); limited understanding of different types of knowledge but some ability to work towards a conclusion (AO3); mostly clear and accurate communication and organisation (AO4).
LEVEL 1	**1 – 4**	**Limited response to question** Restricted / narrow knowledge and understanding of key issues (AO1); simple, perhaps mostly unexplained points – or very narrow range – with limited interpretation or analysis and exemplification (AO2); lacking in understanding of different types of knowledge with little or no evidence of ability to work towards a conclusion (AO3); variable levels of communication and organisation (AO4).
	0	**No valid response or relevance to the question**

Section A

0 1 Summarise how far the data and information in **Source A (Figures 1 to 5)** support the suggestion that smart technology has improved the ways in which we communicate and interact.

[12 marks]

In **Source A**, there are five Figures, each providing tables, graphs, infographs of data/images and information, which might be used to answer the question.

Candidates need to address all aspects of the question in order to achieve a Level 3 score – candidates will need to discuss issues relating to both communication and interaction. However, the ability to summarise is the key requirement, particularly for Level 3.

- Level 1 answers may be very brief/narrow and/or have a tendency to re-write the data/information descriptively instead of using the data/information more analytically to build a compelling picture of how we use smart technology to **communicate and interact** with our world and others using smart technology. Candidates who only use one figure will not reach Level 2. At Level 1, candidates will only discuss one aspect of the question, either the social use or in relation to how we interact.

- Level 2 answers are likely to refer to two to three of the figures in Source A, perhaps with a combination of some descriptive writing and some analytical comment in the context of how we **communicate and interact using smart technologies**.

- Level 3 answers will use data/information from most of the figures (four or more, most likely five) in Source A with clear and relevant interpretation/analysis leading to a logically argued conclusions indicating how far the smart technologies have contributed to our communication processes and how we interact.

Indicative content to support the suggestion

The data strongly demonstrate the extent to which smart technology, the Internet and social media have transformed communications and how we interact with the outside world and even within our own homes. In Figure 5, there is a suggestion that this can be negative and even damaging to our health and development.

Figure 1
- this provides a pictorial snapshot of the use of technology and the rapid proliferation of smart technology and related products
- there are 20 graphics with a wide range of uses for candidates to comment on
- the source is a commercial one and while the reliability of the data is questionable, the overall impact suggests clearly the significance of smart technology in all its forms on how we communicate and interact
- it includes reference to 'check-ins' and a wide variety of personal habits/uses of the digital world.

Figure 2

- the statistics (ONS, Figs 2a, b and c) reveal clear trends in use and access including frequency of use, type of activities (including demography), the rise of the smart phone (with access to the Internet and Apps – Applications)
- Figure 2a (ONS source) indicates the increasing use of the Internet and Intervals of use over a 6 year period. Daily use has increased significantly and as to be expected, the number not accessing the internet on a daily basis has now not accessing it all fallen to 15%. This suggests that we are using the internet to communicate and interact with others
- Figure 2b (again ONS) demonstrates by age and gender a range of popular activities including emails, finding information and social networking, etc. These help demonstrate how and with whom we are communicating
- Figure 2c (ONS) demonstrates increasing use and reliance on smartphones including all age groups and both sexes (men more predominantly)
- Figure 2d (Ofcom) demonstrates the scale of use and commercial reality in the use and sale of smart phones and supports the growing trends in Figure 3
- there is evidence that the majority of people, but not everyone, is using smart technology – the demographics are mixed with the younger generation adopting the technology/media more readily to communicate and interact with the world. However, all groups and sexes are using technology to some extent and this extends from simple social communication (social media) to commercial and other practices.

Figure 3
- the infograph and narrative suggest that the digital communication method and interaction changes depending on the circumstance of the individual, and that we are adept at changing mode to suit our location and circumstance
- digital retail is adapting quickly to meet our digital skills and preferences as reflected in the growth of 'click and collect services' to over £100bn in 2014
- consumers are becoming more critical and mobile
- consumers are using digital devices to get the best deal and retailers are adapting to meet this need through huge investment programmes. Commercial realities now insist on a strong 'online' presence
- the item makes use of both the Guardian newspaper and a commercial source – both support the growing prevalence in the use of digital technology and how we interact with the retail world

Figure 4
- according to the source, smart technology can control and maintain our home living experience/environment through a range of interactive technologies. We can now interact with our home, controlling a range of environmental activities from distance using mobile smart technology
- the reliance on technology may be questioned in the event of software, hardware or power failure
- the source is derived from PlusNet, a broadband provider, promoting how smart internet will help manage your home and life.

Figure 5
- the extract identifies some of the perceived risks (not scientifically proven) attached to the increased use of smart technology and their impact on our ability to function, communicate and interact with other. The reliance on technology (it is argued) is negative and reduces our ability to function at higher levels of thinking – this suggests that our ability to communicate and interact is impaired, and not enhanced, by smart technology
- dementia is an emotive term and the whole thesis behind the article may be legitimately challenged
- the source is via a major Internet provider – the quality and reliability of the source may be questioned.

We would expect at Level 3 for candidates to question the provenance of the sources and conclude on their impact.

Candidates will be expected to use the data to portray the communication revolution and how it has impacted on how we communicate with each other and interact (for example) with our homes and the retail world.

Candidates should be able to achieve marks in the highest level by using a selection of relevant points, not necessarily the complete range.

In Question 01, only information contained in Source A should be credited.

*The Mark Scheme is not exhaustive and any other valid points **from Source A** not included in the indicative content should be credited.*

| 0 | 2 | Using **Sources B and C**, examine the threats posed to our security and privacy by the use of digital technology.

[11 marks]

Answers will include discussion of the real threats to both consumers/citizens and commerce. Digital data become almost impossible to restrict, and do create issues around how we control our digital identities.

- Candidates who only use one source or who provide superficial or descriptive answers with gaps in analysis/understanding will be placed in Level 1.

- At Level 2 there will be a more sustained review showing understanding of both authors in a more developed way but with some gaps. (Candidates who use evidence **only** from Source B or **only** from Source C will be limited to 6 marks).

- To achieve Level 3 candidates will be expected to confidently use both sources arriving at balanced and well-supported responses around the threats posed to our security and privacy.

Both articles (Sources B and C) portray the extent of use of digital information, how information can be shared instantly and therefore the risk of monitoring and the manipulation of data. Source B focuses on government and international comparisons. Source C starts with a personal story and then focuses on how big business is using the data to monitor citizens.

Both articles provide a bleak picture for citizens and consumers with the focus of Source B on the role of national governments and Source C with the focus on large (and smaller) businesses; who, of course, work across national borders. The threats are significant and candidates should be able to develop a realistic picture of the scope of the issue.

Indicative content (Source B)   (P) = Paragraph

- Source B (published by the Guardian) reflects the views of Tim Berners-Lee (inventor of the WWW) who encourages users to take action and says that surveillance threatens our democracy (P1)
- a growing tide of surveillance is identified with governments keen to use this to hide their own wrong doings and shut down radical dissent (P2)
- international comparisons are given and the UKs position is noted (weaker for privacy rights, higher scores for political content and impact) – people are seemingly using the technology through social media to highlight issues, but leaving themselves exposed to official and other scrutiny (P3–6, P8)
- the NSA in the USA and GCHQ in the UK have both been implicated in such practices (P7), however the author notes influence of social media in the Arab Spring with insurgency quickly planned and coordinated via Twitter and other social media. Given this power, it is little wonder that governments are keen to monitor activity. By doing so, our privacy has been infringed.
- the article raises issues around the uncontrollable nature of the web – there is no 'off-switch' (P7)
- technology is encouraging the democratisation of information and communication flows (P9)

- 'bold steps' are needed to protect freedom and privacy (P9)
- according to the article and the index, over 1/3 of all countries had monitored and blocked activities of users (P10)
- even the best countries need to provide 'adequate safeguards' to protect privacy (P10)
- final paragraph encourages and supports the use of the internet but recognises the need for the Internet to be 'affordable, accessible and relevant to all groups in society' (P11).

Indicative content (Source C)

- while Source B uses big numbers and national trends, Source C starts with a personal story and political embarrassment for an MP – based on the lack of awareness of how adverts are used by web pages (using previous search histories/'site visits') (P1–4)
- the article identifies that the WWW and multinational companies are 'amassing huge caches of data about users'. Data collection is big business and the digital economy is growing rapidly with an increased number of users (generating $50 billion for Google) (P5)
- in addition scores of smaller companies are 'fishing' – collecting private information and selling this on to the bigger companies (P5)
- this process has seen the rise of 'data brokers' who 'stitch data together' and sell this on; providing 'gold dust for the advertising industry' (P6)
- our personal information including shopping habits and other preferences are all being cultivated and used to manipulate us as customers – or 'monetising people's personal data' (P7)
- author makes Orwellian comparisons about the level of privacy loss/digital exposure (P8)
- the scale of the monitoring is outlined – 'cyber snooping' and the impact of online adverts and their role in consumer profiling are raised as companies 'build up unprecedented hoards of data' about us (P9)
- the role of watchdogs is identified but these appear to have limited impact as 'privacy is steamrollered in the race for profit' (P9)
- the need for regulation, through Watchdogs, is suggested but control seems very difficult given the extent to which information has now been released and the desirability of control may also be questioned (P10–13)
- the final paragraph poses the real and on-going threat to all citizens and the lack of an effective governmental response (P14).

Candidates should be able to achieve marks in the highest level by using a selection of relevant points from Sources B and C, not necessarily the complete range.

*Any other valid points **from Sources B and C** not included in the indicative content should be credited.*

| 0 | 3 | Using evidence from **Source D and your own knowledge**, discuss the changing impact of smart technology on the working day.

[11 marks]

Answers will include reference to the positive tones and the potential for personalised working. The article provides an optimistic and positive outlook for those in work and able to access modern technology.

- Level 1 answers may be very brief/narrow and/or have a tendency to be superficial in their analysis of the impact of smart technology on the working day. Level 1 answers may use superficial own knowledge to explore the question and not make effective use of the material provided.

- Level 2 answers are likely to show some understanding of the potential impact of smart technology on the working day and bring in some of their own examples. There may be some descriptive writing and some analytical comment in the context of building a case of the potential impact. Candidates who **only** use Source D or their own knowledge will be limited to 6 marks.

- Level 3 answers will effectively use the case material and are likely to bring in some of their own ideas with clear and relevant interpretation/analysis leading to a logically argued conclusion around the impact on the working day and indicating how far the new technologies have changed working practices.

Indicative content   (P) = Paragraph   (OK) = Own Knowledge

- technology is changing the way we work and even think (P1)
- what Psychogeography actually means? (two definitions are included within the source) (P2–3) New smart buildings can meet all our needs both physically and psychologically. This is the dominating theme of the article – essentially positive but how realistic and for whom?
- transportation – ideas of further integrated transport and potential for even more home working and flexible working patterns (P2–3)
- impact on our cities and transportations systems are raised but not defined (P4, P6–7)
- the blurring of work and leisure time will continue (P5)
- time usage will change including – when we work – loss of the rush hours/reduction in congestion (P6–7) or may be prolonged congestion – flexitime? (OK)
- profound impact and potential of integrated transport is noted (P8)
- the meaning of the 'office' will change (P10) - candidates may wish to discuss the impact of smart technology on the growth in home working (OK)
- machines will be able to personalise our work (digital transfer is small, compact and transferrable, but portability has its own issues – such as the loss of data – which may become increasingly significant) (OK)
- candidates may refer to the increasing trend for BYOD (Bring Your Own Devices) (P11 & OK)

- ergonomically, work will be more comfortable with buildings better able to meet our needs (P12 & OK)
- new buildings will be able to identify people as employees, customers and suppliers – adapting the building accordingly - technology will become personalised to know our own preferences (P12)
- improved collaboration and co-operation (P13)
- accessing the cloud will enable us to work from home and at times which suit us (OK)
- using their own knowledge candidates may provide a counter argument re the over reliance on technology and how reliable is the technology – what happens when the technology/web is down? (OK)
- a complex but non-homogenous picture may emerge - this type of workplace (portrayed in the article) may not be suitable for all – fast food providers rely on quick service and turnover of customers, overly comfortable eating areas will be counter-productive. Having said that, the new technology has transformed engineering from dirty, oily and noisy plants to modern, high tech workplaces. Students may draw on own examples to argue the point either way (OK).

For those using smart technology the working day (whatever that really means now) has been transformed but the article does not consider those displaced/disenfranchised from technology and the impact therefore of structural unemployment (machines replacing people for example). Other conclusions may be equally valid (OK).

Candidates may be able to develop different perspectives on how the technology will change the working day and these should be rewarded (OK).

Candidates should be able to achieve marks in the highest level by using a selection of relevant points from Source D and their own knowledge, not necessarily the complete range.

*Any other valid points **from Source D or own knowledge** not included in the indicative content should be credited.*

| 0 | 4 | Using information from **Sources E and F**, discuss the benefits and challenges of the smart technologies they describe.

[11 marks]

- Candidates who use either Source E, or Source F (or both), to write in a very brief, or mainly descriptive, and/or general fashion about the benefits or challenges of smart technologies are likely to be placed in Level 1.

- Those who demonstrate the capacity to use both Source E and Source F to provide some discussion of the benefits and challenges described are likely to be placed in Level 2. Candidates who use evidence **only** from Source E or **only** from Source F will normally be limited to 6 marks.

- Those who demonstrate the capacity to use Source E and Source F to provide a more detailed and analytical discussion of the benefits and challenges of smart technologies will be placed in Level 3.

Source E: Indicative Content

Article begins with a positive statement re the potential for smart technology and sustainable benefits and opportunities (P1–2).

Benefits:
- Hitachi and other global companies are pioneering new partnerships using smart technology (P2)
- carbon savings through smart grids and meters (P3)
- greater efficiencies (wind farm example) (P3)
- subsidies for neighbours (who is your neighbour?) (P4)
- impact on transport including tracking and speed control (P5)
- social benefits include impact on the NHS via remote monitoring (also benefits re independent living for patients) (P6–8)
- article provides balance re the issue of complexity and integration (P9–11)
- need for scaled trials such as in France (Nice) (P10)
- low carbon economies controlled through smart technology are a possibility but at a cost (P12).

Challenges:
The changes described will be 'profound' and there will be challenges to be met by both individual businesses and society.

- complexity and collaboration issues (P9)
- cost – both of the initial investment and related costs such as training below (P11)
- training costs (people may not be skilled or confident) (P11)
- impact on employment levels (the historical example of Luddism is included) (P11)
- public trust concerns again about data (P13).

Source F: Indicative Content

Article looks at how the car industry is playing a leading role in rejuvenating our economy using smart technology:

Benefits:
- supporting the re-balancing of the economy more towards manufacturing and technological innovation
- job opportunities (JLR cite 1700 new jobs in the source) (P1)
- more investment in education to train the future workforce
- more investment in Research and Development (R&D) to maintain competitive advantage (P2)
- potential for spin off innovation in other industrial sectors is described (P3) – several spin offs are mentioned including drilling, energy, transport, water and aircraft
- potential wider economic impact (P3 and P4) with the potential for accelerated change
- spin off industries are a by-product of this 'accelerated change' with JLR technology becoming a 'significant advantage for many different areas' of manufacturing (P3)
- UK is developing a reputation for creativity, computing and design, etc. as we create a 'new world order' of manufacturing (P4)
- more incentives for firms/industry, eg tax credits, tax relief
- UK is becoming a centre for technological innovation/expertise (P5).

Challenges:
- issues around the skills gap are posed and the need to encourage more young people and women into high level engineering careers (P6)
- tackling the skills shortage in the economy (P6)
- retirement of an ageing skilled workforce is creating a skills deficit (P6)
- government support innovation and the 'march of the makers' needs to be sustained/ and the government needs to be more supportive to encourage business (and not rely of internal consumption), eg via technology strategy (P7).

Candidates should be able to achieve marks in the highest level by using a selection of relevant points from Sources E and F, not necessarily the complete range.

*Any other valid points **from Sources E and F** not included in the indicative content should be credited.*

Levels mark scheme for SECTION B (for Qu's 05 to 08)

Each essay should be awarded a single mark out of 25. In awarding the mark examiners should bear in mind the overall assessment objectives for General Studies which the essay questions are intended to test in the following proportions:-

AO1 – 8 marks   AO2 – 7 marks   AO3 – 5 marks   AO4 – 5 marks

Section B questions are set in two parts. Candidates need to answer both parts of the question well to gain access to a Level 4 mark. An unbalanced response with one part answered very well and the other answered significantly less well could only gain access to a maximum Level 3 mark.

Level of response	Mark range	Criteria and descriptors: knowledge, understanding, argument, evaluation, communication.
LEVEL 4	**20 – 25** (6)	**Good to very good treatment of the question** Wide ranging and secure knowledge of topic (AO1); good range of convincing and valid arguments and supporting illustrations, effective overall grasp and logically argued conclusion (AO2); good understanding and appreciation of material, nature of knowledge involved and related issues (AO3); coherent structure and accuracy of expression (AO4).
LEVEL 3	**13 – 19** (7)	**Fair to good response to the demands of the question** Reasonable knowledge of topic (AO1); a range of arguments with some validity, appropriate illustrations with reasonable conclusions (AO2); some understanding and appreciation of material, nature of knowledge involved and related issues (AO3); mostly coherent structure and accuracy of expression (AO4).
LEVEL 2	**6 – 12** (7)	**Limited to modest response to the demands of the question** Limited/modest knowledge of topic (AO1); restricted range of arguments and illustrations but some awareness and attempt at conclusion (AO2); little understanding and appreciation of material, nature of knowledge involved and related issues (AO3); weak structure and variable quality/accuracy of expression (AO4).
LEVEL 1	**1 – 5** (5)	**Inadequate attempt to deal with the question** Very limited knowledge of topic (AO1); little or no justification or illustration, no overall grasp or coherence (AO2); inadequate understanding and appreciation of material, nature of knowledge involved and related issues (AO3); little or no structure/frequent errors of expression (AO4).
	0	**No valid response or relevance to the question**

Section B

| 0 | 5 |

'The 2012 London Paralympic games heralded a breakthrough in attitudes towards people with disabilities, but very little has changed since then.'

Discuss the extent to which sport can have an impact on society's attitudes towards disability.

Examine whether the Olympic legacy has had any lasting benefit for disabled people, or indeed any other groups in society.

[25 marks]

Refer to the '4 Levels mark scheme' for Section B on page 16

Indicative content:

Discuss the extent to which sport can have an impact on society's attitudes towards disability.

- candidates may wish to explore key ideas in the question (what do we mean by impact? how do we measure attitudes? The different nature and degree of disability (which is reflected in the structure of the Paralympic games themselves)
- candidates may explore how attitudes are formed and whether sport can have any influence
- mainstream sport has continued to focus on the able bodied sportsmen and women so the potential for moulding opinion is limited
- sport can bring people together with an almost tribal element and as a consequence acceptance of disabled sports as mainstream can have a positive impact if now considered mainstream
- the Paralympics were heralded as a great success in terms of medal count for Team GB (34 Gold and 120 in total)
- sport here raised the profile of people with a wide range of disabilities (even the classification of disability from moderate to more profound was highlighted and given media exposure)
- television audiences (and attendances at events) were high with expert and satirical TV commentary such as the 'Last Leg' with Alex Brooker raising public awareness
- sport was perceived as a mechanism for bringing people together and often the focus was on the competition not the disability
- sport was able to educate and nurture a greater understanding of disability and the practical problems faced by disabled people
- the Olympic Games have seen (through Sports England and other official organisations) an increase in funding and resources, significantly improving access for disabled people to more mainstream sports
- nevertheless, there is still considerable prejudice and real obstacles for disabled athletes and this questions the real progress made by society in acceptance of disability.
- political theorists such as Noam Chomsky portray sport as form of propaganda used to distract people from their real troubles (this is an extreme view but held and discussed by a number of people) – does the success of the Paralympics have any bearing on this view?

Examine whether the Olympic legacy has had any lasting benefit for disabled people, or indeed any other groups in society.

- the Olympic Games were a great success for the organisers but whether there is a significant legacy for disabled people and other groups is a matter of debate – one we hope the students will fully explore to achieve a Level 4 response
- certainly while the sporting impact of the games will be significant; the wider impact is less certain
- funding from Sports England has seen a reduction; with some facilities closed or with restricted openings. Teams which performed moderately in the 2012 games have seen their funding reduced
- meanwhile disabled people have been subject to changes in disability allowances which some people feel are punitive and not in the spirit of the games
- 'other groups' – whoever they are - have had mixed blessings – candidates may question whether the sports in terms of participation or access to tickets really reflected the face of our pluralistic and multicultural society
- in London, the facilities have been revamped for domestic and economic purposes and this regeneration has been beneficial although house prices may now rise in this area of London. Football teams have argued over the use of the main stadium and other stadia have become accessible to the public. The regeneration of East London and its infrastructure has been significant but for other areas?
- other areas may well argue that the impact has been negligible. Although sporting activities were shared across the nation (e.g. rowing at Eton Dorney in Buckinghamshire in England) other areas such as the North East or Wales will have had a minimal impact
- the economic glow from the Olympics may have been short-lived but it was still a positive boost during these times of austerity; the related feel good factor was also significant in the media but not necessarily throughout society
- candidates may wish to consider the impact on young people (and any school legacy), young families and the elderly. Likewise, it may encourage candidates to consider whether the Olympics had a positive impact on women's sport, increased involvement from black, Asian and minority ethnic groups, etc.
- for some people the Olympics will have passed without notice and with no lasting legacy; this may be a valid viewpoint if supported (this may be difficult to support with evidence)
- the Commonwealth Games (2014) hold both games, able and disabled, together – however, the numbers of participating countries are much smaller which makes this logistically possible. Thus, candidates may comment upon the full integration of both games with suitable conclusions drawn
- the Invictus Games (2014, championed by Prince Harry) with over 400 competitors from 13 nations, is an international sporting event for wounded, injured and sick Servicemen and women.

There is potential for candidates to illustrate this answer with a number of examples; these should be fully awarded if appropriate.

The range and quality of responses will determine the level at which a response is awarded. Level 4 responses are likely to include balanced, well-argued and illustrated responses whilst Level 1 will be superficial and one sided.

Candidates should be able to reach marks in the highest level with a selection of relevant points, not necessarily the complete range.

Any other valid points not included in the indicative content should be credited.

0 6 'An important aspect of the Raising of the Participation Age (RPA) to 18 in 2015 is a recognition that we are likely to change jobs frequently. Therefore, it is essential that education equips young people with the capacity to evolve and adapt to the modern economy.'

Examine the contribution of the RPA and the current post-16 curriculum in preparing young people for the world of work.

Discuss the relevance of the skills and knowledge you have acquired in your post-16 education to your future.

[25 marks]

Refer to the '4 Levels mark scheme' for Section B on page 16

Indicative content:

Examine the contribution of the RPA and the current post-16 curriculum in preparing young people for the world of work.

- RPA will attempt to help young people develop key employability skills – candidates may discuss the nature and importance of employability skills (communication and interpersonal skills, problem solving, initiative, meeting deadlines, organisational skills, team working, negotiation skills, adaptability)
- required skills will evolve (alongside technology and related jobs)
- pupils must see their skill-set as tools that require re-sharpening and updating on a regular basis
- the on-going tension between the skills schools currently provide, the current requirements of prospective employers, what the candidates think they need, and input from society and Government (the 'clash of the stakeholders')
- tension between the 'all-rounder' and 'specialised operative' models of a well-educated citizen
- the unwilling learner and how we engage students who may have been switched off by traditional schooling may be a problem. New modes of learning such as Studio Schools and UTCs may have helped to address this for those who attend such institutions
- how do we ensure that RPA engages all learners and prepares everyone for the world of work – is this in fact possible?
- discuss the role of education in developing the required STEM (science, technology, engineering and mathematics) knowledge and employability skills for active participation within the modern economy
- this has been an active debate among political groups. Some see the acquisition of knowledge as essential. For others, the development of transferrable soft skills and vocational education RPA represents a significant change with all young people now expected to be in education or training. Schools, colleges and other training providers will need to change to prepare for the expected growth in demand for apprenticeships.

Discuss the relevance of the skills and knowledge you have acquired in your post-16 education to your future.

- this question will attract personal responses. Candidates will need to focus on the issue of relevancy linked to their future plans
- candidates who are able to provide considered, articulate and focused responses will achieve the higher bands. Linked to this an awareness of the shortcomings (too narrow) in their academic studies and/or the lack of practical skill development will enhance these responses. Changes to the current curriculum may be commented on here – so for example plans to drop practicals from Science A levels has been widely debated
- post-16 education is varied ranging from IB to A Level and Apprenticeships. These models provide real differences in approach – their merits and demerits may be discussed
- schools/colleges offer candidates a variety of academic, vocational and enrichment activities (Duke of Edinburgh, etc.)
- candidates may provide extended examples of the opportunities provided by Duke of Edinburgh, Young Enterprise, Young Engineers and other national schemes
- candidates may discuss the importance of qualifications such as ASDAN Cope, Critical Thinking, Citizenship and General Studies
- candidates will need to effectively differentiate between the acquisition of knowledge and awareness of their own skills development
- candidates may well identify the growth and importance of Apprenticeships with their greater focus on skills and technical learning
- life-long learning – school should help pupils 'learn how to learn' – people now change jobs on a regular basis (there are very few jobs for life)
- candidates need to draw a balance between skills and knowledge and the question of relevancy will draw upon a wide range of personal responses - the quality of argument supported by knowledge will help to place candidates in the higher mark brands.

The range and quality of responses will determine the level at which a response is awarded. Level 4 responses are likely to include balanced, well-argued and illustrated responses whilst Level 1 will be superficial and one sided.

Candidates should be able to reach marks in the highest level with a selection of relevant points, not necessarily the complete range.

Any other valid points not included in the indicative content should be credited.

| 0 | 7 |

'Advances in science and space exploration are unravelling the secrets of the Universe for the advancement of mankind. Soon there will be few unanswered questions.'

Examine ways in which recent scientific progress has benefited society.

Given the extent of recent breakthroughs in science, discuss whether there is any room for alternatives to scientific explanations for the existence of life.

[25 marks]

Refer to the '4 Levels mark scheme' for Section B on page 16

Indicative content:

Examine ways in which recent scientific progress has benefited society.

Candidates may wish to define the word 'recent' – for most this may be 20 to 30 years but an answer which tracks back further to examine the extent of scientific improvement can be rewarded provided that it does not become a historical narrative. The question is looking for the candidates to establish the beneficial application of science to society (candidates may well distinguish this from individuals).

Scientific breakthroughs have been significant touching on all aspects of our lives including:
- Medicine
- Technology
- Transport
- Communication
- Physics and Maths
- Biochemistry
- Engineering

There is significant scope for varied approaches and illustration – the key will be the quality of discussion related to the demands of the question.

Candidates may take a broad-brush approach or develop a narrow but detailed analysis. Both approaches are acceptable provided that they refer to ideas of society and progress.

Candidates may use space exploration to illustrate their answer and this has provided numerous benefits: weather predictions, improved communications, tracking and sat nav technology are obvious examples.

- spin-off technology around rocket and hybrid engines, heating and cooling systems, water-filtration systems
- ultra-small electronic circuits that enhance computers to countless medical advances, such as bone-density measurement technology and miniaturized heart pumps
- plastic-like metals used in jewellery and sporting goods
- aviation safety systems for pilots
- solar panels
- implantable heart monitors
- cordless tools – improved battery technology allows even electrically propelled vehicles

- compact water purification systems
- medical treatments
- biomedical technology
- computer gene sequencing.

The impact of science permeates every aspect of our technological lives from gadgets, high-speed vehicles to plasma TVs.

The significant role played by science should not be underestimated but candidates may well draw references to those individuals and groups (often religious) who reject the impact of science. Likewise, in our Eurocentric viewpoint there are still significant populations who have limited contact with science and technology. Both viewpoints can be credited.

Students may question the idea of progress through a religious perspective but will still need to address the question in its entirety to achieve the higher mark bands.

Given the extent of recent breakthroughs in science, discuss whether there is any room for alternatives to scientific explanations for the existence of life.

Candidates may again wish to define the word 'recent' and will need to shape their responses against the science/religious debate. Candidates may explore the role of logic, evidence and the nature of faith and reason.

There real potential here for debate and controversy but we will be looking for candidates to provide a balanced and reasoned response. Answers may be wide ranging:

- scientific method relies on testing theory, using empirical evidence to support the theory and as a consequence ruling other theories out
- religion relies on faith and the evidence used to support religion is often questionable when put under scientific scrutiny
- creationism (and / or 'Intelligent Design') is a key area that some candidates may develop – or at least, observe – and provided opposing and contrasting analysis. Religion provides an alternative explanation, which should be recognised, and the quality of response will be a determining factor. Superficial reliance on faith will not provide sufficient depth to justify a high level response
- the 'Big Bang' is a theory supported by significant scientific evidence, and is now widely accepted by scientists and the wider community
- some candidates may separate thinking life (i.e. humans) from non-human and other forms of conscious life; some religions argue for the existence of a 'soul' which cannot be observed by scientific investigation. Scientists do, however, investigate and have sought to explain the existence of consciousness
- given how religious groups have had to refine their understanding of revered texts in the light of progress in scientific understanding, what weight can be put on those texts?

This question should provide some lively responses. It will be the quality of argument and depth which determines the final level and not the specific outcome reached by the candidate.

The range and quality of responses will determine the level at which a response is awarded. Level 4 responses are likely to include balanced, well-argued and illustrated responses whilst Level 1 will be superficial and one sided.

Candidates should be able to achieve marks in the highest level with a selection of relevant points, not necessarily the complete range.

Any other valid points not included in the indicative content should be credited.

0 8 'Medical science and technology have the capability of keeping us alive longer. Improvements in the care of terminally ill people mean that life can be significantly extended.'

Examine how advances in medicine can extend and preserve human life.

Discuss whether assisted dying should remain illegal in the UK.

[25 marks]

Refer to the '4 Levels mark scheme' for Section B on page 16

Indicative content:

Examine how advances in medicine can extend and preserve human life.

People are living longer as a comparison between censuses demonstrates.

According to the ONS in Dec 12…
Medical science and technology has eradicated numerous illnesses/conditions, especially in infancy and childhood. The most common age at death in England and Wales in 2010 was 85 for men and 89 for women. Over the last 50 years (1960-2010), the average life span has increased by around 10 years for a man and 8 years for a woman.

Candidates will be expected to identify the links between "extend and preserve" although the distinction is blurred.

Medicine's successes include:

- eradication or reduction of many diseases such as smallpox, TB and Cholera
- greater care for HIV/AIDS victims – many carriers live much longer lives thanks to treatments related to the immune system. HIV and the Aids epidemic is an interesting example – initially victims died at a very early age. Drug treatment, understanding of the illness and care now means that in the developed world the disease has been controlled. This is not true of course for Africa where the illness is still a major killer
- impact of penicillin and other antibiotics – possibly including reference to over-use and bacterial evolution and resistance
- improved surgery including less invasive and therefore safer keyhole surgery
- impact of genetic treatments and eradication of some conditions
- improved drug treatments and inoculation programmes (e.g. Influenza jabs)
- research and care of cancer treatments and heart problems have eradicated some significant illnesses and life expectancies have increased for many but not all of these illnesses
- greater use of technology in medicine is making treatments much more efficient and effective – eg key hole surgery is less invasive and in some instances removes the need for general anaesthetics
- candidates may discuss public health campaigns and if linked to the question can be rewarded e.g. smoking bans, etc.
- organ transplants

- new treatments are currently being developed to further preserve and enhance life around dementia, Parkinson's and other degenerative illnesses
- palliative care of terminal illnesses is improving the quality of life
- issues around the treatments for drug addiction, smoking and alcohol have made some positive impact on treatments and life expectancy (liver transplants being a controversial example) but also they suggest that humans have an innate self-destruction button. This could be an interesting area for discussion if focused around the question.

Discuss whether assisted dying should remain illegal in the UK.

This question has potential for some provocative and emotive responses. Currently the law classifies assisted dying as a form of homicide (including murder or diminished responsibility). There are powerful philosophical, moral, social and economic reasons for and against assisted dying.

At present people wishing to accelerate their own death have to travel abroad to countries such as Switzerland where Dignitas operate.

Some candidates may distinguish between decriminalisation (where the law is not enforced) and legalisation (where the law is changed to give explicit permissions).

'Should' infers an element of judgement and candidates will be expected to consider a range of personal, medical, social, economic and political reasons.

Candidates can consider the costs in economic (monetary), social and human terms. A narrow response can be awarded highly but will need greater detail and analysis.

The issue of costs may be discussed as part of the response:
- medical costs of research, drug development and hospitals inc. specialist care, training, etc.
- palliative care
- economic and social costs of Adult Social Care
- personal issues relating to the quality of life and impact on families
- pension costs and current pension crises
- candidates may well explore the links between the Hippocratic Oath v the views of Dignitas, frequently tested by the law (Bland/Blood). Definitions of death/life, etc.

Assisted Dying Organisations meet a desired need by some in society. Whether the law and public opinion should legalise/decriminalise is a debate:

Arguments **for**	Arguments **against**
Human choice – the sovereignty of the individual to elect an early death	Dignity of life
Reduce suffering and maintain dignity	Improvements in palliative care
Economic arguments listed above	Religious arguments re the sanctity of life
Other valid arguments	

Candidates may elect to focus on the arguments for or against assisted dying and should be rewarded depending on the quality of the evidence provided and accompanying analysis, but may be rewarded otherwise within the context of the question. The law change might be seen as permissive and not proscriptive.

Ultimately, there is no right or wrong answer but candidates will be expected to develop a balanced, reasoned response.

The range and quality of responses will determine the level at which a response is awarded. Level 4 responses are likely to include balanced, well-argued and illustrated responses whilst Level 1 will be superficial and one sided.

Candidates should be able to achieve marks in the highest level with a selection of relevant points, not necessarily the complete range.

Any other valid points not included in the indicative content should be credited.