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NATIONAL SENIOR CERTIFICATE EXAMINATION
2024

**LIFE ORIENTATION
COMMON ASSESSMENT TASK
PART B**

MARKING GUIDELINES

A MESSAGE TO THE MARKER

Thank you for the careful and professional way in which you will approach the marking of each of your ISC CAT responses. Please note that marks must be awarded for each different and viable explanation according to these Marking Guidelines.

Many of your learners' responses may fall outside of the responses presented here. Please use your initiative here. If a learner has answered the question fully and they have not misunderstood the question (even if they have interpreted it differently from the perspective offered here) – they should be awarded either all marks allocated or a portion of the marks allocated, for each question.

Therefore – it is recommended that you read the sources fully and answer the questions yourself before you begin marking. In this way you will understand what the questions are asking. Learners must answer all questions within the context of the sources.

SECTION A SHORT QUESTIONS**QUESTION 1**

1.1 What was the main focus of the Global Business Gathering in China in 2018?

Artificial intelligence ✓ OR

How AI has the potential to change the world. ✓

(1)

1.2 Why do you think the availability of AI to anyone with an internet connection is significant to our economies and society?

This is significant as it allows anyone to develop and use advanced technologies to solve problems. ✓

This can lead to innovation and solutions which can help societies and build economies / increase food production / reduce environmental impact ✓

(2)

1.3 What are 'wearable plant sensors' and how can they contribute to reducing food insecurity worldwide?

They are small devices which fit onto the stem of a plant. ✓

They gather data, such as humidity, temperature, and nutrient levels. ✓

This will contribute to reducing food insecurity worldwide as it leads to greater crop yields/less wastage. ✓

(3)

1.4 Name TWO ways to ensure that AI systems are transparent and inclusive.

Any two ways which speak to ensuring that AI is transparent and inclusive:

- ***Develop clear guidelines which enforce transparency in the design and use of AI technologies. ✓***
- ***Ensure governmental oversight into AI use through established legislature and regular audits. ✓***
- ***Ensure that the data used to train AI systems is diverse and representative of diverse demographics. ✓***
- ***AI development teams need to be diverse and include people from a variety of different backgrounds / races / genders and cultural perspectives.***
- ***AI should be cheaper which will ensure it is accessible to more people ✓***

(2)

- 1.5 Source 1 focuses on using innovation and generative AI to solve some of the big problems such as food insecurity and dependence on non-renewable fuel sources.

Briefly explain what other 'Big Problem' you believe innovators should focus on and why.

One mark awarded for identifying a relevant 'Big Problem'. Needs to relate to anything being experienced on a global scale.

Two marks are awarded for the explanation and reasoning thereof. Reasoning needs to be logical and speak to the impact on people or a country as a whole. Only award marks for WHY innovators should focus on the problem, not HOW the problem can be solved.

Marks should only be awarded for the explanation of ONE big problem, not many problems.

Examples could include (this list is not exhaustive and only serve as examples of reasoning):

- ***Poverty ✓***
There are billions of people who live in poverty and who do not have access to food, healthcare or education because of it. ✓ These are all basic rights and if properly met, will lead to a healthier and more productive society. ✓
- ***Climate Change ✓***
Due to climate change people are finding it difficult to grow crops successfully. ✓ This could lead to food shortages and increase the levels of food insecurity in our world/country. ✓
- ***Biodiversity loss ✓***
Biodiversity is important for ecosystems to function properly. ✓ If we lose biodiversity then this will impact food production, availability of fresh water and could also lead to mass extinction of species. ✓
- ***Water scarcity ✓***
Water is essential for life on earth, whether for growing crops or drinking. ✓ If we run out of water it could lead to food insecurity, species extinction, loss of life. ✓
- ***War ✓***
War is incredibly destructive and has a huge impact on people, the country and the world as a whole. ✓ Thousands of people are displaced, lose their lives or lose family members due to war. ✓
- ***Gender Equality ✓***
There are millions of women and girls who live in gender-unequal societies. ✓ They therefore do not have equal access to opportunities such as education and can end up in abusive relationships. ✓

QUESTION 2

- 2.1 2.1.1 Before the time of the Covid-19 Pandemic, what were South Africans most concerned about regarding 4IR technologies?

The biggest concern was that robots would replace workers. ✓ (1)

- 2.1.2 In your opinion, is this a valid fear? Please substantiate your answer fully.

Learner can answer yes or no. No mark awarded for yes/no. Marks are awarded for the substantiation only. Please award marks for critical thinking and answers which are logical.

The following examples are not the only range of possible answers:

- Yes, it is a valid fear as a large portion of South African workers are in industries that are quite labour intensive ✓ and easily replaced by robots or technology. ✓***

OR

- Yes, it is valid as it is costly and difficult to retrain or upskill workers ✓ and so companies would prefer to install technology which would save them money in the long run. ✓***

OR

- No, it is not a valid fear as there are many careers which require skills only humans can acquire ✓ and therefore will not be replaced by robots. ✓***

OR

- No, it is not a valid fear as the South African infrastructure is not capable of fully realising these advanced technologies yet ✓ and so robots will not be replacing workers in the near future. ✓***

(2)

- 2.2 Explain in detail ONE possible negative consequence if a country is not actively working towards embracing 4IR technologies.

Learners are awarded 1 mark per valid and logical response. Marks are only awarded for ONE idea fully unpacked. Do not award marks for many different ideas. The below are a variety of possible answers.

- ***If a country does not embrace 4IR technologies it can decrease productivity. ✓ If a country does not actively work towards embracing 4IR technologies, they will struggle to compete in the global markets and will thus have a weakened economy. ✓ This will negatively impact all people in the country. ✓***
- ***Not embracing 4IR technologies could also lead to graduates and highly skilled people immigrating ✓ to a country which is actively working with 4IR technologies and this could lead to a skills shortage in the country. ✓ This could cripple the economy. ✓***
- ***As education is driven by industry, ✓ if there is no 4IR demand from industry, then the education offering in the country will not expand to incorporate technological courses. ✓ This could lead to a lowered standard of education compared to global rankings. ✓***
- ***Sustainability, and the wise use of resources, is paramount due to climate change and global warming. ✓ 4IR technologies are making it possible for countries to be more sustainable. ✓ If a country does not have access to such technology, it could lead to greater environmental breakdown and resource depletion. ✓***
- ***If a country does not use such 4IR technologies, it could lead to food scarcity as the population expands. ✓ 4IR technologies are making it possible to increase crop yields, ✓ which helps prevent food insecurity. ✓***

(3)

- 2.3 Evaluate what the writer meant by: 'It can be argued that South Africa is still stuck in the Second and Third Industrial Revolutions.'

Marks are only awarded for evaluation, not an explanation of the concepts of Second and Third Industrial Revolutions.

The Second and Third Industrial Revolutions are still quite labour intensive and rely on unskilled labour. ✓ South Africa has not yet adopted technologies such as AI and the Internet of Things in a widespread manner. / The majority of South Africans are unskilled labourers ✓

(2)

2.4 According to the source, what TWO reasons are given for why South Africa cannot use 4IR technologies to their full extent?

- *The innovation and industrial policies do not fully support the development of 4IR technologies. ✓*

OR

- *The key stakeholders such as government, industry and universities do not work together enough. ✓*

OR

- *Have not combined our internal resources such as money, people, and infrastructure with external ones such as foreign investments and technology trade*

(2)
[10]

QUESTION 3

- 3.1 According to Source 3, what do young people need in order to be more productive in emerging economies?

Access to better quality primary and secondary education. ✓

OR

Development of problem solving and beginner digital and STEM skills.

OR

Need access to cheaper mobile phones and tablets, mobile internet, and digital services to develop business.

(1)

- 3.2 Source 3 mentions that new formal jobs must be created using advanced technologies. Name TWO advanced technologies and a career within each which could help improve the economy.

Any emerging technology from the Fourth Industrial Revolution can be selected, i.e. Artificial intelligence, Internet of Things, Nanotechnology, 3D Printing, etc.

Careers given as examples must relate to improving the economy.

Example (this list is not exhaustive):

- ***Artificial Intelligence ✓ – AI developer / AI policy developer / AI law professional / AI ethics manager. ✓***
- ***Internet of Things ✓ – Applications developer / internet hardware installer / internet technician. ✓***
- ***Nanotechnology ✓ – New material developer/new material tester. ✓***
- ***3D printing ✓ – 3D printing researcher / Printer of medical 3D printing / 3D printer manufacturer or sales or technician. ✓*** (2 + 2 = 4)

- 3.3 Looking at Source 4, evaluate whether you believe the current education system in Southern Africa encourages the development of these skills.

Allow for learner response.

No marks awarded for stating whether they believe that the education system encourages the development of these skills or not.

Marks must be awarded for a well-substantiated answer which is valid and logically developed. The reasons given may be based on their experience of their unique school environment that the learner is engaged in.

Examples:

- *Yes, the school system encourages the development of these skills. We have IT lessons at school ✓ and the teacher keeps up to date with new technological developments. There are a lot of associations/clubs at our school that allow us to develop leadership and Social Influence Skills. ✓ Our teachers encourage independent thinking in the classroom which leads to the development of curiosity and lifelong learning. ✓*

OR

- *Yes, the school system does encourage the development of these skills. We have lots of different projects which require different skills. ✓ Our teachers let us use AI so we can learn how to use it effectively. ✓ School is a social place where we spend time with our peers and so we develop social skills and empathy. ✓*

OR

- *No, the current education system does not encourage the development of these skills. A lot of the content we learn is not important for life after school. ✓ We have to write exams which do not really show our true abilities. ✓ We have to get through a lot of work and there is no time to develop skills. ✓*

(3)

- 3.4 Choose any skill from Source 4 and indicate how you, as a Grade 12 learner, would develop that skill further.

Allow for learner response.**Mark not awarded for the chosen skill; mark awarded for a strategy to develop the chosen skill.****The strategy needs to relate to the chosen skill.****Examples (this list is not exhaustive):**

- *Analytical thinking: I could start working on logic puzzles. ✓*
- *Creative thinking: I could engage in Art Club/Art projects at school. ✓*
- *AI & Big Data: Read articles on how AI works / participate in online courses / play around with various AI programmes. ✓*
- *Leadership & Social Influence: Get involved in various sports or teams at school/participate in debating or Toastmasters. ✓*

**(1)
[9]****30 marks**

SECTION B DISCURSIVE ESSAY QUESTION**QUESTION 4**

The benefits of the Fourth Industrial Revolution far outweigh its potential risks.

The learner is free to respond in any way – any stance is acceptable, as long as the learner justifies his/her opinions well. The sources provided and the questions posed in Part A of CAT B will assist the learner in writing this essay.

A superior essay will recognise the ethical complexities on both sides of the argument – and provide exceptions on both sides of the argument – although these alternative perspectives do not need to be balanced.

Examples should show an understanding of the issues surrounding the Fourth Industrial Revolution and the technologies which come with it that have been identified in both CAT A and B. Examples should also include the learners' unique thoughts originating from personal internalisation of class discussions and reflection, etc.

The essay should explore the benefits of the Fourth Industrial Revolution and its technologies, as well as the possible risks of industrial advancement.

Possible arguments in agreement of the topic:

- ***The Fourth Industrial Revolution significantly enhances productivity and economic growth.***
- ***Innovations in the Fourth Industrial Revolution can lead to a greater quality of life and more sustainable ways of living.***
- ***Historical perspectives show that while there may be initial concerns surrounding job loss, there are inevitably new professions which are created and improves standard of living, etc.***

Possible arguments in disagreement of the topic:

- ***Fourth Industrial Revolution runs the risk of exacerbating social and economic inequality, widening the gap between the rich and the poor.***
- ***Ethical and privacy concerns in the development and use of technologies.***
- ***Environmental and social impact: History has shown us that industrial progression often comes with environmental degradation and worsening social conditions, etc.***

The A/A+ candidate must be able to look at the impact of the Fourth Industrial Revolution from a multifaceted perspective, by considering the social, economic, and environmental impact of the Fourth Industrial Revolution and its accompanying technologies.

Intelligent and objective arguments are essential (including the counterargument).

Format of a complex essay (A+):

- The learner's stance must be clearly communicated in the introduction and throughout the essay.
- The same stance must be reiterated in the conclusion.
- Clearly and intellectually written paragraphs that align with the learner's stance must be used.
- Learner's statements must be strongly supported by examples – from sources and from 'own experience'.
- Learner's own voice must be evident.
- Strong moral fibre should be communicated – Life Orientation values must be reflected.
- Question should be answered comprehensively with no gaps in argument.
- The essay must provide a strong counterargument. A counterargument (engagement with alternative perspectives/arguments) distinguishes between a Level 7 and a Level 6.

LIFE ORIENTATION: ESSAY RUBRIC

CRITERIA	MARKS	LEVEL
- A clear position has been adopted and focus is consistent throughout the essay (relating to whether the benefits of the Fourth Industrial Revolution far outweigh the potential risks). - The argument is thought provoking, insightful. It offers a <u>unique 'own voice' perspective</u> by drawing on appropriate, detailed, and specific examples. - The examples have been seamlessly integrated into the argument. - Displays thorough understanding of issues within the context of the question (All three addressed: social, economic, environmental impacts of the Fourth Industrial Revolution). - The argument is skilfully sustained and wholly convincing with alternative perspectives/arguments taken into account and that have been thoroughly justified. - It is crisply and clearly expressed.	40 39 38 37 36	7+
- A clear position has been adopted and focus is consistent throughout most of the essay (relating to whether the benefits of the Fourth Industrial Revolution far outweigh the potential risks). - The argument is thorough and logically developed with a range of appropriate, specific examples to support the learner's viewpoint. - The examples have been clearly integrated into the argument. - Shows excellent evidence of understanding the issues within the context of the question (Any two addressed: social, economic, environmental impacts of the Fourth Industrial Revolution). - The argument is mostly sustained and largely convincing with <u>alternative perspectives/arguments</u> taken into account and that have been thoroughly justified. - It is clearly expressed.	35 34 33 32	7
- A clear position is taken by the learner (relating to whether the benefits of the Fourth Industrial Revolution far outweigh the potential risks). - Candidate focuses on the question, however, there may be some lapses. - The argument is clear, has substance and is logically developed with a range of mostly relevant, specific examples to support the learner's viewpoint. - Understands – and engages with – the issues within the context of the question (social and/or economic and/or, environmental impacts of the Fourth Industrial Revolution). - The argument is sustained with minor lapses in logic OR relevance, but it is largely convincing. - It is clearly expressed in most places.	31 30 29 28	6
- A clear position is evident within the argument (relating to whether the benefits of the Fourth Industrial Revolution far outweigh the potential risks). - Lapses in focus and/or implied focus in places. - The argument is evident, and some relevant, specific examples are provided in an effort to support the learner's viewpoint. - The examples are not always successfully integrated into the argument. - The learner has made an effort to unpack the issues within the context of the question (social and/or, economic and/or, environmental impacts of the Fourth Industrial Revolution). - The focus of the argument tends to deviate and may lack logic. - It is adequately expressed.	27 26 25 24	5
- The learner has attempted to adopt a position (relating to whether the benefits of the Fourth Industrial Revolution far outweigh the potential risks). - The focus on the question tends to be thin rather than substantive; the essay is largely narrative. - Alludes to issues within the context of the question (social and/or, economic, and/or environmental impacts of the Fourth Industrial Revolution). - The argument is superficial, and examples provided are vague and generalised in places. - The argument lacks focus and is poorly sustained. - The expression is sometimes awkward, but the candidate can communicate his/her ideas.	23 22 21 20	4
- The learner's position is vague or unclear. - There is no distinct argument present – weak or no examples have been provided in an attempt to answer the question. - Vague statements allude to the context. - There is evidence of repetition of ideas. - Argument lacks focus, cohesion, and logic. - The expression is clumsy and may impact upon the overall meaning that the candidate is trying to communicate.	19 18 17 16	3
- No position is provided by the learner. - Argument is implied; learner does not explicitly address the question. - The response provides some examples, but these are not linked to the question OR no examples are given, and statements do not address the topic. - The response is narrative, and the content is repetitive. - Expression is flawed and prevents the candidate from communicating his/her ideas.	15 14 13 12	2
- There is no connection to the question and the ideas that are provided are irrelevant. - Examples are haphazard and serve no purpose. - Expression is often incomprehensible and may be unintelligible.	0–11	1

40 marks

Marking Codes Key:

- **Gap:** candidate leaves out a core fact/lacks detail with regards to a core fact. = Λ
- **Narrative:** restating points from sources/making statements without justification = N
- **Focus:** candidate has successfully linked evidence to argument/to the question statement = F / ✓
- **Attempted focus:** when the candidate has relevant evidence and has tried to link to the topic but has not linked fully = AF
- **Implied focus:** when the candidate has evidence about the topic, but not linked the evidence to argument, is rather narrative and the link is implied = IF
- **Repetition:** when the arguments are repetitive = R
- **Irrelevant:** statements do not directly link to the topic statements/off-topic = OT