



**Daffodil International University**  
**Faculty of Science & Information Technology**  
**Department of Software Engineering**  
**Midterm Examination, Spring 2026**  
**Course Code: ENG-101: Course Title: English-I**  
**Sections & Teachers: A-G, JC, JR.**

**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.]*

**Radiocarbon dating**

Nancy Athfield is a scientist specializing in radiocarbon dating. She has just returned from a research expedition deep in the forests of Cambodia's Cardamom Mountains, where she has been working to unravel the secrets of ancient human remains discovered on a number of cliff-side ledges. The unexplained remains, discovered by local people in large ceramic jars and hollowed-out logs, have increasingly drawn Athfield away from her regular employment at G.N.S. Science's Rafter Laboratory in New Zealand and into the world of research in the field.

She first learned of the Cardamom remains in 2003, when a film-making company requested that she radiocarbon date bone samples for a documentary film being made in Cambodia. The film-makers had set out to investigate the idea that these human remains marked the final resting place of people belonging to the last royal household of Angkor, which once ruled much of the surrounding area. At its height in the thirteenth century, Angkor was home to a population 30 times larger than that of Paris at the time, but in 1431 it was overrun by an invading army, and the city was permanently abandoned. However, many stories were told of surviving members of the royal family fleeing to seek refuge in the Cardamom Mountains.

Athfield dated the original Cardamom bone samples as late as 1620, dashing the possibility of Angkorian royalty. However, over the years since then, other ancient human remains have emerged at different sites around the country, leaving the ultimate fate of the royal household of Angkor still uncertain. Athfield intends to return soon to Cambodia in order to continue her research at a number of these new sites.

Investigating the origins of an unknown people in Asia is a long way from her birthplace in New York, but Athfield's career path has been far from conventional. She finished her secondary education early, aged just sixteen, and did a variety of badly paid jobs and community courses before a friend suggested she sit the entrance exam for university. She did, and to her surprise, she was accepted. While completing her undergraduate studies in physical geography, she got a job at the Lamont-Doherty Earth Observatory. It was here that she met Wally Broecker, a climate scientist and one of the pioneers of radiocarbon dating. 'From him I learned that the best place to be is where everything you know is shaken by a new piece of information. In other words, I learned to think like a scientist.'

When Athfield's then husband was offered a post at G.N.S. She accompanied him to New Zealand and took a job as lab manager at Rafter Laboratory. 'I realised it was a good time to get a PhD,' she says. At the time, there was a great deal of controversy over radiocarbon dating, which seemed to suggest that a rat species had arrived in New Zealand as early as 100 AD, nearly 700 years before the first visitors were thought to have reached those untouched islands. Her PhD was based on five years of research exploring this issue because she wanted to look at how scientists ascertain the reliability of radiocarbon dating, and this seemed to be the perfect subject. Athfield concluded that previous radiocarbon tests had been unreliable, and this was connected to the rat's diet, not due to faulty lab procedures as had once been thought. Primary & Secondary Schooling (K-12). She then began embracing broader issues related to her skills, and started working as a fully qualified archaeologist in the UK in order to contribute to a 10-year research project fine-tuning Anglo-Saxon chronology. But it was the call from those filmmakers in 2003 that truly ignited her passion for fieldwork, and the unanswered questions regarding the Cardamom remain.

Athfield was keen to continue her work in Cambodia after the camera crews left, but she and her colleagues were hampered by that universal problem for researchers: a lack of funding. However, after several years of fruitless applications, she made a breakthrough when the Australian Research Council supported her and a team based at the University of Sydney so that she could return to the Cardamoms, as part of a larger project to create a

Cambodia-wide radiocarbon database. The project has brought together geologists, biologists, ceramic specialists, ethnographers, and even a dendroclimatologist (who determines past climates from trees), but it has been no easy task because the country doesn't have an extensive geological map.

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| 1. | <p>a) Complete the flowchart below with information from the passage. Don't write MORE THAN ONE WORD for each answer.</p> <p style="text-align: center;"><b>Nancy Athfield's career</b></p> <p style="text-align: center;">In her mid-teens, Athfield did not expect to attend i).....</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Wally Brocker taught Athfield how to develop the mind of a scientist. Athfield's PhD investigated when a type of ii)..... arrived in New Zealand.</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Her PhD research found that the subject's diet accounted for previous inaccurate results. She worked as a professional (iii)..... before going to Cambodia in 2003.</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Inadequate (iv)..... prevented further research in Cambodia. Later, she helped to compile a (v)..... dating across Cambodia of radiocarbon.</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">The lack of a detailed (vi)..... of Cambodia's geology has made her team's research harder.</p> | [6x0.5=3]  | CLO-3<br>Level-C4  |
|    | <p>b) Classify the following statements as True/False/Not Given based on your reading of the passage.</p> <ol style="list-style-type: none"> <li>1. Nancy Athfield uncovered ancient human remains in Cambodia.</li> <li>2. The recovered human remains were exceptionally well preserved.</li> <li>3. Athfield has taken an extended leave from her professional post to undertake research activities in Cambodia.</li> <li>4. The Cambodian government commissioned Athfield to perform radiocarbon dating on the remains from the Cardamom Mountains.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | [4x1=4]    |                    |
| 2. | <p>a) Match the subjects of the following sentences with their correct form of verbs in the brackets.</p> <p>Trees contribute a lot to maintain ecological balance. A month-long tree fair a) _____ (begin) in Kurigram Stadium recently. It b) _____ (organize) by the local administration and the department of Social Forestation. The fair c) _____ (inaugurate) yesterday by the DC of Kurigram. It was also addressed by other speakers who d) _____ (emphasize) the need for planting more trees. The chief guest in his speech e) _____ (put) importance on planting trees so that we f) _____ (save) our environment from other effects of climate change and natural disasters. A huge procession g) _____ (parade) down the streets of the town after the inaugural. Various government and non-government organizations h) _____ (set) up stalls displaying saplings of different varieties. Cultural functions i) _____ (arrange) every night j) _____ (inspire) people to plant trees.</p>                                                                                                                                                | [0.5x10=5] | CLO-1<br>Level- C1 |
|    | <p>b) Identify an appropriate article (a/an/the/put cross for no article) to fill in the gaps: Kamal is a) _____ HSC examinee this year. He is not b) _____ attentive to his lessons. He is very weak in c) _____ English. Moreover, he is d) _____ lazy. So his preparation in English is not good. e) _____ month ago before his examination he managed f) _____ short suggestion and learnt it. On g) _____ day of his examination, he started for the examination hall h) _____ bit earlier. He entered i) _____ examination hall with j) _____ trembling heart.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | [0.5x10=5] |                    |
| 3. | <p>Compose a paragraph based on any one of the following options.</p> <ol style="list-style-type: none"> <li>1. The day you learned something the hard way.</li> <li>2. Your BLC account.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | [1x8=8]    | CLO-4<br>Level- C3 |