1 To what extent is gender inequality a significant issue in the world of science? (2023 RI Y6 CT)

Requirements

'gender inequality': In the context of the question, this implies male domination of the scientific sphere. Can be understood to indicate an imbalance in terms of representation, acknowledgement, attention to women and their issues/work.

'significant issue': This can be understood as implying that such inequality has caused severe harm to the disadvantaged gender; also implies that the harm extends beyond women to affect the rest of society.

'world of science': Response should show recognition that the realm of science includes a range of aspects – students can explore gender inequality in science as a career, scientific research topics, research subjects, research publications etc.

Band 4 & Above	**Band 3**
• Awareness of the key term "significant issue" shown by evaluating reasons why this inequality is severely concerning or otherwise	• Listing of how gender inequality exists in the scientific sphere • **Band 2:** Hijacks the question by discussing how science and tech causes/improves gender inequality

<u>Gender inequality in the sciences is an issue of little significance</u>

a. Gender inequality in the world of science may not be as significant an issue in some societies because of **historical or contemporary policies that directly or indirectly result in greater parity** for the genders in science.E.g. Many Eastern European countries have a legacy of encouraging female participation in science, a result of Soviet policies that pressed both men and women into scientific careers regardless of their gender, with a large proportion of women in Lithuania, Bulagria and Latvia being engineers. Universities in Poland and Serbia were ranked among the best in the world for sexual equality in research publications. Consequently, having many female researchers and scientists has been normalised in these societies.
b. There has also been **a tide of change thanks to activism** that has brought greater equality in the scientific community. Efforts have been made to increase the number of female scientists and researchers in labs, as well as to change the perception of women's role in science. E.g. Advocates for having more women in STEM have been encouraging girls to develop their passion for science despite traditional stereotypes that women are not suited for the sciences, most often through the creation of organisations and new programmes targeted specifically at women and girls, such as Carnegie STEM Girls in the United States and Girls2Pioneers in Singapore. These programmes provide internship opportunities to young women, and link them to female

mentors who can guide them.E.g. There has also been an increase in efforts to change existing stereotypes and perceptions about women in science, often through highlighting the notable roles that female scientists have played in major discoveries, so that the general public can better realise their accomplishments. For example, Physicist Jessica Wade made over 1000 Wikipedia biographies for women scientists whose contributions to science would otherwise have gone unknown and uncredited. Changes are also taking place in the mainstream media – 2016's Hidden Figures, a Hollywood film, emphasised the experiences and achievements of three female African-American mathematicians who worked for NASA.

Gender inequality in the sciences remains a significant issue

a. Unfortunately, it must be noted that despite the valiant efforts to give female scientists their due, there is still a **lack of acknowledgement of female contributions to scientific disciplines**, as they are often under-attributed in journals, given smaller research grants, or their work and discoveries are not celebrated. This, among other factors, contributes to a "leaky pipeline" where they may then leave the profession after years of struggling to have their work acknowledged. Beyond this **fundamental unfairness**, the loss of female researchers **limits the talent pool for science** as the proportion of women staying within the discipline dwindle, leading to a less diverse workforce**, fewer fresh perspectives and reduced innovation for a world that is heavily reliant on science to deliver solutions**.

b. The loss of women and lack of diversity in the world of science further creates a **gender bias in research focus**, which has **life-impacting consequences** for women in general, as male researchers are less likely to be interested in and prioritise women's experiences and issues as research topics. There is thus an underrepresentation of women as research subjects and women's health suffer due to their bodies being less understood by science. For example, seat belts were designed with the average man's height and weight in mind. Despite putting on seat belts, women, with their physiological differences, were more likely to sustain severe injuries during road accidents as compared to men. Furthermore, many drugs which were tested on an overwhelming number of men created adverse side effects on women due to the dosage levels determined during clinical trials which may not be well metabolised in women. These include common drugs such as aspirin, morphine and heparin. When research and design teams consist of mainly men, women's needs are often ignored or grossly neglected.

c. The underrepresentation of women in scientific leadership positions also creates a vicious cycle where **female researchers are at greater risk of discrimination and sexual harassment in an extremely male-dominated culture and environment**, which often results in them leaving science altogether, reinforcing the lack of women in science. In recent years, there have been several high-profile scientists from prestigious American institutions who have been investigated following allegations of sexual misconduct. E.g. Sexist comments from well-known male scientists within the

labs and to the media perpetuate the idea of female scientists and researchers being incapable and reinforce sexist perceptions of women's abilities. For example, Nobel-Prize winner Sir Tim Hunt dismissed female scientists as girls who fell in love with their male colleagues and who were prone to crying. Such flippant, disparaging comments belittle female researchers, despite the reality of their hard work and professionalism.

2 'In today's society, people are slaves to technology.' What is your view? (RI Y6 Prelim 2018)

Requirements

'**Slaves'**: This term needs to be explored in all its connotations and contexts. Primarily, it refers to a total loss of autonomy and control, addiction, lack of independence without it. Technology is a dominant part of our daily lives and we have become a slave to it: It's demanding, intrusive and in many ways, regularly disappoints, yet despite this knowledge, we can't live without it. Students must examine the alleged enslavement to technology as manifested in *practice, behaviour and attitude* of people in the *context* of modern society. To support their assessment of the alleged enslavement, students have to provide *clear evidence of how* people have become/or are not "slaves to technology".

Band 4 & Above	**Band 3**
• Awareness of the key term 'slaves' shown by discussing reasons why this is worrying.	• A list of how people use technology • A list of pros and cons of technology

<u>People are slaves to technology</u>

a. Far from empowering us, the increased accessibility and ease at which people are connected have made us become over dependent on it to the extent we have lost control over our daily lives. While technology did allow us to remain connected to our work and ensured that learning could continue on various online platforms during Covid-19 pandemic, when people were forced to remain in their homes, it did seem that people lost their personal time, as the ease of access resulted in their work and private lives being blurred, with many reportedly suffering from burnout and experiencing an increase in mental stress due to an increase in demand and expectations from their employers regarding the time spent on their work. Many were required to attend online meetings even after official work hours simply because technology allowed them to. In addition, on a larger scale, our over-reliance may have made us more complacent, making us think that its apparent reliability will ensure that our lives will be made more convenient with little disruption, which was proven wrong following the Crowdstrike crash in 2024 that created turmoil for many service-related industries, including banks and airlines, which witnessed numerous flight cancellations in many airports around the world. This seems to reflect how even businesses have become too reliant on technology, giving them an illusion of security, without realising the potential catastrophic impact it can have on us in the event of a failure.
b. The convenience and accessibility which technology offers have, over time, shaped people's way of life to the extent that many have little choice but to cede some degree

of control in exchange for the benefits that technology offers. As many services have migrated to online platforms in an attempt by corporations to reduce manpower and hence lower cost, consumers have also increasingly used these platforms for their daily transactions. This is also a result of many countries' attempt to create nationwide digital infrastructure to increase efficiency of services. At the same time, this has increased the risk of people's information being exploited for monetary reasons, evident in the rise of fraudulent transactions and scams, like the high-profile OCBC phishing scams in 2022, where customers lost more than 10 million dollars. Furthermore, the lack of transparency on data management and governance suggests how we are helpless in the way our information is used, clearly seen in the recent NRIC unmasking incident in Singapore, where the public had full access to Singaporeans' NRIC number on ACRA website, which led to Singaporeans protesting and demanding accountability from ACRA and the government.

c. Furthermore, the unprecedented reach of technology to users and consumers has led to many creating algorithms to constantly engage and sustain users' attention, and the echo chambers that result have the effect of shaping people's beliefs and influencing their actions. The rise of Tik-Tok among the young has reportedly led to a rise in mental health issues among them, chief of which include eating disorders and body image concerns. The frequent challenges appearing on users' feeds and the virality of these feeds and challenges compelled people to take them on, often resulting in severe consequences. For example, the A4 paper challenge, which featured slim women with a waist that is smaller than the width of a horizontal A4-size paper led to people challenging themselves to lose weight to achieve a similar waistline. The "blackout" challenge led to the death of several girls. Contrary to what Musk promised when he first took ownership of X, the platform was subsequently accused of being far-right, and was reported to be a vehicle for Trump's recent presidential campaign, at the same time running a smear campaign against then-VP Kamala Harris with its AI-powered trending section. All this highlights the power of technology in playing the dominant role in influencing the decisions, thoughts and actions of people today, leaving them with little agency.

People are not slaves to technology

a. As governments are increasingly cognisant of the harms of technology and how it can potentially regain control of our lives, they are introducing legislations to curtail its power and influence and once again change the power dynamics and the asymmetric relationship. For example, the rise of fakes news and its impact on people's beliefs led to the introduction of POFMA in Singapore and Network Enforcement Act in Germany. Recently, Australia introduced a ban on social media for those under 16 years old. On the academic front, universities are tweaking their plagiarism guidelines to reflect the use of AI-tools to generate academic work by students, as many are increasingly relying on these tools to complete their term papers, rather than on their own research and ideas, a practice that is considered cheating by many universities. In China, children are not allowed to spend more than 15 hours on gaming during their month-long winter break. This was an attempt to prevent gaming addiction among the youth. These policies seem to reflect the degree of control and dominance technology exerts on various aspects and segments of society to the extent that governments had to resort to unprecedented measures to rebalance people's relationship with it.

b. While people are quick to harness the benefits of technology, there is still greater trust placed in people in using the technology. Doctors are still needed in making sense of the patient's diagnostic tests, even though AI has been used to improve accuracy of medical diagnosis. The two crashes of the Boeing 737 Max due to the MCAS, which was a new system installed on the latest variant of the 737 model to bring the nose of the aircraft down and which could not be controlled by the pilot, highlighted the importance of pilot involvement and human control, rather than giving full autonomy to technology.

3 Consider the importance of physical appearance in today's world. (2022 RI Y5 Promo)

Requirements

- Consider the **value** and attendant benefits that physical appearance has today.
- **Proper contextualisation** to characteristics/features of the world today by considering situations in the modern context where one's physical appearance is still/no longer important.
- '**Physical appearance**'**:** broad enough for candidates to consider **other forms of physical appearance besides 'attractiveness/beauty'**

Band 4 & above	**Band 3**
• Scripts in this band will be able to **address the key term, 'importance'** and not just list benefits or problems. To do so, students will need to relate it to the context of <u>today's world</u> and **explain why** there is a (lack of) need for physical appearance.	• Largely providing a list of benefits and problems of physical appearance. **High Band 3:** • Arguments may be **largely limited** to **one aspect of physical attractiveness** (e.g youthfulness) or limited to one society (Singapore/the US). • Listing the areas/domains in which physical appearance is important, with sufficient details. **Low Band 3:** • A script in lower Band 3 or 4 may be a **hijack** of the question, i.e. discussing other factors which are important or more important than physical appearance, or may make claims that are largely unsupported.

<u>Physical appearance is highly important</u>

a. **Physical appearance can be an indicator of deeper personal values**, and is **often used by other people to form an immediate impression of someone's character**. In politics, it is common for one's appearance to be used as a proxy for their competence and abilities, and good looks/appropriate grooming can sometimes sway voters into rooting for them. On the flip side, poor management of one's physical appearance can stir unwanted controversy that can undermine one's credibility. For instance, when an old picture of Justin Trudeau in blackface surfaced on the Internet,

many were upset and took offence at the inappropriate portrayal, claiming that Trudeau was 'not fit' to be Canada's PM because of his 'racist behaviour'.

b. Social groups also use physical markers to identify themselves through the use of fashion, and physical appearance is **essential in allowing an individual to feel part of a group** as well as identifying themselves to other members of that group. Counterculture fashion such as punk or ganguro (Japanese girls with dark or tanned skin) often rely on clothing, symbols, tattoos and piercings as visual markers of their group identities.

c. The **societal perception** that one's physical appearance is a **strong reflection of their professionalism** continues to exist today. In people-facing jobs, physical appearance is paramount as career success can be largely linked to how they present themselves. It is not uncommon to see many actors (such as Kumail Nanjiani in Eternals, Chris Hemsworth in Thor, and Natalie Portman in Black Swan) undertaking strict diet and training regimes to prepare themselves for certain roles that demand a particular physique. Social media influencers like the Kardashians whose success is contingent upon receiving and maintaining sponsorships also focus heavily on looking good. Kim Kardashian's Skims, which is a shapewear brand that became a phenomenal success worldwide has once again redefined beauty for women, and emphasised the importance of physical appearance as an integral part of one's confidence. In Singapore, it is clear that our SIA brand relies heavily on the exotification of the "Singapore Girl". It was reported that to maintain the highest level of grooming standards, there were various rounds during a job interview where one's skin condition and physique were assessed.

<u>Physical appearance is not very important</u>

a. **A growing voice to overcome bias towards physical appearance has led to meritocratic values increasingly becoming more central**, especially in the workplace. Work ethic and integrity, now deemed to be more necessary, are often assessed by an individual's actions instead of their appearances. Many workplaces are beginning to remove arbitrary rules on their workers' appearances e.g. no tattoos or piercings as there is a growing understanding that an employee's worth lies in their ability to contribute meaningfully in their role, rather than how they look. The already existing anti-discriminatory policies for gender or race have now expanded to discriminatory workplace practices based on one's appearance. In South Korea, a bill was passed by the legislative committee, albeit opposed by the Korea Employers Federation, to fine employers who ask for a photograph during the job interviews/inquire about the candidates' appearance. Such legislative changes are recommended in part to increase fairness at the workplace.

b. **Global challenges and changing conditions in the world today have led to people rebalancing their priorities today, with physical appearance deemed to be of lesser importance.** For example, a slow economic recovery and rising youth

unemployment has significantly reduced demand for luxury goods in China, whose market in pre-pandemic days tripled. The perception of designer goods as a necessary part of their overall physical appearance, which was an important status symbol, changed significantly, with many channelling their wealth to experiences and property investment instead. This was evident in the luxury brands in China facing severe headwinds in post-pandemic years, that led to a significant drop in their share price, with LVMH and Kering being the worst affected luxury companies.

4 'There is no value in believing in something unless it can be scientifically proven.' How far is this true? (2021 RI Y6 Prelim)

<table>
<tr><td colspan="2">Requirements
• Candidates are to assess whether there is any worth/value to having beliefs that cannot be scientifically proven.
• 'no value' – some engagement with the absolute term is required, as the question completely dismisses the usefulness of believing in something that cannot be scientifically proven.
• 'can be scientifically proven' – refers to the quality (of a belief) being demonstrable to be true/correct through scientific knowledge or empirical data.</td></tr>
<tr><td>Band 4 & above</td><td>Band 3</td></tr>
<tr><td>• Essays in this band would address 'no value' consistently and sensibly
• Illustration highlights the tension in the question by focusing on the opposing claims made by science and other beliefs.
• Nuancing is clear, showing good effort to move away from absolute statements about science and bringing about a clear awareness of the subject matter.</td><td>• Arguments are adequate in listing pros and cons of believing things that cannot be scientifically proven, but ideas may be superficial or shallow.
• Illustration which may only focus on the value of other beliefs, rather than illustration that highlights opposing or competing views between these beliefs and science.
Low Band 3
• Response may largely misconstrue the question's focus to be about the benefits vs harms of believing in things that cannot be scientifically proven or be clearly biased in terms of only addressing the harms of such beliefs.
• Mostly hypothetical or personal/ anecdotal examples or inappropriate examples (which demonstrate a poor grasp of the key issues).</td></tr>
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Such beliefs have no value

a. Believing in something that cannot be scientifically proven is **fundamentally incompatible with the larger world**, which is based on and organised primarily around knowledge and understandings that have been proven or subjected to robust scientific examination. The need to align oneself with a widely prevalent trust in measurable results yielded through rigorous testing and analysis is reflected in claims

of homeopathic treatments being founded on scientific evidence. Most notably, homeopathy, which is the belief that the body can cure itself, has been erroneously claimed to have found scientific support in a research paper published in 1988 by French immunologist Jacques Benveniste, which was categorically disproven by researchers. The need to associate with scientific credibility is also evident in companies that market health products or even enrichment classes that claim to be designed based on brain-based research.

b. Far from having value, **such beliefs are actually harmful**, as throughout history, they have been **the cause of much human conflict and tragedy.** For instance, highly questionable beliefs about race and genetics that their proponents asserted were based on biblical texts and highly bigoted perspectives were in part responsible for slavery and for the pursuit of Aryan supremacy/Nazi aggression; climate change scepticism/denialism have not advanced human societies with scientifically disproven claims that climate change is fundamentally part of a natural cycle, or that climate models exaggerate the actual amount of carbon emissions in the atmosphere but instead have been highly damaging to human societies and the survival of the species. Climate change counter movements, including The Global Climate Coalition, a lobby group for the US fossil fuel industry, succeeded in shifting public opinion away from urgent climate action. It was found that between 2003 and 2010, more than US$500 million was donated by private philanthropic foundations associated with ExxonMobil and the Koch brothers to organisations that disputed climate change as an urgent problem. The resistance against the covid-10 vaccine was also another case of how unscientific claims of vaccines will result in autism of children could contribute to even more problems that society was already facing, and which urgently required the US population reach herd immunity from vaccinations to stem the spread of the virus.

There is still value in such beliefs

a. Belief in something that cannot be scientifically proven actually **strengthens the basis for moral or ethical action**, particularly today when the rate at which science advances can lead to potential misuse of it, which can eventually harm, instead of enhancing our well-being. For example, while CRISPR technology seems to offer a scientific basis to cure and prevent diseases, the ethical concerns surrounding the technology offering a tool for human beings to play God, the uncertainty surrounding the impact of the technology and the wider implications for society, in terms of social inequality, in the form of designer babies exclusively possible for the well-to-do, requires the teachings of religion to guide the public, government and scientific community in the application of this technology. This also explains why He Jiankui was censured by the scientific community and jailed for its role in using CRISPR to help a couple give birth to twins without inheriting HIV from the mother.

b. Furthermore, one needs to acknowledge **the inadequacy of science** in not gaining sufficient knowledge even though it has guided our decisions due to its perceived reliability. For example, during the Covid-19 pandemic, despite the lack of scientific proof, many people turned to alternative medicine like Lianhua Qingwen capsules manufactured in China to alleviate the symptoms of covid-19. Even though they were not approved in Singapore, a study involving clinics was conducted on their efficacy and safety despite science not being able to explain why the pills would (not) work. Acupuncture, which is a form of TCM treatment, is considered a popular alternative treatment by many despite not having clear scientific proof of its efficacy, because of

how it is viewed as less invasive and not having severe side effects that usually would come with drugs which have undergone scientific studies and clinical trials.

5 'Formal education is less valuable today than it was in the past.' What is your view? (2023 RI Y6 Prelim)

Question requirements: '**Formal education'**: Schools, structured education pathways/programmes '**valuable'**: Clarifying and evaluating the extent of benefits offered by formal education	
Band 4 and above	Band 3
• Assess the value of formal education in the context of today • Comparison of past and present education	• Listing of pros and cons of formal education • Focus is on education in general – considering education on online platforms like Coursera, for example.

Less valuable today

a. The rapid advancement of modern technology which constantly redefines economic landscape is **making many jobs, and hence, job specific skills/knowledge of today, obsolete and non-existent** for students today, far outpacing the changes made to educational policies to adapt to the new environment. Additionally, due to advancements in technology and work processes, constant upgrading and skills upgrading is needed, even after completion of a formal path of education. This favours informal continuous upgrading and makes formal education a waste of time and resources. Jobs like human computers were phased out when technology introduced an electronic computer system. Additionally, jobs like social media managers and programmers were not in existence in the late 20th century and these are a few of the best paying professions these days. This reduces the value of formal education which focuses on a fixed set of knowledge and skills.

b. **Changing economic conditions may have led to a decline in the value of tertiary education, particularly in professional sectors.** The supply-demand labour imbalance especially in rapidly developing sectors appears to have encouraged employers to suspend the use of proxies, such as degree completion, to expand their pool of prospective candidates. States in America, with Pennsylvania being the latest state, were reportedly dropping college degree requirement for most state jobs. Harvard Business Review has termed the phenomenon as "Degree Reset" particularly in middle-skill occupations where labour scarcity as well as increasing appreciation of skills competence over academic attainment depressed demand for degree holders. It has estimated that 1.4 million jobs will be available to workers without college degrees in the next five years.

Equally/more valuable today

a. With **greater awareness by governments and educational institutions of the need for broad life skills in the working world**, formal education has moved to teaching

skills beyond those required for the courses. Broad-based skills such as those relating to critical thinking, presentation and project management skills are in demand across all industries, allowing formal education to continue to be valuable. Additionally, formal education teaches desirable social and teamworking competencies, which are even more crucial in the globalised interconnected world where collaboration is central to working and succeeding. Schools are now more attuned to the needs of the workplace, and this has resulted in current programmes introduced to ensure that students leave schools with skills that are useful. In Singapore, primary schools have introduced the teaching of coding as a course to ensure that their students have relevant and current skills needed for the world they are about to enter. In line with its motto *'because tomorrow's jobs don't yet exist'*, the Hun School of Princeton has implemented a skills-based curriculum where teachers focus on the development of 7 core skills while pursuing subject mastery: creativity, cultural competency, collaborative problem solving, critical thinking, ethical decision making, effective communication, and leadership skills. Shifts in these institutions are indicative that formal education is keeping in tandem with changes in marketplace demands.

b. Beyond skills and jobs, formal education remains a significant platform to **teach values and socialisation**, elements that are left out in independent and informal learning platforms which mainly focus on delivering information and elements that have a direct tangible return which is something that may not be directly associated values transmission. In Demark, schools have specific lessons and programmes teaching social and life skills such as communication and empathy. This is in stark contrast to informal lessons where the focus is purely on knowledge and subject matter mastery such as in the free courses programme from Harvard University, where students are brought through content materials without any element that would build social skills or impart any form of values. Furthermore, following the outbreak of violence in Gaza between Hamas and Israel, many stakeholders, including parents, expected schools to play an instrumental role in in facilitating discussions of the conflict.
c. The certification or degree awarded by formal education institutions are **still very much recognised, and necessary for social mobility as well as career advancement today**. Formal education remains key for entry and progression in academia. While examples like Elon Musk and Mark Zuckerberg are used to support the claim that college education is not a prerequisite for professional success, the field of research is premised upon scholarly work which requires formal education. In developing, low-income countries, for example, there is a direct correlation between a person's income and every additional year of education. Social mobility continues to be closely associated with formal education in this context. In developed economies where intense competition remains, the focus on upskilling and taking on further education is still seen as important, as such qualifications helped differentiate and makes workers more marketable.

6 'Traditional beliefs have little value in the modern world.' Discuss. (2023 RI Y6 Prelim)

Question requirements:

'**Traditional beliefs'**: systems of thought, values, practices, and interpretations that are rooted in historical and cultural contexts; typically passed down from one generation to another

'**(little) value**': The (significance of) benefits traditional values can bring to the individual, various communities and wider society, and the lack of relevance these beliefs have on today's society.

Band 4	Band 3
• Awareness of term '**little value**' (irrelevant/ severity of negative impact, declining sense of importance placed on such entrenched beliefs) • Addresses specific contexts as to how traditional beliefs are subject to **tensions** in the modern world.	• Listing the pros and cons of traditional beliefs or stating common practices or mindsets with no links to specific target groups and their beliefs • Mostly descriptions of generic beliefs (social mindsets or national psyche e.g hard work, pragmatism) without qualifying how they are relevant to tradition or how cultural or historical contexts shape traditions.

<u>Little value</u>

a. Traditional beliefs that **promote discrimination, prejudice, or inequality may clash with the values of a modern, progressive society**. Traditional beliefs do not promote the inclusivity and open-mindedness that seem to characterise modern society. Societies evolve and progress over time, often moving towards greater inclusivity, equality, and respect for individual rights. This is evident in China, where the pressure on women to marry before 30, seems increasingly out of place in a society where increasing level of education of women resulted in them focusing on their career, rather than marriage. The LGBTQ+ community continues to be marginalised in many societies due to the resistance of conservative groups, which believe in heterosexual unions.

<u>Have great value</u>

a. Traditional beliefs often **contribute to a sense of cultural identity and heritage**, which are **under threat of being diluted in an age of modernisation**. They can help people connect with their roots and understand the history and values of their ancestors. They can also foster a sense of community and belonging. Participating in rituals, festivals, and practices can bring people together and strengthen social bonds within and between communities. Many traditional beliefs are further translated into folklore, literary anthologies, oral traditions, rites of passage or social customs which

have been refined over centuries. They still offer valuable insights about social identities or norms maintained by faith-based communities or many ethnic communities today. Aboriginal cultures have a rich tradition of Dreamtime stories, also known as Dreaming or Songlines. These stories explain the creation of the world and pass down cultural, spiritual, and practical knowledge about the care and stewardship of the bushland in which they live. Very few written accounts exist within Aboriginal cultures, which makes it crucial for such traditional beliefs to be passed down. Similar cultures that depend on traditional storytelling include the Inuit and Hawai'ian peoples.

b. Many traditional beliefs **contain moral and ethical guidelines** that have been developed over generations, and are now more needed than ever in influencing us in our decisions and actions which will contribute positively to society. These entrenched principles cannot be replicated or recast by modern technology or state ideology. Many traditional beliefs embody values and virtues which provide individuals and communities with a solid sense of self and moral foundation in making ethical decisions for their lives. Some traditional beliefs also often contain accumulated wisdom and knowledge about humanity's ethnic roots or spiritual longings. These may be demonstrated in the form of birth and death rites, puberty and rites of passage, home establishment, healing and treatment or commemorative practices linked to marital ties, clan loyalty or land consecration and ownership. Originating in China, Confucianism emphasises moral virtues such as benevolence, righteousness, propriety, wisdom, and faithfulness, providing guidance on how individuals should interact with one another and promotes the concept of a harmonious society. In rapidly ageing societies, the belief in the young taking care of the old may be even more important today when there the elderly are increasingly being part of the loneliness epidemic. Similarly, the South African philosophy of Ubuntu, a term from the Nguni languages of Zulu and Xhosa that is often translated as "I am because we are," underscores the interconnectedness of all people. It emphasises compassion, kindness, and a sense of community, encouraging individuals to consider the well-being of others as well as the environment.

c. Far from being irrelevant, **the demands of modern life** have driven many to search for ways to **alternative ways** to manage them, and very often, those anchored in **traditional beliefs seem to increasingly favoured today**. This has led to traditional practices being reinvented and adapted to align with the demands with the modern world. For example, traditional healing practices have been integrated into modern healthcare systems around the world – traditional Chinese medicine and qi gong in China are used alongside conventional medical treatments. In India, there are dedicated hospitals and clinics focusing on AYUSH treatments (Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homoeopathy). The Tanzanian government has recognised the importance of traditional medicine and has established Traditional Medicine Units in health facilities across the country where traditional healers are sometimes trained to work alongside modern healthcare providers. Furthermore, some traditional beliefs have been secularised or interpreted in a non-religious context.

For example, practices like meditation or mindfulness, rooted in religious traditions such as Buddhism, are often adopted for their mental health benefits and form part of a holistic therapeutic treatment for an individual.

7 Is it fair to say that investment in space exploration is a total waste of resources? (RI Y6 Prelims 2021)

Requirements

- Candidates are to assess whether investment in space research is a 'total waste of resources' by considering the contributions that space exploration has had to the larger world. Candidates need to take note of the absolute term in the question and consider if it is true that there is absolutely no benefit from space exploration. As far as possible, references or examples about space exploration should be contemporary.
- '**investment in space exploration**' – can refer to space probes, astronomy, space tourism, moon and mars exploration, satellites etc.
- '**total waste of resources**' – absolute term needs to be addressed conscientiously in the response. Resources in this case are largely monetary but need not be limited to that alone; can include resources that have a finite nature e.g. manpower, time.

Band 4 & above	**Band 3**
• Essays in this band would address the absolute term '**total waste**' **sensibly** (such as showing cognisance and a reasonable treatment of its absolute nature by acknowledging how space exploration have also generated positive returns/outcomes).	• Arguments are adequate in **listing the pros and cons** of space exploration. The relevance to **'total waste'** might be **indirectly implied/suggested** through sufficiently analysed cons. • Scripts might mention briefly that such investment has not paid off but may not go into greater detail to explain why/how. • Shows **adequate awareness** of current criticism(s) against space exploration but perhaps lacking in convincing or sufficient details. **Low Band 3** • There could be **substantial confusion** concerning space exploration and related research or pursuits (such as astronomy or astrophysics).

Total waste of resources

a. The millions of dollars spent on space research **could be used to greatly address more current and pressing problems on Earth** such as global poverty and climate change. Coupled with the fact that outcomes from space exploration are rarely guaranteed, these resources spent on space could be better utilised for a more practical end. Estimates from globalgiving.org suggest that the upper limit of ending world hunger is somewhere between 7 to 265 billion a year, an amount that can be easily covered by governments' combined space budget of $216.27 billion from 2018-2020.

b. Space exploration is increasingly **becoming a vanity project/mere display of power and prowess by billionaires and nations**. As of 2018, the Chinese government has invested approximately US$550 million in space, arguably to rival and to challenge the US and its political dominance in the space industry. The super-rich e.g. Elon Musk, Jeff Bezos and Richard Branson are also piling in an astronomical amount of money into space exploration/tourism which would merely cater to the wealthy elites and in turn exacerbate the existing gap and inequality between them and the masses.

Not a complete waste of resources

a. **Many practical technologies and research findings that we enjoy today were derived from space exploration**. This includes satellite technology, freeze-dried food, heat resistant materials, and various biomedical research. Velcro, a highly useful everyday item was first invented for use in space; freeze dried milk powder that is a staple for many babies was initially created as a portable protein source for astronauts.
b. Space exploration equips us with **crucial knowledge about the outer space that can have valuable applications to our lives.** Operational environmental satellites GOES and POES assist us in weather forecasting and environmental applications; the MODIS rapid response system allows for observation and monitoring of pollution patterns from space. Through space, we can also view archaeological structures and learn more about humanity's past.
c. **Furthering of scientific knowledge** in expanding the frontiers of science through space exploration, which cannot be measured or quantified by a cost. Every piece of knowledge enlarges our scientific understanding of our physical environment and may provide the impetus for future discoveries and technologies. Space research has guided our knowledge and insights in many areas of scientific study (e.g. magnetosphere, fluid dynamics).
d. At present, space exploration may appear to be a waste of resources and money, but **our limited ability in assessing the potential utility of space may be blinding us from reaping the actual gains of space exploration**. Space is rich in resources (e.g. asteroids that are rich in C-type carbon, M-type and S-type metals) and the European Space Agency's Rosetta probe has located such resources from images and data sent back from its Philae module after having landing on a comet in 2015. Other exciting prospects about space exploration include space colonisation, resource mining, alien contact and space diplomacy.

8 'There is little to look forward to in one's old age.' To what extent is this true of your society? (2021 RI Y6 Timed Practice)

Requirements • Key terms: "Little to look forward to": discuss and examine the prospects of growing old in view of trends in your society – rapid technology, low fertility rates, raised retirement ages – that either support or challenge the process of growing old. • 'One's old age' is not the equivalent of 'getting older' and hence the responses should primarily deal with the elderly.	
Band 4 & above	**Band 3**

• Scripts in this band **clearly explain what 'looking forward' means** and, rather than only describe what is done for the elderly. Scripts in this band would be able to establish how observations make growing old something that is desirable, not merely bearable. To frame the argument more explicitly to address 'looking forward', responses could show how current trends are likely to continue in the future. • In doing so, **characteristics of the society** have been taken into account in the discussion of the challenges that the elderly face and in what they can enjoy. • Good discussion of government policies and changing attitudes towards the elderly, with analysis of how this has happened over the years.	• **Identify and explain** areas in which the elderly face disadvantage and areas in which they are supported. • **Examples** are adequate but may not fully support analysis in the arguments **Low Band 3** • Examples may either be brief or not about the challenges associated with the elderly in Singapore. • Little mention of country's context and key features that make growing old easy/challenging, though examples raised are relevant to the question or topic.

There is little to look forward to in one's old age

a. **Given the frenetic pace of recent technological advancement, the elderly are often unable to adapt to the rapid rate and pace of technological advancement.** This concern is especially pertinent to the old in Singapore as it moves towards being a SMART nation, with technology endemically integrated into most aspects of society. Apart from being unfamiliar with these systems and thus not being able to access/utilise/maximise them, such changes lead to the pace of life moving at a dramatically faster pace, resulting in a widening digital divide in society, which may end up alienating the elderly. The immense upheaval to the lives of those entering retirement is regarded with fear and trepidation. (e.g. smart services and contactless payments which have become so prevalent that the SG govt sees a need to employ digital ambassadors to facilitate this transition.). Furthermore, as online transactions and services become an integral part of our lives, the elderly have similarly become more vulnerable to cybercrimes, with many falling victim to phishing scams, resulting in them losing a huge part of their savings.

b. **Fragmented family ties, longer working hours for the young and the plight of the 'sandwich generation' in Singapore have borne witness to an epidemic of loneliness amongst today's elderly.** Singapore's elderly are more lonely and depressed than ever before. In 2018, the Samaritans of Singapore said that the number of elderly aged 60 and above who took their own lives peaked at an all-time high.

There is much to look forward to one's old age

a. **The government's attempt to create a more inclusive society** in Singapore has resulted in greater resources and a more comprehensive plan to better support the elderly. With Singapore becoming an increasingly globalised nation with an ageing demographic, the government has recognised the needs of the social services sector and has especially provided various assistance schemes for the aged and the ageing in society. This reinforced social safety net has made this transition easier for those who are growing older in Singapore. The government has progressively rolled out support schemes as well as initiatives to offer financial support and subsidised medical costs for the elderly. From Eldershield to the Pioneer/Merdeka Generation package to the Enhancement for Active Seniors plan, many subsidies and programmes are in place to mitigate the hefty financial challenge of getting older in Singapore. The constant revision to the CPF minimum sum, with the latest being introduced at the start of 2025, is to ensure that the elderly will have a more sustainable monthly payout upon retirement, given the increasing cost of living and the longer life expectancy among Singaporeans today.
b. Furthermore, in order to achieve greater financial independence for those in their old age and ensure greater longevity in their employment, the government has introduced **stronger legal protection** against workplace discrimination. The constant raising of the retirement age and re-employment age, with the latest being 64 and 69 respectively, will ensure that Singaporeans can remain employed even at a later stage of their life journey. The passing of the Workplace Fairness Bill into law in 2025, ensures that hiring, firing and appraisal decisions should not reflect employers' bias in five groups of characteristics, with age being one of them.
c. **Smart, assistive technology** has transformed the healthcare landscape for the elderly and their caregivers in Singapore for the better. It is expected that such technology will be able to provide better home care and help seniors stay independent or improve senior care services for caregivers. (e.g. instead of alienating seniors, healthcare digital transformation can provide them and caregivers with support. As part of Singapore's Smart Nation initiative, the country has rolled out tele-health rehabilitation, e-services and even robotic nurses, shifting the concept of elderly care from hospital to home.)