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Daffodil International University

Faculty of Science & Information Technology
Department of Computer Science and Engineering
Final Examination, Spring 2026
Course Code: ENG 102 Course Title: Writing and Comprehension
Level: 1 Term: 2 Batch: 70

Time: 2 Hours **Marks: 40**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.		**Reading**	**1x 20= 20 Marks**	**CO's**
		Reading Passage 1: Read the following passage and answer the following questions		**CO 1**
		A Rooftops covered with grass, vegetable gardens and lush foliage are now a common sight in many cities around the world. More and more private companies and city authorities are investing in green roofs, drawn to their wide-ranging benefits. Among the benefits are saving on energy costs, mitigating the risk of floods, making habitats for urban wildlife, tackling air pollution and even growing food. These increasingly radical urban designs can help cities adapt to the monumental problems they face, such as access to resources and a lack of green space due to development. But the involvement of city authorities, businesses and other institutions is crucial to ensuring their success – as is research investigating different options to suit the variety of rooftop spaces found in cities. The UK is relatively new to developing green roofs, and local governments and institutions are playing a major role in spreading the practice. London is home to much of the UK's green roof market, mainly due to forward-thinking policies such as the London Plan, which has paved the way to more than doubling the area of green roofs in the capital. **B** Ongoing research is showcasing how green roofs in cities can integrate with 'living walls': environmentally friendly walls which are partially or completely covered with greenery, including a growing medium, such as soil or water. Research also indicates that green roofs can be integrated with drainage systems on the ground, such as street trees, so that the water is managed better and the built environment is made more sustainable. There is also evidence to demonstrate the social value of green roofs. Doctors are increasingly prescribing time spent gardening outdoors for patients dealing with anxiety and depression. And research has found that access to even the most basic green spaces can provide a better quality of life for dementia sufferers and help people avoid obesity. **C** In North America, green roofs have become mainstream, with a wide array of expansive, accessible and food-producing roofs installed in buildings. Again, city leaders and authorities have helped push the movement forward- only recently, San Francisco, USA, created a policy requiring new buildings to have green roofs. Toronto, Canada, has policies dating from the 1990s, encouraging the development of urban farms on rooftops. These countries also benefit from		

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having newer buildings than in many parts of the world, which makes it easier to install green roofs. Being able to keep enough water at roof height and distribute it right across the rooftop is crucial to maintaining the plants on any green roof- especially on 'edible roofs' where fruit and vegetables are farmed. And it's much easier to do this in newer buildings, which can typically hold greater weight, than to retro-fit old ones. Having a stronger roof also makes it easier to grow a greater variety of plants, since the soil can be deeper.

D For green roofs to become the norm for new developments, there needs to be support from public authorities and private investors. Those responsible for maintaining buildings may have to acquire new skills, such as landscaping, and in some cases, volunteers may be needed to help out. Other considerations include installing drainage paths, meeting health and safety requirements and perhaps allowing access for the public, as well as planning restrictions and disruption from regular activities in and around the buildings during installation. To convince investors and developers that installing green roofs is worthwhile, economic arguments are still the most important. The term 'natural capital' has been developed to explain the economic value of nature; for example, measuring the money saved by installing natural solutions to protect against flood damage, adapt to climate change or help people lead healthier and happier lives.

E As the expertise about green roofs grows, official standards have been developed to ensure that they are designed, constructed and maintained properly, and function well. Improvements in the science and technology underpinning green roof development have also led to new variations in the concept. For example, 'blue roofs' enable buildings to hold water over longer periods of time, rather than draining it away quickly – crucial in times of heavier rainfall. There are also combinations of green roofs with solar panels, and 'brown roofs' which are wilder in nature and maximise biodiversity. If the trend continues, it could create new jobs and a more vibrant and sustainable local food economy – alongside many other benefits. There are still barriers to overcome, but the evidence so far indicates that green roofs have the potential to transform cities and help them function sustainably long into the future. The success stories need to be studied and replicated elsewhere, to make green, blue, brown and food-producing roofs the norm in cities around the world.

a) **(Questions 1-5)**

Reading Passage 1 has five sections, A-E. Which section contains the following information? Choose the correct letter, A-E.

NB You may use any letter more than once

1. mention of several challenges to be overcome before a green roof can be installed
2. reference to a city where green roofs have been promoted for many years
3. a belief that existing green roofs should be used as a model for new ones
4. examples of how green roofs can work in combination with other green urban initiatives
5. the need to make a persuasive argument for the financial benefits of green roofs

b) **(Questions 6-10)**

Complete the notes below. Write ONE WORD ONLY from the passage in each gap.

Advantages of green roofs

City rooftops covered with greenery have many advantages. These include lessening the likelihood that floods will occur, reducing how much money is spent

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on (6) _____ and creating environments that are suitable for wildlife. In many cases, they can also be used for producing (7) _____ .
There are also social benefits of green roofs. For example, the medical profession recommends (8) _____ as an activity to help people cope with mental health issues. Studies have also shown that the (9)_____ of green spaces can prevent physical problems such as (10)_____ .

Reading Passage 2: Read the following passage and answer the following questions

Alfred Wegener: science, exploration and the theory of continental drift

by Mott T Greene

CO1

Introduction

This is a book about the life and scientific work of Alfred Wegener, whose reputation today rests with his theory of continental displacements, better known as 'continental drift'. Wegener proposed this theory in 1912 and developed it extensively for nearly 20 years. His book on the subject, The Origin of Continents and Oceans, went through four editions and was the focus of an international controversy in his lifetime and for some years after his death.

Wegener's basic idea was that many mysteries about the Earth's history could be solved if one supposed that the continents moved laterally, rather than supposing that they remained fixed in place. Wegener showed in great detail how such continental movements were plausible and how they worked, using evidence from a large number of sciences including geology, geophysics, paleontology, and climatology. Wegener's idea – that the continents move – is at the heart of the theory that guides Earth sciences today: namely plate tectonics. Plate tectonics is in many respects quite different from Wegener's proposal, in the same way that modern evolutionary theory is very different from the ideas Charles Darwin proposed in the 1850s about biological evolution. Yet plate tectonics is a descendant of Alfred Wegener's theory of continental drift, in quite · the same way that modern evolutionary theory is a descendant of Darwin's theory of natural selection.

When I started writing about Wegener's life and work, one of the most intriguing things about him for me was that, although he came up with a theory on continental drift, he was not a geologist. He trained as an astronomer and pursued a career in atmospheric physics. When he proposed the theory of continental displacements in 1912, he was a lecturer in physics and astronomy at the University of Marburg, in southern Germany. However, he was not an 'unknown'. In 1906 he had set a world record (with his brother Kurt) for time aloft in a hot-air balloon: 52 hours. Between 1906 and 1908 he had taken part in a highly publicized and extremely dangerous expedition to the coast of northeast Greenland. He had also made a name for himself amongst a small circle of meteorologists and atmospheric physicists in Germany as the author of a textbook, Thermodynamics of the Atmosphere (1911), and of a number of interesting scientific papers.

As important as Wegener's work on continental drift has turned out to be, it was largely a sideline to his interest in atmospheric physics, geophysics, and paleoclimatology*, and thus I have been at great pains to put Wegener's work on continental drift in the larger context of his other scientific work, and in the even larger context of atmospheric sciences in his lifetime. This is a 'continental drift book' only to the extent that Wegener was interested in that topic and later became famous for it. My treatment of his other scientific work is no less detailed, though I certainly have devoted more attention to the reception of his ideas on continental displacement, as they were much more controversial than his other work.

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Readers interested in the specific detail of Wegener's career will see that he often stopped pursuing a given line of investigation (sometimes for years on end), only to pick it up later. I have tried to provide guideposts to his rapidly shifting interests by characterizing different phases of his life as careers in different sciences, which is reflected in the titles of the chapters. Thus, the index should be a sufficient guide for those interested in a particular aspect of Wegener's life but perhaps not all of it. My own feeling, however, is that the parts do not make as much sense on their own as do all of his activities taken together. In this respect I urge readers to try to experience Wegener's life as he lived it, with all the interruptions, changes of mind, and renewed efforts this entailed.

Wegener left behind a few published works but, as was standard practice, these reported the results of his work – not the journey he took to reach that point. Only a few hundred of the many thousands of letters he wrote and received in his lifetime have survived and he didn't keep notebooks or diaries that recorded his life and activities. He was not active (with a few exceptions) in scientific societies, and did not seek to find influence or advance his ideas through professional contacts and politics, spending most of his time at home in his study reading and writing, or in the field collecting observations.

Some famous scientists, such as Newton, Darwin, and Einstein, left mountains of written material behind, hundreds of notebooks and letters numbering in the tens of thousands. Others, like Michael Faraday, left extensive journals of their thoughts and speculations, parallel to their scientific notebooks. The more such material a scientist leaves behind, the better chance a biographer has of forming an accurate picture of how a scientist's ideas took shape and evolved.

I am firmly of the opinion that most of us, Wegener included, are not in any real sense the authors of our own lives. We plan, think, and act, often with apparent freedom, but most of the time our lives 'happen to us', and we only retrospectively turn this happenstance into a coherent narrative of fulfilled intentions. This book, therefore, is a story both of the life and scientific work that Alfred Wegener planned and intended and of the life and scientific work that actually 'happened to him'. These are, as I think you will soon see, not always the same thing.

c) **(Questions 11-14)**

Choose **YES** if the statement agrees with the writer's claims, choose **NO** if the statement contradicts the writer's claims, or choose **NOT GIVEN** if there is impossible to say what the writer thinks about this.

11. Wegener's ideas about continental drift were widely disputed while he was alive.

12. The idea that the continents remained fixed in place was defended in a number of respected scientific publications.

13. Wegener relied on a limited range of scientific fields to support his theory of continental drift.

14. The similarities between Wegener's theory of continental drift and modern-day plate tectonics are enormous.

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d) **(Questions 15-20)**

Complete the summary using the list of phrases, **A-J**, below. Select the correct letter, **A-J**.

Wegener's life and work

One of the remarkable things about Wegener from a (15) _____ is that although he proposed a theory of continental drift, he was not a geologist. His (16) _____ were limited to atmospheric physics. However, at the time he proposed his theory of continental drift in 1912, he was already a person of (17)_____. Six years previously, there had been his (18) _____ of 52 hours in a hot-air balloon, followed by his well-publicised but (19) _____ of Greenland's coast. With the publication of his textbook on thermodynamics, he had also come to the attention of a (20) _____ of German scientists.

(A) modest fame	(F) professional interests
(B) vast range	(G) scientific debate
(C) record-breaking achievement	(H) hazardous exploration
(D) research methods	(I) biographer's perspective
(E) select group	(J) narrow investigation

2		**Grammar**	**7x 1 = 7 Marks**	**CO2**
		Correct the following sentences. i. Happiness consists of mental peace. ii. We couldn't risk to leave him alone. iii. He said that he will come tomorrow. iv. What kind of a book do you want? v. She has return back to school. vi. Is the room enough large for you? vii. Why you were absent last Friday?.		
3.		**Writing**	**1x 13 = 13 Marks**	**CO3**
		Compose an essay about the following topic. **It is observed that in many countries not enough students are choosing to study science as a subject. What are the causes? And what will be the effects on society?** Present reasons for your answer and include any relevant examples from your own knowledge or experience. **Write at least 250 words.**		

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