RADLEY

Academic Scholarship 2023

(A series of detailed reports to provide feedback for Preparatory Schools)

Subject reports

ENGLISH

Section A: Poetry Analysis

Very few candidates wrote with confidence on this poem. A large number of responses leaned heavily on technique spotting or retelling the narrative, with little synthesis of the two. Only a few students made reference to tone; these tended to be the most successful answers. In many cases, form and structure were dealt with in isolation, with no sense of the poem's language or meaning. It is crucial that candidates consider the effects of the poet's choices on the reader, alongside the events or 'plot' of the poem. Very often, students over-isolated language from the meaning of the whole. I would advise reading sentences not lines.

A curiously large number of students spent a good deal of time focusing on punctuation, with limited relevance to the task. Neither form nor structure can be handled in a vacuum.

The strongest responses showed some level of personal engagement and an understanding of the poem's mood; when these features were central to the answer, more convincing work was produced.

A significant minority of these papers would signal alarm bells as to the candidate's capacity to cope academically at Radley.

Introduction

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Meeting the Scholarship candidates this year was, as ever, very rewarding. Socially accomplished, intellectually broad, and very keen to please, the boys were terrific guests. As you can see from these academic reports, we are providing detailed and quite directive advice on how boys can improve their approach in future, in addition to the analysis of their performance in 2023.

Please remember that this advice is provided to help your staff improve teaching for the Radley Scholarship process. I hope the tone never comes across as snarky or fault-finding. We continue to understand that this is a stressful time for preparatory schools. We are very sympathetic. It remains our aim to mark fairly and we also take seriously any complaints about excessively hard papers or, indeed, excessively easy ones! Those of you who have been working with us for a few years will, I hope, recognise that adjustments do occur in response to your feedback.

This is my last year at Radley. I would like to thank you for the great work you have done in nurturing the super boys you send to take part in what we hope is an intellectually challenging - and stimulating - process.

With all good wishes
Stephen Rathbone
Academic Director MA, MA

Section B: Creative Writing

In this section, candidates were required to produce a piece of creative writing in which the word "describe" was clearly the focus of the task. It is a shame that a fair number of candidates then proceeded to write a narrative which barely made it to the description! Candidates would do well to make a brief plan to framework their description. "Vivid" and "interesting" were also key in the instructions, and procedural, flat accounts of someone doing a job could not be highly rewarded, nor could repetitive gushing of superlatives when describing someone eating lunch. The best pieces were those which were focused, fully detailed, made effective use of figurative language and exhibited control, originality and a confident style. Nuanced language choice was required for the top marks and a minority produced writing which displayed precisely chosen vocabulary and variety in sentence structure. Lack of structure and development limited marks, as did inaccurate spelling and punctuation. There was a significant number of scripts which displayed little evidence of crafting or deliberate language choice, and a surprising number in which candidates struggled to articulate their ideas beyond a very basic level.

Section C: Essay Writing

This essay tested the candidates' ability to understand a quite sophisticated quotation on the subject of the expression of emotion, virtues of honesty and value of truth. They needed to develop a clearly argued position which reflected personal perspective, thoughtful engagement and coherent written expression. Very few candidates were able to succeed in all these elements: often, the interpretation of the quotation was sound but superficial, and the directions the candidates took to illustrate their points were too personal, too general and irrelevant. Much more time must be given to thinking through what the quotation means and to producing an interesting interpretation and perspective. Most candidates did well to model a two-part essay using a simple agree/disagree form. While this has advantages of clarity and ordered ideas, it can become too formulaic and means that the candidate does not take a side or argue for a position. SPaG was mostly clear and controlled, but there were some very weak answers without the range and variety of vocabulary and sentence structure needed for nuance.

MATHS

2023 was a fairly average year for us. There was a good rump of competent Mathematicians, and one boy who was really outstanding. The pleasing thing to report is that presentation is much improved this year. Long may that trend continue. But again we had one or two candidates who tried to answer on the question paper in part 2. We changed part 1 this year, but part 2 remains better answered on lined paper.

Paper 1

The mean mark on the paper for those candidates who were selected for part 2 was the same as last year – that is, 70%, with a spread from a lowest mark of 32%, up to a highest mark of 94%.

We are happy with a paper that produces that spread of marks, so we think that we are getting the standard about right. It remains our aim to set a paper that emphasises routine teachable algebra at the start, with a bit of creative Maths at the end.

Paper 2

Again this year I delayed the setting of Paper 2 until we had marked Paper 1. The mean mark in 2023 was 2% higher than in 2022 at 58%, with a top mark of 97%. So again I am happy that we pitched it at about the right level.

Q1 was a gentle start on percentages and there were lots of fully correct answers. It was my intention that they found the year at which the value of the car first exceeded £100 000 by putting numbers into their calculators. I was surprised that one candidate knew how to successfully solve the equation using logs.

Q2 was inspired by a shopping trip to Asda where they have introduced the double roll with the claim of 'twice as many sheets per roll'. This seemed to be an all or nothing question as I decided not to give any scaffolding.

Q3 proved harder than I expected with only seven boys scoring full marks. It is the sort of question that I would hope a Scholarship candidate to be able to do.

Q4 was a good discriminator. It started off with a simple pair of simultaneous equations. There were only two candidates who failed to get full marks on part (a). Replacing the variables with their reciprocals lost about half the candidates in part (b). In part (c) only five candidates scored full marks as I went on to replace the original variables with quadratic expressions.

Q5 was the least successful question. It often happens that I set what I think is a good question, and I find that I've misjudged things. One candidate scored full marks, but other than that there was little to show.

Q6 rescued things, and produced a good spread of marks. Every boy who attempted the question scored something. In parts (e) and (f) the best method was to work out the number of unacceptable codes, and subtract from 1000.

To conclude, the papers did what we wanted them to do. We will try to set papers of a similar standard in 2024.

PHYSICS

The 2023 Physics Scholarship paper was very tough, probably a bit tougher this year than previously. As such, it succeeded in challenging the most able candidates and in separating out the exceptional from the very good. The top score was 76% (the second highest was 58%), with a mean score of 35% and a standard deviation of 12%. A score of over 55% was very impressive, placing the candidate in the

top 10% of candidates.

The paper was designed to test aptitude rather than assess prior learning and knowledge, and the habits of thought which might be described as "thinking like a physicist". It was hoped to give opportunities to think about unfamiliar contexts, and to explore everyday physics situations afresh. Each question tested a different skill - Maths, physical intuition, problem-solving, proportional reasoning, using an unfamiliar equation, and so on.

As with past papers, successful candidates were able to express large numbers in standard form. The ability to make sensible estimates also proved useful, particularly on Q2 about the number of tennis balls Radley College buys in a year; blind guesses or assertions were not credited.

A few pieces of general advice:

Think beyond what you have been taught
The paper was designed to identify candidates who would be willing not just to write down what they could see – for example, on Q1, what apparatus was labelled on the diagram given - but to identify those who have thought beyond this into why each piece of equipment might have been used, and what the apparatus as a whole might be for.

In Q3 (c), although many pupils correctly stated the frequency of waves in 3 (a), they were unsure about finding this reciprocal value (which only needed to be approximate for full credit).

Try to relate what you see in the questions to your everyday experience of Physics
Candidates who were able to show that they spend time thinking about the physics of experiences in their everyday life were generously rewarded. There were some excellent, but also some very poor answers to Q4 (a), and answers that were plausible, showing that candidates had thought about what a black hole might be like, but not quite right were given credit. Using your imagination is important in Physics.

Be bold
Making sensible approximations to simplify the numbers is often a good idea in Physics. Endless longhand Arithmetic is rarely the right path; for candidates who embarked upon it, not only was this unnecessarily time-consuming, it was rarely mistake-free.

Keep going
Successful candidates had the resilience and determination to carry on, even in difficult and unfamiliar situations, keeping a cool head and using what they knew: a few with significant aplomb. When the going gets tough, the tough lower their standards a little and at least do something!

The final question was a little tougher than I would have liked; whilst the paper is designed to be challenging, it is important to balance that against simply being disheartening for candidates. Of course, whilst questions are purposely based on unfamiliar Physics to require students to analyse information given, and the Mathematical content may involve unfamiliar units, the questions are designed to be accessible to all students, independent of previous study. If you deem a question to be

unfair, you are encouraged to use the opportunity to comment on the paper (physics@radley.org.uk). We may not be able to respond directly, but all comments are taken seriously and used to refine future papers.

CHEMISTRY

As in previous years, the Chemistry Scholarship paper has no particular format and instead tries to discuss interesting Chemistry. The paper is designed to explore boys' ability to read and make sense of new information.

We are not looking for boys to gain full marks - some will be closer, some further away. As a result, this paper is, by its very nature, challenging and requires an open mind. It is marked accordingly and credit is given where due. This year, as in previous years, there was an excellent and expected spread of marks into the high 80%.

Q1: Most boys correctly defined an element to be made up from the same type of atoms but often forgot to add that they are chemically bonded. It was interesting to read that some boys thought electrons and protons are attracted by a gravitational field (or even behave like planets revolving around the sun) but most boys correctly spotted that atoms have to be neutral. A fair number also completed the shell diagram correctly.

Q2: This question introduced the arrangement of the elements in the periodic table. Boys did well to extract the information and made sense of atomic numbers and masses, as well as the numbers of subatomic particles of an element. Candidates also showed a good understanding of the arrangement of particles in the solid and gaseous state although the answers were not always fully comprehensive (referring to motions and packing of particles). The last sub-question proved a little trickier with boys not realising that the calcium isotope has a mass number of 41.

Q3: This was the most advanced and testing question. A good number of candidates were able to work out isotopes and arrived at the correct isotopic distribution of chlorine, showing a few different methods.

BIOLOGY

As ever, this year's Scholarship paper for Biology was a comprehension exercise, the topic this year being the biology of bees. It touched on areas like classification, breeding systems, life history, ecology and human impacts. The students responded well and the test produced a range of marks, roughly following a normal distribution with an average of 58% and range of 21-82%.

A set of terms were well defined by most students, though there was a slight emphasis on the "English" meaning of some words like "Solitary" rather than referring to the scientific context of the passage.

The questions about bee breeding systems caused most confusion, partly because many candidates missed the part of the question stem asking for the name of the process. Reading the question carefully is important.

We often make reference to classification and ecology/food chains/webs in our papers and these two areas seemed to be well interpreted by most students, though some missed the emphasis of the question. A common mistake was that honey (rather than the organism producing it) could be part of a food chain.

A reference to Antarctica (not mentioned in the article) invariably led to some sensible suggestions and students were invited to use their own knowledge to explain a choice of environmental issues, which most did well, though some did miss the second part of the question which asked for solutions.

Overall, though, a strong showing with all but a few students well able to access the content of the paper. Thank you for your teaching which has clearly left them well prepared.

FRENCH

This year's French Scholarship paper yielded a wide range of results. The more confident French learners were the ones that were able to demonstrate that they were able not only to produce, but to recognise morphological items and differentiate similar structures with context. In the Reading section, it was encouraging to see that the pluperfect tense was identified by many, which emphasised a good knowledge of tenses in general.

In contrast, many students found it more challenging to recognise adverbs, and to identify plural and feminine adjectival agreements.

This year's gap-fill exercise proved challenging for many students, although the lexical content was limited. Here as well, a number of candidates found it difficult to identify word categories and differentiate between nouns, verbs, plural and singular forms, preventing them from proceeding by logical elimination.

This year again, the Translation section yielded the widest range of results across the cohort. More successful students were the ones who were able to think about accuracy and agreements.

The Writing was successful on the whole when it came to the content, as most students scored above the average in that part of the mark scheme. Inaccuracy cost students marks, especially the imprecision on simpler, often repeated conjugated verbs, such as "je fais", "j'ai fait" and other high-frequency utterances. More systematic revision of those verbal forms would help improve the general impression of a piece.

For many students, there was a solid variety of tenses, which shows once again good knowledge of conjugation and usage. The lack of lexical variety, repetition of adjectives (for example, intéressant, amusant, ennuyeux) and the rare use of reflexive verbs prevented some scripts from obtaining higher marks.

It was encouraging to see so many students following the instructions carefully and adopting the format of the letter rigorously. The most impressive scripts showed some ambitious structures, such as sequential structures "après avoir fait mes devoirs mais avant de faire du sport", conjugated reflexive verbs "je me suis réveillé" and subjunctives "bien que ce soit difficile" - well done to students who showed curiosity and a will to go off the beaten track.

A small number of boys struggled to deliver accurate verbs in any tense and looked, on paper, more like beginners than Scholarship candidates; if you have any Scholarship candidates who have learnt French for less than 18 months then do let us know as they can sit our Language Aptitude Test instead.

SPANISH

The Spanish test was sat by four candidates, one of them native. Most of them showed a sound knowledge of word types which had to be taken from an authentic text. Overall, they showed excellent lexical range on the variety of topics they had to write about. Tenses seemed to be the main issue for most of them, particularly when dealing with past tenses. Having said that, they attempted detailed and well-developed answers. These candidates were very promising.

HISTORY

Marks

For the shortlisted candidates, the mean average score was 18 and marks ranged from 9 to 25 out of 30. Of the shortlisted candidates, 40% were awarded A grades, scoring a mark of 20 or more in order to achieve this.

Summary

The paper was challenging, regarding both the material boys were presented with and the time pressure they faced in having to complete three short answers in 30 minutes. That said, the top candidates were able to produce thorough and insightful responses to all three questions, and we felt the paper clearly enabled us to identify the strongest historians. Boys who were able to think on their feet, read the source material swiftly and with a high degree of accuracy, write fluently, and show historical imagination were all rewarded.

Feedback by question

The first question, with a mean average score of 7/10, was the strongest of the three across the cohort of shortlisted candidates. Most candidates were able to pick out one or two key inferences regarding the nature of Paris in 1792, before justifying their selections with quotation from the text. The best candidates used quotation precisely and were able to pick out up to four or five relevant inferences from the passage. Less strong candidates tended to quote less selectively, sometimes copying out whole sentences from the passage. Stronger candidates were able to ensure that the inferences they identified from the text were phrased in direct response to the specific question that they were

answering; less strong candidates offered more generalised, narrative descriptions of the content of the source and failed to clearly link their points back to an explicit indication of what this showed about Paris in 1792.

The second question proved to be the most challenging of the three, with a mean average score of 5/10. Less strong candidates tended to offer generalised statements based on an observation that the evidence came from a 'primary source'; better candidates were far more selective with the points they chose to make about the source's provenance. For example, the best candidates were able to make evaluative use of information from the text preceding the extract regarding the (English) authorship and (pre-war) context of the source's publication. The very best candidates were able to use the information regarding the nature of the Times - a popular newspaper and a successful business - to form an argument regarding the potential usefulness, or not, of the source as a piece of historical evidence. The best candidates were able to identify features of both the source's strengths and weaknesses before reaching an overall judgement as to its usefulness.

The third question saw the greatest range of responses, with a mean average score across the cohort of 6/10. Interesting answers were offered on a range of historical figures, including Hitler, Stalin, Charles I, James II, Napoleon and Mary Tudor. Although time pressure necessarily meant candidates had to write with clarity and concision, the best candidates were nonetheless able to illustrate their arguments with specific evidence and factual detail. The key requirement for success, rather than writing in general terms about a chosen individual, was to offer a specific answer to the question: on why the subject was unable to alter history in the way they had desired. Candidates who achieved this were rewarded, with a number of answers achieving scores of 8 or 9 out of 10.

GEOGRAPHY

It was pleasing to see some robust geographical understanding in the Academic Scholarship papers and nearly all the students were able to produce 3 full answers. The marks ranged from 39% – 89% and a wide range of place-specific examples were used, showing an excellent breadth of understanding.

The questions aim to get students to take a geographic factor, cause or impact and develop it clearly in a short-written answer. The best answers were written by students who consistently used a clear PEEL structure (Point, Evidence, Expand and Link). Some students showed excellent examples (such as, the recent Turkey-Syria earthquake) but were unable to develop their argument beyond a series of superficial facts. To get full marks the students needed to consistently implement a PEEL structure with 3 separate factors for each answer. Terminology was used sporadically, and students should be encouraged to use technical geographical terms to add depth to their answers. Some outdated terms were used (for example, MEDC) but benefit of the doubt was given to these students when their argument was thorough.

Most students were able to tackle the command word 'Explain' effectively but some did not read the other key words in the questions and therefore lost marks for straying off topic – for example, talking about causes of deforestation rather than impacts. It is essential that students take time to read, re-read and underline the command word and key words in the question to ensure the response is well

focused. A clear point at the start of each paragraph, one sentence long, will make the students' argument easier to follow.

Students who were able to demonstrate an understanding of why and how geographical issues vary spatially and temporally scored high marks.

THEOLOGY

There were two questions on the paper and candidates were required to choose one. The first asked candidates to evaluate whether religion is an outdated concept, and the second asked whether religious believers of any faith should adopt an anti-abortion stance.

For the question on religion as an outdated concept, stronger answers were able to convey an impressive level of knowledge relating to theology or philosophy. Some individuals highlighted the challenge to religious belief from secularism, and that non-religious ethical systems could be preferred over religious ones. The best answers evaluated their claims – and those who were able to construct an argument with careful reasoning were rewarded. The best answers also mentioned scholars such as Dawkins and Darwin. A small number of candidates explored debate between intelligent design and evolution – rather impressively. Candidates who did not score well usually lacked specific knowledge of areas within theology and philosophy that could be applied to the question.

The abortion question was answered with more specificity, overall. The strongest answers referred to deontological and teleological approaches to ethics, and contemporary debate on the topic, notably Roe vs Wade. Some candidates deviated from the question which affected the score that they could achieve. Commonly, candidates were able to support religious views with quotations from scripture, which allowed them to argue compellingly from the perspective of a religious believer.

The most important skill to evince in these short essays is the ability to construct and justify an argument. A persuasive conclusion, with concise but compelling reasoning, is essential to a good answer. Answers which did not choose a side of the debate to support scored less, in general.

LATIN

There was a big spread of attainment on this paper - some answers were excellent, while it would perhaps have been advisable not to have entered a few candidates who had clearly had much less teaching time and opportunity to learn vocabulary.

The paper was shortened, and time pressure may well have been a significant factor for some. We will aim to trim Section A a bit further next year, unless we have feedback telling us not to. Hopefully instructions had got through telling candidates to prioritise that section if they were pushed.

The best answers managed to identify and correctly render all the constructions, including the various *ut* clauses and participles. Moderately scoring papers followed the story with the major details

more or less correct, but offered more vagueness on subordinate clauses. As mentioned above, some candidates found it difficult to recognise vocabulary and, in some cases, simple noun and verb endings.

All but a few of the cohort did the comprehension for the second section. Some apparently had time to make a decent fist of it. The few that attempted the sentences did so with mixed success. The best attempts were excellent.

GREEK

There were a reasonable number of entries, including some who were relatively new to the language and who did a good job of following the vocabulary help. A couple of candidates found the whole paper very accessible, which was pleasing. There was a bit of a spread among the less high scoring candidates. We welcome anyone who would like to 'have a go' - all exposure to Greek is a good thing, and a low score would never be held against a candidate overall in the process.

LANGUAGE APTITUDE TEST

This paper was intended to provide evidence of linguistic skills for candidates who have not studied a European language taught at Radley for a significant length of time. In most instances, candidates have acquired English as a second language. The overall quality of responses was good.

The first question required candidates to recognise and apply patterns in short, descriptive sentences written in Swedish. These sentences contained a mixture of common and neuter nouns in conjunction with attributive and predicative adjectives. The most able candidates noticed that attributive adjectives end in -a whereas predicative adjectives end in -t for neuter nouns only (for example, "Det lilla huset är grönt." but "Den fula grisen är brun.").

Credit was given for the fact that lilla/litet has different forms and for any relevant observations involving syntax, gender, articles, agreement or the verb "to be". There was a wide range of answers, and the strongest candidates were able to illustrate their points with relevant examples. Less perceptive candidates fell back on obvious details such as the use of the Roman alphabet.

The second question required a working knowledge of the various parts of speech. Stronger candidates referred to more specific categories such as proper nouns, past participles, possessive adjectives, and so on.