

COMPETITIVE ENTRANCE

ENGLISH LANGUAGE

EXAMINATION

TIME: THREE HOURS

SERIE C, D, E, F, TI and GCE/AL

INSTRUCTIONS TO CANDIDATES :

1. Read all instructions carefully before starting each section.
2. Each section is worth 10 marks.
3. Answer all questions in the spaces provided on this paper.
4. For the essay, use the lined pages provided at the end.
5. Manage your time wisely across the four sections.

SECTION A: GRAMMAR (10 MARKS)

Exercise I: Multiple Choice Questions (4 Marks)

Choose the best option (a, b, c, or d) to complete each sentence. (0.5 marks each)

1. If the materials _____ stronger, the bridge would not have collapsed.
a) were b) had been
c) have been d) would be
2. The new software _____ by the engineering team next month.
a) is installed b) will be installed
c) will install d) has been installed
3. The manager asked the engineers _____ she had completed the stress analysis.

a) did b) if
c) that d) does
4. This is the laboratory _____ the crucial experiments are conducted.
a) which b) that
c) whose d) where
5. By the time the project manager arrives, we _____ the preliminary design.
a) will finish b) will have finished
c) are finishing d) finished
6. Students who _____ consistently usually perform better in examinations.
a) study b) studies
c) is studying d) are study

7. You _____ wear safety goggles when operating this machinery; it's a strict rule.
 - a) should
 - b) might
 - c) must
 - d) could
8. The _____ component in this circuit is the microprocessor.
 - a) more important
 - b) most important
 - c) importanter
 - d) importantest

Exercise II: Cloze Test (3 Marks)

Fill in each blank with **ONE** suitable word. (0.5 mks)

The design (1)_____ a new engine requires careful consideration of several factors. (2)_____ engineers must ensure that the engine is not only powerful (3)_____ also fuel-efficient. Materials used in its construction must be able (4)_____ withstand high temperatures and pressures. (5)_____ prototype is built, it undergoes rigorous testing (6)_____ it can be approved for mass production.

Exercise III: Sentence Transformation / Error Correction (3 Marks)

Follow the instructions for each sentence. (1 mks each)

1. The engineers are testing the new system extensively. (*Rewrite in the passive voice*)

2. "We need to optimize the algorithm for better performance," said the lead developer. (*Rewrite in reported speech*)

3. Identify and correct the error: *The data collected from the experiments shows significant variations.*

SECTION B: VOCABULARY (10 MARKS)

Exercise I: Matching (4 Marks)

Match the technical/general terms (1-8) with their correct definitions (a-h). (0.5 mks)

Column A: Term	Answer	Column B: Definition (Used letters ONLY)
1 Prototype	1 - _____	a) To improve the efficiency or effectiveness of something.
2 Constraint	2 - _____	b) A detailed plan or drawing for making something.
3 Efficiency	3 - _____	c) A first or preliminary version of a device or vehicle.
4 Simulate	4 - _____	d) A measure of how well resources are used to achieve an objective.

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|---|-----------|-----------|--|
| 5 | Design | 5 - _____ | e) A limitation or restriction. |
| 6 | Implement | 6 - _____ | f) To put a plan or system into effect. |
| 7 | Optimize | 7 - _____ | g) The basic material from which something is made. |
| 8 | Substance | 8 - _____ | h) To imitate the conditions of a situation, system, or process. |

Exercise II: Contextual Fill-in-the-Blanks (3 Marks)

Choose the **BEST** word from the box to complete each sentence. Use each word **ONLY ONCE**. (0.5 mk each)

analysis	components	durable	function	mechanism	variable
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- Before construction, engineers perform a detailed structural _____ of the bridge design.
- The primary _____ of this lever is to lift heavy objects with minimal effort.
- The materials used for the spacecraft must be extremely _____ to withstand harsh conditions.
- A car engine consists of hundreds of individual _____.
- In this experiment, temperature is the independent _____ that we will control.
- The locking _____ on this door is designed for maximum security.

Exercise III: Word Forms (3 Marks)

Complete each sentence with the **CORRECT FORM** of the word in brackets. (0.5 mks)

- The _____ (STRONG) of the material was tested under extreme pressure.
- Engineers need to think _____ (CREATE) to solve complex problems.
- Proper _____ (MAINTAIN) is essential for the longevity of machinery.
- The project was _____ (SUCCESS) completed on time and within budget.
- The team conducted a _____ (SYSTEM) review of all safety procedures.
- It is important to _____ (SPECIFIC) the dimensions accurately in the blueprint.

SECTION C: READING COMPREHENSION (10 MARKS)

Read the following passage carefully and answer the questions that follow.

THE PROMISE AND CHALLENGES OF RENEWABLE ENERGY TECHNOLOGIES

The global pursuit of sustainable development has placed renewable energy technologies at the forefront of discussions about our planet's future. Unlike fossil fuels, which are finite and

contribute significantly to greenhouse gas emissions, renewable energy sources – such as solar, wind, hydro,¹ geothermal, and biomass – are naturally replenished and generally produce far lower emissions. The transition to a renewable energy-based economy is seen by many as crucial for mitigating climate change and ensuring long-term energy security.

Solar power, harnessing energy from the sun using photovoltaic (PV) panels or concentrated solar power systems, has seen remarkable advancements. The cost of solar PV panels has plummeted over the past decade, making solar energy increasingly competitive with traditional energy sources. Its scalability, from small rooftop installations to vast solar farms, makes it a versatile option. However, solar power generation is intermittent, as it depends on sunlight availability, thus requiring energy storage solutions or complementary power sources.

Wind energy, captured by wind turbines, is another rapidly growing sector. Modern wind turbines are sophisticated engineering marvels, capable of generating substantial amounts of electricity. Wind farms, both onshore and offshore, are becoming common sights. Like solar, wind power is also intermittent, varying with wind speed and consistency. The visual impact of wind farms and concerns about wildlife, particularly birds, are also challenges that need careful management.

Hydropower, which generates electricity from flowing water, is one of the oldest and most established forms of renewable energy.² Large dams can provide significant and reliable power, as well as water management benefits. However, large-scale hydro projects can have considerable environmental and social impacts, such as altering river ecosystems and displacing communities. Smaller, run-of-the-river hydro systems aim to minimize these impacts.

Geothermal energy taps into the Earth's internal heat, while biomass energy utilizes organic materials. Both offer potential for consistent power generation, though their suitability is often geographically specific.

Despite the immense promise of these technologies, the widespread adoption of renewable energy faces several hurdles. Integrating intermittent sources like solar and wind into existing electricity grids, which were designed for consistent fossil fuel power plants, requires significant grid modernization and smart management systems. Energy storage solutions, such as advanced batteries, are critical for ensuring a reliable supply when the sun isn't shining or the wind isn't blowing, but current storage technology can be expensive. Furthermore, the initial investment costs for renewable energy projects can be high, even if their long-term operational costs are lower.

Nevertheless, ongoing research and development, supportive government policies, and increasing public demand for cleaner energy are driving innovation and cost reductions in the renewable sector. The transition is complex and will take time, but the shift towards a more sustainable energy future powered by renewable technologies is well underway, presenting both immense engineering challenges and exciting opportunities.

QUESTIONS :

1. What is the main topic of this passage? **(1.5 mks)**
 - a) The complete failure of fossil fuels.
 - b) A detailed technical guide to building solar panels.
 - c) The advantages, types, and challenges of renewable energy technologies.
 - d) Why hydropower is the only viable renewable energy source.
2. According to the passage, which of these is a shared challenge for both solar and wind power? **(1.5 mks)**
 - a) High operational costs.
 - b) Their dependence on specific geographical heat sources.
 - c) Their intermittent nature of energy generation.
 - d) The displacement of communities.
3. Indicate whether the following statements are True (T) or False (F) based on the passage. **(2 marks)**
 - a) The cost of solar PV panels has significantly increased over the last ten years. (T/F)
 - b) Integrating renewable energy into existing power grids requires no significant changes. (T/F)
4. Find a word in the second paragraph that means "*able to be used in many different ways.*" **(1.5 marks)**

5. According to the passage, why is energy storage important for sources like solar and wind power? **(2 mks)**

6. What does the passage imply about the overall future of renewable energy? **(1.5 mks)**
 - a) It is uncertain and likely to be abandoned.
 - b) It is a temporary trend that will soon fade.
 - c) It is a growing and essential part of the future energy mix, despite challenges.

