

# ITU/SFL 2023-2024 FALL MOCK PROFICIENCY EXAMINATION (JUNE 2023)



## SESSION 1

## QUESTION BOOKLET

- This session lasts 2 hours.
- The booklet consists of 10 test pages plus this cover page. Check the number of pages at the beginning of the exam.
- Do not remove any pages.
- Mark ALL the answers to the multiple choice questions on the OPTICAL ANSWER SHEET. Also, make sure to mark your group (A or B) on the optical answer sheet.
- There are 43 multiple choice questions for a total of 50 points.

**NO ANSWERS WRITTEN IN THIS BOOKLET CAN BE CONSIDERED!**

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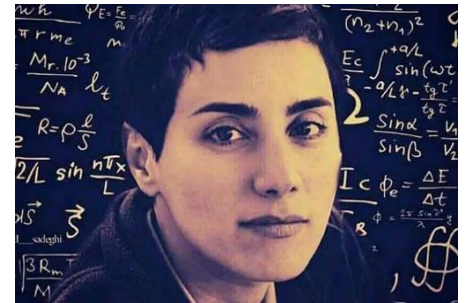
**Part 1. Cloze (10 x 0.5 = 5 points)**

Choose the correct option to fill in each blank.

**Maryam Mirzakhani**

The Fields Medal is an international award given every four years to mathematicians under the age of 40. \_\_\_\_\_ (1) this prize, which is the equivalent of the Nobel Prize for Mathematics, is the highest professional honor for mathematicians. In 2014, Maryam Mirzakhani, an Iranian mathematician, became the first woman to win this prestigious medal.

Mirzakhani was born on 12th May 1977 in Tehran, Iran. As a child, she enjoyed reading and wanted to be a writer; \_\_\_\_\_ (2), she later found an even greater joy in solving mathematical problems. At high school, she went with one of her classmates to the headteacher and asked her \_\_\_\_\_ (3) the school could arrange mathematical problem-solving classes for them. The answer was yes, and they spent hours preparing for mathematical competitions. Years later, Mirzakhani said in an interview, "If my high school \_\_\_\_\_ (4) so supportive of girls back then, I probably couldn't have won the gold medals at the 1994 and 1995 International Mathematical Olympiads."



\_\_\_\_\_ (5) to be a mathematician, she received her undergraduate degree in mathematics from the Sharif University of Technology in Tehran in 1999. Then, she \_\_\_\_\_ (6) her PhD program at Harvard University. She became a professor at Princeton University in 2004, and five years later, she continued her career at the Department of Mathematics of Stanford University.

Mirzakhani's achievements in mathematics have contributed to diverse fields of science \_\_\_\_\_ (7) quantum field theory, engineering and material science. When Mirzakhani died in 2017 of breast cancer at the age of 40, the mathematics community lost one of its brightest stars, a woman \_\_\_\_\_ (8) could inspire many people to follow their dreams. The International Council for Science \_\_\_\_\_ (9) Maryam Mirzakhani's birthday, May 12, as International Women in Mathematics Day in respect of her memory. \_\_\_\_\_ (10), several mathematics prizes such as the Maryam Mirzakhani New Frontiers Prize and the Maryam Mirzakhani Prize in Mathematics have been named after her. To introduce her to more people, a documentary that examines her life and work has been filmed under the title *Secrets of the Surface: The Mathematical Vision of Maryam Mirzakhani*.

- |                      |                   |                |                       |
|----------------------|-------------------|----------------|-----------------------|
| 1. A) Awarded        | B) Being awarded  | C) By awarding | D) By being awarded   |
| 2. A) for instance   | B) however        | C) therefore   | D) to sum up          |
| 3. A) what           | B) when           | C) where       | D) whether            |
| 4. A) hadn't been    | B) wasn't         | C) wouldn't be | D) wouldn't have been |
| 5. A) Declined       | B) Determined     | C) Discouraged | D) Distracted         |
| 6. A) participated   | B) prohibited     | C) proved      | D) pursued            |
| 7. A) being included | B) included       | C) including   | D) to be included     |
| 8. A) ----           | B) who            | C) whom        | D) whose              |
| 9. A) declared       | B) estimated      | C) neglected   | D) postponed          |
| 10. A) Furthermore   | B) In addition to | C) In contrast | D) Whereas            |

**Part 2. Restatements (9 x 1 = 9 points)**

Which of the following sentences best expresses the meaning in the given sentence?

- 11. The most recent research has shown that spending at least 120 minutes a week in green spaces is associated with good health.**
- A) The latest research reveals that only those spending at least two hours a week in nature are in good health.
  - B) Spending a minimum of two hours per week in green areas is linked to being in good health, according to the latest research.
  - C) According to recent research, people who spend less than 120 minutes per week in green areas may suffer from serious health problems.
  - D) By spending a minimum of 120 minutes a week in green areas, people with severe diseases recover quickly, new research suggests.
- 12. Nearly one-third of trees are threatened with extinction, which is more than twice the total number of endangered animals.**
- A) The number of endangered animals is almost double the number of trees facing extinction, which has tripled.
  - B) While the number of trees in danger of extinction is nearly one-third of the total, twice as many animals are endangered.
  - C) Going extinct is a threat to almost one-third of trees, equaling more than twice the overall number of animals that are endangered.
  - D) The number of trees under the threat of extinction, just over one-third of the total number, is nearly double the number of endangered animals.
- 13. The UN Environment Program (UNEP) predicts that climate change will make wildfires more frequent and intense, with a global increase of extreme fires of up to 50 per cent by the end of the century.**
- A) A UNEP prediction for the frequency and intensity of global wildfires at the end of the century excludes its estimation of a 50 per cent increase in extreme fires due to climate change.
  - B) The UNEP estimates that extreme fires worldwide will have risen by up to 50 per cent by the end of the century as wildfires will occur more often and at greater intensity due to climate change.
  - C) The UNEP predicts that wildfires will get more frequent and intense owing to climate change, and the increase in global extreme fires will exceed the rate of 50 per cent at the end of the century.
  - D) According to the UNEP, extreme fires will have increased by about 50 per cent worldwide by the end of the century unless the main effects of climate change on the number of wildfires are stopped.

**14. Despite the fact that caste discrimination in India was banned in 1950, cleaning work in the country is still mostly carried out by members of the lowest caste, the Dalits.**

- A) The 1950 ban on caste discrimination in India has allowed Dalits, members of the lowest caste, to enter the cleaning workforce in the country.
- B) Even though India prohibited caste discrimination in 1950, Dalits, the people of the lowest caste, still form the majority of the cleaners in the country.
- C) Dalits, members of the lowest caste in India, still dominate the cleaning workforce in the country with the help of the ban on caste discrimination introduced in 1950.
- D) The prohibition of caste discrimination in India in 1950 encouraged people of the upper castes to respect Dalits, members of the lowest caste, in the cleaning sector.

**15. The International Labour Organization (ILO), founded in 1919 to set international work standards, has been largely criticized because when those standards are not met by governments, it just publishes recommendations to them.**

- A) The ILO, founded in 1919 to introduce international work standards, has been widely criticized by governments receiving recommendations upon not meeting those standards.
- B) Many critics of the ILO, which was established in 1919 to determine global standards for work, have published recommendations to governments to make sure those standards are met.
- C) Founded in 1919 to establish universal standards for work, the ILO has met widespread criticism for not going beyond offering recommendations to governments that fail to meet those standards.
- D) The ILO, established in 1919 by governments to maintain high work standards, has been widely criticized as it does not publish such standards in the form of recommendations for global use.

**16. Trials of a 4-day workweek without a reduction in pay for workers are becoming increasingly popular, and some companies are considering keeping it on a permanent basis.**

- A) Trials of a 4-day workweek are getting more and more popular among companies especially because there is no permanent reduction in pay for workers.
- B) Trials of a 4-day workweek have shown that workers in some companies wish the practice were permanent even if they were supposed to receive a pay cut.
- C) All companies that have tried the increasingly popular practice of a 4-day workweek are willing to make it permanent on condition that employees are paid less.
- D) More and more companies are trying a 4-day workweek while paying their employees their full salaries, but not all of them intend to make it a permanent practice.

**17. Charles Fritts first produced electric current using solar panels in 1883, but the process of how light produces electricity wasn't explained until Albert Einstein first did so twenty years later.**

- A) The first person to understand the process of light being made into electricity was Albert Einstein, and he managed to do this by studying Charles Fritts' 20-year-old solar panels, made in 1883.
- B) Although Charles Fritts' solar panels produced electricity for the first time in 1883, the first explanation of how light brings this about did not come out until Albert Einstein described it 20 years later.
- C) In 1883, Charles Fritts became known as the inventor of solar panels that make electricity, but Albert Einstein understood the way in which light produces electricity first and then wrote about it 20 years later.
- D) It took Albert Einstein 20 years to describe the process of light producing electricity because it took him a long time to comprehend this process after Charles Fritts made the first current-producing solar panels in 1883.

**18. The first modern solar cell was produced in 1954, and in only six years such solar cells were the main power source for satellites orbiting Earth.**

- A) In 1960, the major power source for satellites that orbited Earth was the modern solar cell, which had taken just six years to develop.
- B) Six years after the first modern solar cells were made in 1954, their primary usage was to power satellites which orbited Earth.
- C) Solar cells became the primary source of power for satellites orbiting Earth just six years after they were first produced in 1954.
- D) Although modern solar cells had already been produced in 1954, it took six years for them to become a significant power source for Earth-orbiting satellites.

**19. In recent years, manufacturers have managed to widen the spectrum of light that a solar cell can convert into energy.**

- A) A recent development in manufacturing solar cells is making them capable of creating energy from a wider spectrum of light.
- B) Modern solar cell producers have succeeded in using a wider band of light and can now produce various types of energy.
- C) A project to convert a wide spectrum of light to energy is being directed by producers, who have just begun doing this recently.
- D) Today's solar cells are able to produce more energy because of their wider design that makes use of many different wavelengths of light.

**SECTION II – READING COMPREHENSION (24 x 1.5 = 36 points)**

Read each text and choose the best alternative that answers each question.

**Text 1*****Crown Shyness***

1 Millions of people around the world became familiar with “social distancing” at the beginning of the COVID-19 pandemic, when it began to be used as a tool to slow down the spread of the virus. Amazingly, certain trees have also been keeping their distance from one another, but they started doing so long before we did. In some forests, if you look up into the treetops, you might spot channel-like gaps between the crowns, namely the uppermost branches, of the trees above your head. The crowns of the same tree species or those of different species may actually avoid touching one another, which leads to the formation of these separation lines in the sky. First observed and photographed in 1920, this phenomenon was later named “crown shyness” by Australian botanist Maxwell R. Jacobs in the 1950s.

2 Some scientists have suggested that crown shyness occurs as a result of wind, forcing the branches and leaves of neighbouring trees of a similar height to touch and damage each other. A 1955 study led by Jacobs in northeastern Australia, where severe wind often causes contact between trees, convinced scientists that trees' sensitive tips die because of winds, resulting in spacing. In 1984, during their research on forest areas in Costa Rica, biologist Francis E. Putz and his colleagues picked 22 pairs of trees of a similar height at random and measured the distance between them during non-wind conditions and during strong winds. They found that during calm conditions, the branches looked like “loosely fitting pieces of a jigsaw puzzle”. Yet when the wind blew, the branches would often touch one another and lose their tiny tips and leaves, proving that interaction with other trees was a key reason for damage. Indeed, experiments in windy areas of Canada have shown that artificially preventing trees which display crown shyness from colliding with each other lets them grow into and fill in the surrounding gaps.



3 Today, damage from wind is not considered the primary cause of crown shyness by the scientific community though. In his 1977 study on crown shyness conducted in the forests of Malaysia, Francis S.P. Ng found no evidence of damage due to wind. Similarly, in 1988, the findings of biologist Alan Rebertus in Costa Rica revealed that crown shyness was not any more noticeable among trees in windy locations than those growing in sheltered spots. Highlighting that the trees' tips were able to sense light and stopped growing when they got too close to neighbouring trees, both Ng and Rebertus concluded that trees exercise crown shyness as a shade avoidance practice so that the sunlight reaches all of the branches and is not blocked by leaves in dense forests, where there is intense competition between plants for light, an essential component of photosynthesis.

4 There is also research linking crown shyness to the threat of diseases and invasive species such as leaf-eating insects. Trees have been shown to sense them in nearby trees, and prevent spread by stopping growth and creating gaps as a natural defense mechanism. The variety of hypotheses and experimental results indicates that there seem to be multiple mechanisms behind crown shyness. Regardless of how it occurs, it not only works to the advantage of trees but also reminds us of how beautiful and wonderful nature can be.

20. According to **paragraph 1**, crown shyness ----.
- A) was discovered by Maxwell R. Jacobs in 1920
  - B) is more common among identical tree species
  - C) is a phenomenon mostly observed in the forests of Australia
  - D) occurs when tree branches distance themselves from one another
21. The word “**them**” in **paragraph 2** refers to ----.
- A) strong winds
  - B) forest areas in Costa Rica
  - C) 22 pairs of trees of a similar height
  - D) Francis E. Putz and his colleagues
22. The phrase “**colliding with**” in **paragraph 2** could best be replaced by ----.
- A) hitting
  - B) feeding
  - C) blocking
  - D) supporting
23. From **paragraph 2**, the reader can understand that ----.
- A) Putz and his team focused on tree species with leaves of a similar size
  - B) research on the reasons for crown shyness has been limited to one continent
  - C) Jacobs’ finding was confirmed by a study conducted about three decades later
  - D) trees in windy areas are unlikely to suffer damage in case of contact with other trees
24. Which of the following statements is **FALSE** according to **paragraph 3**?
- A) Many scientists do not agree that wind is the leading factor in crown shyness.
  - B) Trees in thick forest areas tend to exhibit crown shyness in search of more light.
  - C) Crown shyness is not observed in forest areas that are not exposed to heavy wind.
  - D) Ng and Rebertus spotted the same purpose behind crown shyness in different sites.
25. In **paragraph 4**, the writer states that ----.
- A) crown shyness is an aesthetically unpleasant natural phenomenon
  - B) harmful insects in neighboring trees are a bigger threat than diseases
  - C) researchers have finally determined the main cause of crown shyness
  - D) crown shyness has been found to be a means of protection from diseases
26. Which of the following is **NOT** mentioned in the text?
- A) The impact of severe wind on tree tips
  - B) The drawbacks of crown shyness for trees
  - C) The areas of comparison in Rebertus’ research
  - D) The way Putz and his team chose the sample trees

**Text 2*****Techno-tracking in India***

**1** In several cities of India, thousands of sanitation workers are being monitored while performing their duties such as cleaning streets and public toilets and emptying wastewater tanks. Every sanitation worker has a GPS-enabled smartwatch, also known as Human Efficiency Tracking System (HETS), strapped to their wrists. The smartwatches they are required to wear during work hours have a SIM card, a GPS tracker, a camera for sending pictures as proof of attendance and a microphone. This digital tracking is part of two popular campaigns launched by the government of Prime Minister Narendra Modi. One is the Clean India Mission (CIM) campaign, under which several cities have been holding an annual cleanliness survey since 2014. Participating cities are ranked and the “cleanest” city is given an award while local authorities can earn extra points by adopting technology like GPS trackers to monitor worker movement. The other development that encouraged the use of such technology is the government’s Digital India (DI) campaign, introduced in 2015, aiming “to create a digitally empowered society”.

**2** Not surprisingly, the system has not been welcomed by all. In 2017, the Supreme Court of India, the highest court in the country, recognized privacy as a basic human right. Supreme Court lawyer Mehmood Pracha says that making sanitation workers wear invasive and dehumanizing tracking devices is an attack on privacy. “It is everybody’s right to live without being monitored by authorities. The DI campaign is actually becoming a tool for **curtailing** the individual freedoms of the workers rather than improving efficiency,” he adds. Indeed, not knowing if they are being monitored even when they visit the toilet during work hours, a lot of workers have raised privacy concerns, saying persistent monitoring has made their lives miserable.

**3** ‘We are not really monitoring any personal document or anything like that,’ says Anindita Mishra, representing the local authority in Chandigarh, a city in northern India, where it is obligatory for sanitation workers to wear smartwatches. “It is only the location and duty hours that are being tracked. The system was put into practice only to ensure that workers have put in eight hours of work. Thus, workers needn’t worry.” The issue of privacy actually constitutes just one of the areas of criticism. In response to workers’ claims that **they** are also held responsible for maintaining the devices, occasionally facing penalties for lack of repair or loss, Mishra says, “Such salary deduction might have happened due to some other reasons, but not because the watch malfunctioned or got switched off.”

**4** Users have experienced numerous technical problems with the watches, too. In Chandigarh, Gurpreet Singh, a sanitary inspector whose job is to mark the attendance of the sanitation staff every morning, takes out his phone to access the app which shows how many workers are online or offline. There have been instances when the workers have arrived at work and the application has shown them as out of area or offline. In such cases, the workers can be marked absent, and go unpaid for the day’s work. Singh also confirms that the smartwatches do not track overtime work outside regular working hours. “The duty hours span from 7 in the morning till 5 in the evening with a two-hour break in between,” he says. “If a worker does overtime outside of their usual work hours, it will not be tracked, so they will not be paid for that. Many workers have protested that.”

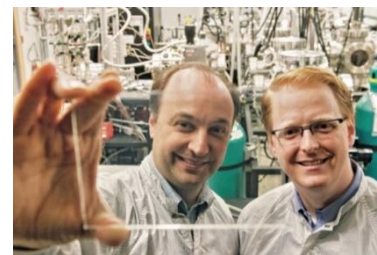
**5** Generally underpaid, sanitation workers do their job facing greater risk of infection, injury and death than average workers, and rarely have insurance or access to health services. The local authorities in Chandigarh pay \$265,000 a year to rent the smartwatches from IMTAC India Pvt Ltd, an IT company. If they are capable of spending so much on tracking technologies, workers ask, why weren’t they able to provide basic safety equipment during the COVID-19 pandemic?



27. From **paragraph 1**, the reader can understand that ----.
- A) the Narendra Modi government came into power in 2014
  - B) the CIM campaign encourages competition between Indian cities
  - C) the DI campaign has failed to develop the digital skills of the Indian society
  - D) sanitation workers have to wear their smartwatch even when they are not working
28. The word “**curtailing**” in **paragraph 2** is closest in meaning to ----.
- A) defending
  - B) delaying
  - C) enhancing
  - D) restricting
29. The word “**they**” in **paragraph 3** refers to ----.
- A) devices
  - B) workers
  - C) penalties
  - D) areas of criticism
30. According to **paragraph 3**, Mishra ----.
- A) is critical of the current tracking system
  - B) is against overtime work in the sanitation sector
  - C) denies that malfunctioning watches led to salary cuts
  - D) wants to invest in a system to collect workers’ personal data
31. In **paragraph 4**, which of the following is **NOT** mentioned as a problem with the watches?
- A) Failing to identify latecomers
  - B) Not keeping track of overtime work
  - C) Displaying online workers as offline
  - D) Failing to identify the location of workers
32. It can be inferred from **paragraph 5** that ----.
- A) average workers are more vulnerable than sanitation workers
  - B) the local authorities in Chandigarh searched for a cheaper offer from another IT company
  - C) sanitation workers in Chandigarh had unsafe work conditions during the COVID-19 pandemic
  - D) most average workers are unhappy with their insurance and ability to access to health services
33. It is stated in the text that in India ----.
- A) HETS is set to track workers during night shifts
  - B) Chandigarh is the first city to put HETS into practice
  - C) sanitation workers are generally not satisfied with the smartwatches
  - D) privacy concerns outweigh economic ones for most sanitation workers
34. The text mentions the opinions of all of the following **EXCEPT** ----.
- A) a lawyer from the highest court of India
  - B) IT workers who developed the HETS app
  - C) a representative of a local authority in India
  - D) sanitation workers made to wear a smartwatch

**Text 3** *Transparent Solar Cells: Generating Power from Everyday Surfaces*

1 It is difficult to invent a new solar technology that can compete with today's solar cells since current cells have become much more efficient. However, transparent photovoltaic (PV) cells might change everything. They could be installed on any surface without changing the view because they are invisible. Vladimir Bulović, professor of electrical engineering at Massachusetts Institute of Technology (MIT), says "They could be on everything around you, even on your windows, and you wouldn't even know it."



2 Other researchers have previously worked on creating "see-through" solar cells using opaque PV materials, that is, PV materials that do not allow light to pass through them. The researchers have tried making the materials so thin that some light can pass through them, and they have also attempted to "segment" them, which means putting some pieces of a solar panel on a window while leaving gaps for seeing out. However, **both approaches** involve a tradeoff between transparency and efficiency. "When you use opaque PV materials, you have to decrease the amount of area used for solar energy to increase light flow," says Miles Barr of Ubiquitous Energy, Inc. "Thus, it's difficult to optimize for efficiency and aesthetics at the same time while using opaque PV materials."

3 Three years ago, a team in MIT's Organic and Nanostructured Electronics Laboratory began to solve the problem using a different approach. Richard Lunt, then an MIT postdoc and now an assistant professor at Michigan State University, proposed making a solar cell that would absorb all the energy from the sun except the part that allows us to see. All light is made up of electromagnetic radiation from a spectrum of wavelengths, and each wavelength has energy that can be used by a solar cell. But the human eye can detect only a small part of that spectrum, often called "visible light". With the right materials and design, visible light passes through solar cells while other light is absorbed, and people don't notice that a lot of light has been absorbed. Inspired by Lunt's idea, the team developed the first transparent PV cell.

4 The current version of the team's cell allows through more than 70% of visible light, which is similar to the amount of light that gets through tinted glass, which is used in the windows of many buildings. Unfortunately, its power-conversion efficiency is low, only about 2%. However, Lunt has showed that its design could reach over 12% efficiency, which is similar to the efficiency of current solar panels. In fact, Lunt says by simply putting the team's transparent solar cells on top of each other, they could reach an efficiency of 10% and still maintain the ability to transmit light.

5 Another challenge is **longevity**. If the PV cells are installed on top of windows, they need to perform well for decades to be cost-effective. According to Bulović, work to extend the lifetime of related products such as LEDs has made steady progress. Because researchers have found ways to make related products last longer, he is confident that transparent PV cells can also last a long time. As a result, he thinks they will be able to guarantee a long lifespan that will make transparent PV cells attractive to consumers.

6 Regarding cost, there are several sources of cost savings over traditional solar systems. One factor reducing cost is that making transparent PVs is not as energy-intensive as making other PVs, so the savings begin in the production phase. There are even more significant savings during installation because transparent PV cells can "**piggyback on the infrastructure**," says Barr. To illustrate, he contrasts adding transparent PV cells to window glass to doing a traditional solar project. The PV cells can be added to windows and their frames for very little extra cost. The cells can be installed on one of the inner surfaces of double-paned windows. Installing the PV layer between the two pieces of window glass is cheap and protects them from weather and threats outside such as ammonia-based window cleaning products. On the other hand, when installing a conventional PV system, there is no infrastructure to use, so installation costs are much higher, usually half to two-thirds of the total cost. A final cost advantage is that distributing the energy generated by windows with transparent PVs is as simple as placing a wire connection and an outlet at the side of a window, which is also significantly cheaper than the cost of distributing energy from a traditional solar system.

7 The benefits of adding these solar cells will be significant. The windows in a skyscraper, for example, provide a vast area exposed to sunlight. **A** If all those windows are covered by transparent solar cells, even at just 5% efficiency, the power generated can provide more than a quarter of all the electricity needs of the building. **B** That will cut down on air conditioning needs, further reducing energy use. **C** These benefits can be gained without modifying the look of the building or impacting people's view. **D** The team knows that their technology will not save the planet by providing all the emissions-free energy it needs, but they think it is one important part of the solution.

35. The phrase "**both approaches**" in **paragraph 2** refers to ----.

- A) the work of previous researchers and the researchers who have made very thin PV materials
- B) creating see-through solar cells and making opaque PV materials very thin
- C) making opaque PV materials very thin and segmenting them

- D) segmenting opaque PV materials and leaving gaps in windows to see out
36. According to **paragraph 2**, the primary factor making it difficult to optimize for efficiency and aesthetics is that ----.
- A) earlier PV materials do not allow light to pass through them
  - B) earlier PV materials need to be spread out over a vast area
  - C) all types of PV materials are thin, making them difficult to work with
  - D) all types of PV materials produce less energy when they are made to look aesthetically pleasing
37. Which of the following statements **CANNOT** be understood from **paragraph 3**?
- A) The proposed solar cells will absorb all wavelengths of sunlight except those that enable sight.
  - B) Solar cells can make use of energy which is made up of a number of different wavelengths.
  - C) People are not aware that a solar cell is only letting “visible light” pass through it.
  - D) Richard Lunt continues to work with a team from MIT in developing a transparent PV cell.
38. The writer mentions tinted glass in **paragraph 4** in order to ----.
- A) stress the strong impact that the new solar cells have on visible light in their current form
  - B) provide an example of how it looks when 70% of visible light passes through a window
  - C) compare the amount of energy that could be collected from tinted windows and the new solar cells
  - D) explain what will happen when the new solar cells are put one on top of another
39. The word “**longevity**” in **paragraph 5** is closest in meaning to ----.
- A) having a lifespan of many years
  - B) making windows whose length is sufficient
  - C) producing windows that are easy to see through
  - D) working together with a large number of industries
40. The phrase “**piggyback on the infrastructure**” in **paragraph 6** could best be replaced by ----.
- A) be transported easily
  - B) be used on traditional and current solar systems
  - C) produce a large amount of energy
  - D) be built on top of already present windows and frames
41. According to **paragraph 6**, one source of reduced costs provided by transparent PV cells is that ----.
- A) the manufacture of transparent PV cells is much quicker than that of traditional PV cells
  - B) the transparent PV cells are able to produce energy in more types of weather than the traditional PV cells
  - C) it is inexpensive to make use of the power which is produced by windows with this type of PV cell
  - D) traditional solar systems distribute power inconsistently, but transparent PV cells distribute it consistently
42. Where would the following sentence best fit in **paragraph 7**?
- Moreover, the solar cells will block much of the sun’s infrared radiation that heats up a building too much.***
- A) **A**
  - B) **B**
  - C) **C**
  - D) **D**
43. The text mainly discusses ----.
- A) how researchers were able to develop both opaque and transparent PV cells
  - B) whether transparent PV cells can work and whether they can be more efficient than other PV cells
  - C) advances in different types of PV cells which increase efficiency while decreasing in cost
  - D) advantages of a recently developed transparent PV cell and difficulties researchers are trying to overcome