

**NATIONAL UNIVERSITY OF PHARMACY  
FOREIGN LANGUAGES DEPARTMENT**



*НФаУ*

---



**ENGLISH TESTS  
FOR UNIFIED ENTRANCE EXAM TRAINING**

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я  
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ  
КАФЕДРА ІНОЗЕМНИХ МОВ**

**Буданова Л.Г., Карасьова О.В., Чернишенко О.О.**

**НАВЧАЛЬНО-МЕТОДИЧНІ РЕКОМЕНДАЦІЇ  
ДЛЯ ПІДГОТОВКИ СТУДЕНТІВ ДО ЄВІ З АНГЛІЙСЬКОЇ МОВИ  
В МАГІСТРАТУРУ**

**Харків  
НФаУ**

**2022**

**Рекомендовано ЦМР Національного фармацевтичного університету**

**Протокол №**

**Автори:** Буданова Л.Г., Карасьова О.В., Чернишенко О.О..

**Рецензенти:**

Живора Н.В. – кандидат фармацевтичних наук, доцент кафедри технології ліків НФаУ

***Навчально-методичні рекомендації з дисципліни «Іноземна мова за профпризначенням»***

Навчально-методичні рекомендації / Буданова Л.Г., Карасьова О.В., - Х.: НФаУ, 2022.- 44с.

Навчально-методичні рекомендації містять тестові завдання з розуміння читання оригінальних англійських текстів та завдання з використання лексичних та граматичних одиниць для організації підготовки студентів із складання ЄВІ з англійської мови.

Мета навчально-методичних рекомендацій – надання різноманітних тестових завдань для підготовки до ЄВІ з урахуванням сучасних вимог впровадження нових методів та підходів викладання англійської мови, а також допомогти здобувачам вищої освіти у повній мірі оволодіти, розвинути і сформувати навички з читання та граматики.

Видання являє собою навчально-методичні рекомендації для організації навчального процесу з викладання англійської мови з урахуванням сучасних вимог підготовки до ЄВІ. Тестові завдання дозволяють не лише забезпечити інтенсивне та всебічне тренування усного та писемного мовлення, а й організувати самоконтроль вивченого матеріалу, впровадити особистісно-орієнтований підхід у навчанні.

Навчально-методичні рекомендації сприяють організації підвищення рівня володіння англійською мовою студентів НФаУ, організації творчої самостійної особистості здобувачів вищої освіти, допомагають в практиці з організації та розвитку мовних навичок з читання та перекладу текстів, граматики англійської мови в аудиторії і вдома, опануванню усним та писемним мовленням.

Видання може використовуватися науково-педагогічними працівниками та студентами під час підготовки до занять, здобувачами вищої освіти денного та заочного відділення, магістрантами та аспірантами вищих медичних та фармацевтичного закладів, а також усіма, хто викладає та вивчає англійську.

**УДК 811.161.2:37.091.26(072)**

Буданова Л.Г., Карасьова О.В., Чернишенко О.О.

НФаУ, 2022.

## ПЕРЕДМОВА

Організація освітнього процесу потребує впровадження нових, сучасних, особистісно-орієнтованих, інтерактивних методів навчання. Підготовка студентів до складання ЄВІ з використанням тестових завдань є невід'ємною складовою процесу навчання іноземній мові на сьогоднішній час.

Метою даних навчально-методичних рекомендацій є надання типових тестових завдань здобувачам вищої освіти для організації підготовки до складання іспиту з ЄВІ з урахуванням сучасних вимог впровадження нових методів та підходів викладання іноземної мови, а також допомогти здобувачам вищої освіти у повній мірі оволодіти знаннями з обраної дисципліни.

Навчально-методичні рекомендації складаються з чотирьох варіантів, які містять завдання з читання та використання англійської мови, а також відповідей. Перед кожним завданням є чіткі інструкції для виконання тестів на multiple choice, matching, completing, що дає можливість сформувати навички з виконання типових завдань, зацікавити студентів, поширити їх знання з лексики та граматики.

У методичних рекомендаціях відповідно до мети й завдань представлено тестові завдання для активізації навчальної діяльності здобувачів вищої освіти під час викладання дисципліни «Англійська мова за профпризначенням» та підготовки до ЄВІ відповідно з Загально-Європейськими рекомендаціями відповідно до вимог Закону України «Про вищу освіту» сьогодення.

Організація навчальної діяльності здобувачів вищої освіти з використанням даних методичних рекомендацій дозволяє забезпечити високий рівень пізнавальної діяльності в умовах сьогодення.

## CONTENTS

1.	PREFACE.....	p.4
2.	CONTENTS.....	p.5
3.	VARIANT 1.....	p.6
4.	VARIANT 2.....	p.13
5.	VARIANT 3.....	p.20
6.	VARIANT 4.....	p.31
7.	KEYS.....	p.44

## VARIANT 1.

### READING

**Task 1. Read the texts below. Match choices (A-H) to (1-5). There are three choices you do not need to use**

#### **Categorisation of Universities in the UK**

UK universities can be categorised in a number of different ways. Historically, they have frequently been categorised based on age and location, while some more recent categorisations have used statistical techniques such as cluster analysis.

1) \_\_\_\_\_, which are normally subdivided geographically into the ancient universities of Scotland and Oxbridge in England.

2) \_\_\_\_\_ and its constituent colleges, which were founded in London from the early 19th century onwards as non-residential university colleges, following the pattern of the ancient universities of Scotland. Scott notes that it "compris[es] large schools like Imperial College, University College and the London School of Economics, and small specialised institutes". London does not always feature as a stand-alone category: the UGC joined London with Durham,<sup>1</sup> while Bligh, McNay and Thomas put it in with Durham, York, Lancaster and Wales in their 'other collegiate' group.

3) \_\_\_\_\_, often divided into older or larger and younger or smaller, or some similar division. The older or larger civic universities, also known as redbrick universities, were founded in provincial cities as non-residential university colleges in the later 19th and early 20th century. The newer or smaller civic universities, sometimes called "white tile" universities, were founded later. "Redbrick" is sometimes used to mean any university established between 1800 and 1960, or between 1800 and 1992. Scott, unusually, uses "redbrick" to refer to the younger civics universities.

4) \_\_\_\_\_ were created in the 1960s as residential universities with degree-awarding powers from the start, in contrast to being created as university colleges. The UGC took the decision to create these universities in the late 1950s and early 1960s, prior to the Robbins Report. The Scottish University of Stirling was the only entirely new university created as a result of the Robbins Report, and is often considered (e.g. by Scott) as a Scottish equivalent of the plate glass universities.

5) \_\_\_\_\_ were created from the colleges of advanced technology as a result of the recommendations of the 1963 Robbins Report and are thus also known as Robbins expansion universities.

- A) The University of London
- B) Plate glass universities
- C) The University of distance education
- D) Civic universities
- E) Ancient universities
- F) Technological universities
- G) War Universities
- H) Chicago University

**Task 2. Read the text below. For questions (6-10) choose the correct answer (A, B, C or D)**

### **Stages of Education in Great Britain**

In each country there are five stages of education: early years, primary, secondary, further education (FE) and higher education (HE). The law states that full time education is compulsory for all children between the ages of 5 (4 in Northern Ireland) and 16, the compulsory school age (CSA). In England, compulsory education or training has been extended to 18 for those born on or after 1 September 1997. This full-time education does not need to be at a school and some parents choose to home educate. Before they reach compulsory school age, children can be educated at nursery if parents wish, though there is only limited government funding for such places. Further Education is non-compulsory, and covers non-advanced education which can be taken at further (including tertiary) education colleges and Higher Education institutions (HEIs). The fifth stage, Higher Education, is study beyond A levels or BTECs (and their equivalent) which, for most full-time students, takes place in universities and other Higher Education institutions and colleges.

The National Curriculum (NC), established in 1988, provides a framework for education in England and Wales between the ages of 5 and 18. Though the National Curriculum is compulsory, some private schools, academies, free schools and home educators design their own curricula. In Scotland the nearest equivalent is the Curriculum for Excellence programme, and in Northern Ireland

there is something known as the common curriculum. The Scottish qualifications the National 4/5s, Highers and Advanced Highers are highly similar to the English Advanced Subsidiary (AS) and Advanced Level (A2) courses.

6. According to the text, to have full-time education....

- A) children may be educated at home
- B) children must be educated at school
- C) children can be educated at school as well as at home
- D) children needn't home education

7. What is **NOT** true?

- A) compulsory education or training has been extended
- B) Higher Education, is study which takes place in universities not at colleges.
- C) the National Curriculum is compulsory in England and Wales
- D) in Northern Ireland there is the common curriculum

8. What country has the Curriculum for Excellence programme?

- A) England
- B) Ireland
- C) Scotland
- D) Wales

9. The Scottish qualifications, as for Higher education, are similar to .....

- A) English intermediate
- B) English advanced
- C) English advanced Subsidiary
- D) English advanced Subsidiary and Advanced Level (A2)

**Task 3. Read the text below. Match choices (A-H) to (11-16). There are two choices you need not to use.**

## **Asthma**

### **11. Exercise-induced**

Exercise can trigger bronchoconstriction both in people with or without asthma. It occurs in most people with asthma and up to 20% of people without asthma. Exercise-induced bronchoconstriction is common in professional athletes. The highest rates are among cyclists (up to 45%), swimmers, and cross-country skiers. While it may occur with any weather conditions, it is more common when it is dry and cold. Inhaled beta2-agonists do not appear to improve athletic



performance among those without asthma, however, oral doses may improve endurance and strength.

## **12. Occupational**

Asthma as a result of (or worsened by) workplace exposures is a commonly reported occupational disease. Many cases, however, are not reported or recognized as such. It is estimated that 5–25% of asthma cases in adults are work-related. A few hundred different agents have been implicated, with the most common being: isocyanates, grain and wood dust, colophony, soldering flux, latex, animals, and aldehydes. The employment associated with the highest risk of problems include: those who spray paint, bakers and those who process food, nurses, chemical workers, those who work with animals, welders, hairdressers and timber workers.

## **13. Aspirin-induced asthma**

Aspirin-exacerbated respiratory disease (AERD), also known as aspirin-induced asthma, affects up to 9% of asthmatics. AERD consists of asthma, nasal polyps, sinus disease, and respiratory reactions to aspirin and other NSAID medications (such as ibuprofen and naproxen). People often also develop loss of smell and most experience respiratory reactions to alcohol.

## **14. Alcohol-induced asthma**

Alcohol may worsen asthmatic symptoms in up to a third of people. This may be even more common in some ethnic groups such as the Japanese and those with aspirin-induced asthma. Other studies have found improvement in asthmatic symptoms from alcohol.

## **15. Non-atopic asthma**

Non-atopic asthma, also known as intrinsic or non-allergic, makes up between 10 and 33% of cases. There is negative skin test to common inhalant allergens. Often it starts later in life, and women are more commonly affected than men. Usual treatments may not work as well. The concept that "non-atopic" is synonymous with "non-allergic" is called into question by epidemiological data that the prevalence of asthma is closely related to the serum IgE level standardized for age and sex ( $P < 0.0001$ ), indicating that asthma is almost always associated with some sort of IgE-related reaction and therefore has an allergic basis, although not all the allergic stimuli that cause asthma appear to have been included in the battery of aeroallergens studied (the "missing antigen(s)" hypothesis). For example, an updated systematic review and meta-analysis of population-attributable risk (PAR) of *Chlamydia pneumoniae* biomarkers in chronic asthma found that the PAR for *C. pneumoniae*-specific IgE was 47%.<sup>1</sup>

## **16. Infectious asthma**

When queried, asthma patients may report that their first asthma symptoms began after an acute lower respiratory tract illness. This type of history has been labelled the "infectious asthma" (IA) syndrome, or as "asthma associated with infection"

(AAWI) to distinguish infection-associated asthma initiation from the well known association of respiratory infections with asthma exacerbations. Reported prevalences of IA for adults range from around 40% in a primary care practice to 70% in a specialty practice treating mainly severe asthma patients. The true population prevalence of IA in adult-onset asthma is unknown because clinicians are not trained to elicit this type of history routinely, and recollection in child-onset asthma is challenging.

**Which of the choices gives a chance to:**

- A. to define infection-associated asthma
- B. to give describe asthma if people don't have allergy
- C. to find out the alcohol as the reason of asthma
- D. to demonstrate the subsequences of asthma
- E. to tell about the jobs where people can suffer from asthma
- F. to get to know that professional athletes also suffer asthma
- G. to inform about the symptoms of the Aspirin-exacerbated respiratory disease
- H. to find out how to treat the diseases

**Task 4. Read the text below. Choose from (A-H) to one which best fits each space (17-22). There are two choices you do not need to use.**

Medicine encompasses a variety of health care practices 17)\_\_\_\_\_ by the prevention and treatment of illness. Contemporary medicine applies biomedical sciences, biomedical research, genetics, and medical technology 18)\_\_\_\_\_, typically through pharmaceuticals or surgery, but also through therapies as diverse as psychotherapy, external splints and traction, medical devices, biologics, and ionizing radiation, amongst others.

Medicine has been practiced since prehistoric times, 19)\_\_\_\_\_ (an area of skill and knowledge) frequently having connections to the religious and philosophical beliefs of local culture. For example, a medicine man would apply herbs and say prayers for healing, or an ancient philosopher and physician would apply bloodletting according to the theories of humorism. In recent centuries, 20)\_\_\_\_\_, most medicine has become a combination of art and science (both basic and applied, under the umbrella of medical science).21)\_\_\_\_\_, the knowledge of what happens at the cellular and molecular level in the tissues being stitched arises through science.

Prescientific forms of medicine are now known as traditional medicine or *folk medicine*, 22)\_\_\_\_\_ and are thus called alternative medicine.

Alternative treatments outside of scientific medicine having safety and efficacy concerns are termed quackery.

- A. during most of which it was an art
- B. While stitching technique for sutures is an art learned through practice
- C. which remains commonly used in the absence of scientific medicine,
- D. to diagnose, treat, and prevent injury and disease
- E. which are used in modern sciences
- F. since the advent of modern science
- G. to prevent the diseases
- H. evolved to maintain and restore health

### USE OF ENGLISH

**Task 5. Read the text below. For questions 23-32 choose the correct answer (A, B, C or D)**

#### **Immunology.**

**Immunology** is 23)\_\_\_\_\_ of biology and medicine that covers the study of immune systems in all organisms. Immunology charts, measures, and contextualizes the physiological functioning of the immune system in states of both health and 24)\_\_\_\_\_; malfunctions of the immune system in immunological disorders (such as autoimmune diseases, hypersensitivities, immune 25)\_\_\_\_\_, and transplant rejection; and the physical, chemical, and physiological characteristics of the components of the immune system *in vitro*, *in situ*, and *in vivo*. Immunology has 26)\_\_\_\_\_ in numerous disciplines of medicine, particularly in the fields of organ transplantation, oncology, rheumatology, virology, bacteriology, parasitology, psychiatry, and dermatology.

The term was coined by Russian biologist Ilya Ilyich Mechnikov, who advanced studies on immunology and received the Nobel Prize for his work in 1908. He pinned small thorns into starfish larvae and noticed unusual cells surrounding the thorns. This was the active response of the body trying 27)\_\_\_\_\_ its integrity. It was Mechnikov who first observed the phenomenon of phagocytosis, 28)\_\_\_\_\_ the body defends itself against a foreign body.

Prior to the designation of immunity, from the etymological root *immunis*, which is Latin for "exempt", early physicians 29)\_\_\_\_\_ organs that would later be proven as essential components of the immune system. The important lymphoid organs of the immune system are the thymus, bone marrow, and chief lymphatic tissues such as spleen, tonsils, lymph vessels, lymph nodes, adenoids, and liver. 30)\_\_\_\_\_, many components of the immune system are cellular in nature, and not associated with specific organs, but rather 31)\_\_\_\_\_ or circulating in various tissues located throughout the body.

When health conditions 32)\_\_\_\_\_ to emergency status, portions of immune system organs, including the thymus, spleen, bone marrow, lymph nodes,

	A	B	C	D
23	a field	a branch	A field	
24	diseases	problem	disorder	complaint
25	absence	lack	deficiency	-
26	use	applications	request	appeals

and other lymphatic tissues, can be surgically excised for examination while patients are still alive.

27	to maintain	to keep	to subtain	to sustain
28	where	in which	in terms of which	under which
29	defined	described	characterized	spoken out
30	however	moreover	nevertheless	besides
31	implanted	embedded	included	<b>insert</b>
32	bad	worse	worsen	badder

**Task 6. Read the texts below. For questions (33-12) choose the correct answer (A, B, C, or D).**

Basic questions 33)\_\_\_\_\_ in molecular neuroscience include the mechanisms by which neurons 34)\_\_\_\_\_ and respond to molecular signals and how axons form complex connectivity patterns. At this level, tools from molecular biology and genetics 35)\_\_\_\_\_ to understand how neurons develop and how genetic changes affect biological functions. The morphology, molecular identity, and physiological characteristics of neurons and how they relate to different types of behavior are also of considerable interest.

Questions 36)\_\_\_\_\_ in cellular neuroscience include the mechanisms of how neurons process signals physiologically and electrochemically. These questions include how signals 37)\_\_\_\_\_ by neurites and somas and how neurotransmitters and electrical signals are used to process information in a neuron. Neurites 38)\_\_\_\_\_ extensions from a neuronal cell body, consisting of dendrites (specialized to receive synaptic inputs from other neurons) and axons (specialized to conduct nerve impulses called action potentials). Somas are the cell bodies 39)\_\_\_\_\_ the neurons and contain the nucleus.

40) \_\_\_\_\_ major area of cellular neuroscience is the investigation of the development of the nervous system. Questions include the patterning and regionalization of the nervous system, neural stem cells, differentiation of neurons and glia (neurogenesis and gliogenesis), neuronal migration, axonal and dendritic development, trophic interactions, and synapse formation.

Computational neurogenetic modeling is concerned with the development of dynamic neuronal models 41) \_\_\_\_\_ modeling brain functions with respect to genes and dynamic interactions 42) \_\_\_\_\_ genes.

	A	B	C	D
33	addressing	addressed	being addressed	was addressed
34	are expressing	expressed	express	will express
35	are used	is used	will be used	has been used
36	addressing	addressed	to address	were addressed
37	is processed	was processed	will be processed	are processed
38	are thin	is thin	was thin	will be thin
39	in	of	on	under
40	differ	other	another	-
41	for	in	of	on
42	among	inside	out of	between

## VARIANT 2.

### READING

**Task 1. Read the text below. Choose the correct answer A, B, C or D**

#### **Topical medications**

A topical medication is a medication that is applied to a particular place on or in the body. Most often topical administration means application to body surfaces such as the skin or mucous membranes to treat ailments via a large range of classes including creams, foams, gels, lotions, and ointments. Many topical medications are epicutaneous, meaning that they are applied directly to the skin. Topical medications may also be inhalational, such as asthma medications, or

applied to the surface of tissues other than the skin, such as eye drops applied to the conjunctiva, or ear drops placed in the ear, or medications applied to the surface of a tooth. The word *topical* derives from Greek *τοπικός* *topikos*, "of a place".

The definition of the topical route of administration sometimes states that both the application location and the pharmacodynamic effect thereof is local. A transdermal patch which delivers medication is applied to the skin. The patch is labelled with the time and date of administration as well as the administrator's initials.

In other cases, *topical* is defined as applied to a localized area of the body or to the surface of a body part regardless of the location of the effect. By this definition, topical administration also includes transdermal application, where the substance is administered onto the skin but is absorbed into the body to attain systemic distribution. Such medications are generally hydrophobic chemicals, such as steroid hormones. Specific types include transdermal patches which have become a popular means of administering some drugs for birth control, hormone replacement therapy, and prevention of motion sickness. One example of an antibiotic that may be applied topically is chloramphenicol

1. Topical administration means.....
  - a) skin or mucous membranes an epithelial tissue
  - b) application to body surfaces
  - c) application to the skin or mucous membranes
  
2. According to the text, many topical medications are epicutaneous, meaning that .....
  - a) they are used directly to the body
  - b) they are applied directly to the skin
  - c) they are applied directly to the hairs
  
3. What is the aim of the transdermal patch?
  - a) to supply medication to the skin
  - b) to reduce the number of useful medications to the skin
  - c) to protect the skin from damage
  
4. The patch is labelled with .....
  - a) the administrator's initials.
  - b) time and date of administration
  - c) the administrator's initials, time and date of administration
  
5. It is not stated in the text that
  - a) specific types include transdermal patches
  - b) topical administration doesn't include transdermal application
  - c) the word *topical* derives from Greek

**Task 2. Read the text below. For questions (6-10) choose the correct answer (A, B, C or D)**

### **The human immunodeficiency viruses**

The human immunodeficiency viruses (HIV) are two species of *Lentivirus* (a subgroup of retrovirus) that infect humans. Over time, they cause acquired immunodeficiency syndrome (AIDS), a condition in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive. Without treatment, average survival time after infection with HIV is estimated to be 9 to 11 years, depending on the HIV subtype. In most cases, HIV is a sexually transmitted infection and occurs by contact with or transfer of blood, pre-ejaculate, semen, and vaginal fluids. Research has shown (for both same-sex and opposite-sex couples) that HIV is untransmittable through condomless sexual intercourse if the HIV-positive partner has a consistently undetectable viral load. Non-sexual transmission can occur from an infected mother to her infant during pregnancy, during childbirth by exposure to her blood or vaginal fluid, and through breast milk. Within these bodily fluids, HIV is present as both free virus particles and virus within infected immune cells.

HIV infects vital cells in the human immune system, such as helper T cells (specifically CD4<sup>+</sup> T cells), macrophages, and dendritic cells. HIV infection leads to low levels of CD4<sup>+</sup> T cells through a number of mechanisms, including pyroptosis of abortively infected T cells, apoptosis of uninfected bystander cells, direct viral killing of infected cells, and killing of infected CD4<sup>+</sup> T cells by CD8<sup>+</sup> cytotoxic lymphocytes that recognize infected cells. When CD4<sup>+</sup> T cell numbers decline below a critical level, cell-mediated immunity is lost, and the body becomes progressively more susceptible to opportunistic infections, leading to the development of AIDS.

6 Immunodeficiency syndrome (AIDS), a condition in which progressive failure of the immune system

- a) let life-threatening infections and cancers to thrive.
- b) avoid life-threatening infections and cancers to be developed.
- c) develop opportunistic infections

7. According to the text, non-sexual transmission can occur

- a) from an infected mother to her infant only through breast milk
- b) from an infected mother to her infant with cough
- c) from an infected mother to her infant during pregnancy, during childbirth by exposure to her blood or vaginal fluid, and through breast milk

8. What does HIV infects?

- a) (specifically CD4<sup>+</sup> T cells)
- b) helper T cells, macrophages, and dendritic cells

c) T cells, dendritic cells

9. HIV infection leads to low levels of CD4<sup>+</sup> T cells through a number of mechanisms, including

a) pyroptosis , apoptosis , direct viral killing of infected cells, and killing of infected CD4<sup>+</sup> T cells

b) apoptosis of uninfected bystander cells,

c) direct viral killing of infected cells, and killing of infected CD4<sup>+</sup> T cells by CD8<sup>+</sup> cytotoxic lymphocytes

10. It is not stated in the text that

a) When CD4<sup>+</sup> T cell numbers decline below a critical level, cell-mediated immunity is lost

b) Approximately half of the world's population is at risk of HIV

c) HIV is present as both free virus particles and virus within infected immune cells.

**Task 3. Read the text below. Choose the correct answer for (11-15).**

### **Bristol University studies**

Scientists at the University of Bristol Arctic have revealed how a tiny microbe, crucial to shaping the surface of glaciers, survives in such extreme conditions. For the first time, researchers at the Bristol Glaciology Centre sequenced the genome of *Phormidesmispriestleyi*, which belongs to the cyanobacteria, an ancient group of photosynthetic microorganisms capable of transforming energy from sunlight into sugars using carbon dioxide and water.

Recent studies have shown that cold extreme habitats thrive with microbial life. In the Arctic, Antarctic and high altitude places where plants cannot survive, cyanobacteria , serve as major primary producers and represent the base of the microbial food chain.

In the Greenland ice sheet, *Phormidesmispriestleyi* helps to form cryoconite holes -- dark, dust-filled puddles on the ice sheet surface. Cryoconite holes can be found covering vast areas of ice, making these microbes important ecosystem engineers on, glaciers and ice sheets. Explaining how these organisms are capable of survival in these environments is key to understanding the ecology of Polar Regions. Many cold adapted organisms, have distinct signatures in their genomes related to how they are adapted to survival in the cold. By isolating and sequencing its genome of *Phormidesmispriestleyi*, we can look for distinctive signatures at the genome level. Its genome is similar to related organisms from much warmer environments. This new genome suggests that *Phormidesmispriestleyi* mainly



survives in cold environments by producing a special protective coating made from sugars.

By wrapping itself in a protective layer made out of a complex arrangement of sugars, this microbe uses this sticky layer to protect its cells from freezing, allowing it to survive through the Arctic winter.

11. According to the text, Scientists at the University of Bristol have found

- a) the way of Arctic microbe survival in strict conditions
- b) the reason of Arctic microbe survival in strict conditions
- c) the place of Arctic microbe survival in strict conditions

12. Cyanobacteria is an ancient group of photosynthetic microorganisms that is.....

- a) capable to charge energy from sunlight into sugars
- b) capable to convey energy from sunlight into sugars
- c) capable to give energy from sunlight into sugars

13. Phormidesmispriestleyi helps .....

- a) to produce the life on glaciers
- b) to balance the life on glaciers
- c) to construct the life on glaciers

14. Why does Phormidesmispriestleyi survives in cold environments?

- a) it has sugar coating
- b) it has special protective coating
- c) it produces producing a special protective coating

15. It is not stated in the text that.....

- a) this microbe doesn't use this sticky layer to protect its cells from freezing
- b) many cold adapted organisms, or psychrophiles, have distinct signatures in their genomes
- c) by isolating and sequencing its genome of Phormidesmispriestleyi, we can look for distinctive signatures at the genome level.

**Task 4. Read the text below. Choose from (A-H) to one which best fits each space (16-22). There are two choices you do not need to use.**

### Genetics

Genetics is a branch of biology concerned with 16)\_\_\_\_\_.

Though heredity had been observed for millennia, Gregor Mendel, Moravian scientist and Augustinian friar working in the 19th century

in Brno, was the first to study genetics scientifically. Mendel studied "trait inheritance", 17)\_\_\_\_\_. He observed that organisms (pea plants) inherit traits by way of discrete "units of inheritance". This term, still used today, is a somewhat ambiguous definition of what is referred to as a gene.

Trait inheritance and molecular inheritance mechanisms of genes are still primary principles of genetics in the 21st century, 18)\_\_\_\_\_. Gene structure and function, variation, and distribution are studied within the context of the cell, the organism (e.g. dominance), and within the context of a population. Genetics has given rise to a number of subfields, including molecular genetics, epigenetics and population genetics. Organisms studied within the broad field span the domains of life (archaea, bacteria, and eukarya).

Genetic processes work in combination with an organism's environment and experiences to influence development and behavior, 19)\_\_\_\_\_. The intracellular or extracellular environment of a living cell or organism may switch gene transcription on or off. A classic example is two seeds of genetically identical corn, one placed in a temperate climate and 20)\_\_\_\_\_. While the average height of the two corn stalks may be genetically determined to be equal, the one in the arid climate only grows to half the height of the one in the temperate climate 21)\_\_\_\_\_.

- A) often referred to as nature versus nurture
- B) patterns in the way traits are handed down from parents to offspring over time
- C) but modern genetics has expanded beyond inheritance to studying the function and behavior of genes.
- D) one in an arid climate (lacking sufficient waterfall or rain.
- E) since modern scientific approach
- F) the study of genes, genetic variation, and heredity in organisms
- G) due to lack of water and nutrients in its environment
- H) because of the extremely terms of survival

### USE OF ENGLISH

<p><b>Task 5. Read the text below. For questions 22-32 choose the correct answer (A, B, C or D)</b></p>
---

#### **Voynich Manuscript**

Named (22)\_\_\_ the Polish-American antiquarian bookseller Wilfrid M. Voynich, who acquired it in 1912, the Voynich Manuscript is a detailed 240-page book written in a language or script that is (23) \_\_unknown. Its pages are also filled with colorful drawings of strange diagrams, odd events and plants that do not seem to (24)\_\_\_\_\_ any known species, adding to the intrigue of the

document and the difficulty of deciphering it. The original author of the manuscript (25) unknown, but carbon dating has revealed that its pages were made sometime (26) 1404 and 1438. It has been called “the world’s most mysterious manuscript.” Theories abound about the origin and nature of the manuscript. Some believe it was (27) to be a pharmacological encyclopaedia, to address topics in medieval or early modern medicine. Many of the pictures of herbs and plants (28) that it may have been some kind of textbook for an alchemist. The fact that many diagrams appear to be of astronomical origin, (29) with the unidentifiable biological drawings, has even (30) some fanciful theorists to propose that the book may have an alien origin.

One thing most theorists agree on is that the book is unlikely to be a hoax, given the (31) of time, money and detail that (32) to make it.

	A	B	C	D
22	of	after	to	with
23	completely	especially	obviously	particularly
24	remind	match	correspond	suit
25	remains	leaves	keeps	stays
26	in	among	from	between
27	used	meant	done	bought
28	point	suppose	hint	direct
29	combined	united	joined	grouped
30	taken	carried	led	offered
31	number	amount	sum	lot
32	would have been required	have been required	would required	will have required

**Task 6. Read the texts below. For questions (33 – 42) choose the correct answer (A, B, C or D). Write your answers on the separate answer sheet.**

### A Big Day for America!

America recognized the 400th anniversary in May, 2007! Colonists arrived at 33) \_\_\_\_\_ became Jamestown, Virginia, the first permanent English settlement in North America, 34) \_\_\_\_\_ May 13, 1607.

The English hoped they 35) \_\_\_\_\_ discover gold, silver, and a trade route to Asia. But their arrival meant trouble for the local Indians. The settlers moved onto the Indians' land, and while 36) \_\_\_\_\_ two groups sometimes got along, they fought when food became scarce. The settlers never found riches or a shortcut to Asia, but they did 37) \_\_\_\_\_ the first representative government in the British colonies.

	A	B	C	D
33	when	what	which	where
34	in	at	on	by
35	will	would	shall	should
36	the	a	this	that
37	created	creating	create	to create

### Are All Deserts Hot?

The geological definition of a desert is a place that 38) \_\_\_\_\_ less than ten inches of rain each year. Low rainfall isn't 39) \_\_\_\_\_ on heat, though. 40) \_\_\_\_\_ place on the planet isn't the sand-swept Sahara, Kalahari, or even the Australian outback: it's Antarctica, Earth's southernmost continent 41) \_\_\_\_\_ the South Pole. In some parts of this giant frozen desert, it 42) \_\_\_\_\_ for two million years.

	A	B	C	D
38	receive	is receiving	receives	has received
39	depending	dependence	depended	dependent
40	Driest	The driest	Drier	The drier
41	is overlying	overlying	overly	overlies
42	hasn't rained	didn't rain	doesn't rain	hadn't rained

### VARIANT 3.

#### READING

**Task 1. Read the texts below. Match choices (A-H) to (1-5). There are three choices you do not need to use**

#### Types of vaccines

1. \_\_\_\_\_

Some vaccines contain live, attenuated microorganisms. Many of these are active viruses that have been cultivated under conditions that disable their virulent properties, or that use closely related but less dangerous organisms to produce a broad immune response. Although most attenuated vaccines are viral, some are bacterial in nature. Examples include the viral diseases yellow fever, measles, mumps, and rubella, and the bacterial disease typhoid.

The live *Mycobacterium tuberculosis* vaccine developed by Calmette and Guérin is not made of a contagious strain but contains a virulently modified strain called "BCG" used to elicit an immune response to the vaccine. The live attenuated vaccine containing strain *Yersinia pestis* EV is used for plague immunization. Attenuated vaccines have some advantages and disadvantages. Attenuated, or live, weakened, vaccines typically provoke more durable immunological responses. But they may not be safe for use in immunocompromised individuals, and on rare occasions mutate to a virulent form and cause disease.

2. \_\_\_\_\_

Some vaccines contain inactivated, but previously virulent, micro-organisms that have been destroyed with chemicals, heat, or radiation – "ghosts", with intact but

empty bacterial cell envelopes. They are considered an intermediate phase between the inactivated and attenuated vaccines. Examples include IPV (polio vaccine), hepatitis A vaccine, rabies vaccine and most influenza vaccines.

3. \_\_\_\_\_

Toxoid vaccines are made from inactivated toxic compounds that cause illness rather than the micro-organism. Examples of toxoid-based vaccines include tetanus and diphtheria. Not all toxoids are for micro-organisms; for example, *Crotalus atrox* toxoid is used to vaccinate dogs against rattlesnake bites.

4. \_\_\_\_\_

Certain bacteria have a polysaccharide outer coat that is poorly immunogenic. By linking these outer coats to proteins (e.g., toxins), the immune system can be led to recognize the polysaccharide as if it were a protein antigen. This approach is used in the *Haemophilus influenzae* type B vaccine.

5. \_\_\_\_\_

Heterologous vaccines also known as "Jennerian vaccines", are vaccines that are pathogens of other animals that either do not cause disease or cause mild disease in the organism being treated. The classic example is Jenner's use of cowpox to protect against smallpox. A current example is the use of BCG vaccine made from *Mycobacterium bovis* to protect against tuberculosis.<sup>1</sup>

- A) DNR
- B) inactivated
- C) heterotypic
- D) DNR
- E) toxoid
- F) experimental
- G) attenuated
- H) conjugate

**Task 2. Read the text below. For questions (6-10) choose the correct answer (A, B, C or D)**

Lincoln's now famous Gettysburg Address was not, on the occasion of its delivery, recognized as the masterpiece that it is today. Lincoln was not even the primary speaker at the ceremonies, held at the height of the Civil War in 1863, to dedicate the battlefield at Gettysburg.

The main speaker was orator Edward Everett, whose two-hour speech was followed by Lincoln's shorter remarks. Lincoln began his small portion of the program with the words that today are immediately recognized by most Americans: "Four score and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal." At the time of the speech, little notice was given to what Lincoln had said, and Lincoln considered his appearance at the ceremonies rather unsuccessful. After his speech appeared in print, appreciation for his words began to grow, and today it is recognized as one of the all-time greatest speeches.

6. The main idea of the text is that:

- A) the Gettysburg Address has always been regarded as a masterpiece
- B) at the time of its delivery the Gettysburg Address was truly appreciated as a masterpiece
- C) it was not until after 1863 that Lincoln's speech at Gettysburg took its place in history.
- D) Lincoln is better recognized today than he was at the time of his presidency

7. Which of the following is NOT TRUE about the ceremonies at Gettysburg during the Civil War?

- A) Everett was the main speaker
- B) Everett gave a two-hour speech.
- C) Lincoln was the closing speaker of the ceremonies.

D) Lincoln's speech was longer than Everett's

8. According to the text, when Lincoln spoke at the Gettysburg ceremonies,

A) his words were immediately recognized by most Americans

B) he spoke for only a short period of time

C) he was enthusiastically cheered

D) he was extremely proud of his performance

9. When did Lincoln's Gettysburg Address begin to receive public acclaim?

A) After it had been published

B) Immediately after the speech

C) Not until the present day

D) After Lincoln received growing recognition

10. Look at the word "it" in the text. Choose a word that it refers to.

A) his speech

B) appreciation

C) C) print

**Task 3. Read the text below. Match choices (A—H) to (11—16). There are two choices you do not need to use. Write your answers on the separate answer sheet.**

### **MEXICO'S BEST PLACES FOR FAMILY BEACH HOLIDAYS**

Mexico offers a great chance to combine resort amenities, beautiful beaches, plus cultural interest. Families love to have a vacation at beach resorts in Mexico, especially at all-inclusives that offer watersports, kids programmes, entertainment, and of course meals, snacks, and drinks. Below find several of Mexico's best spots.

#### **11. Mexico's Best: Mayan Riviera**

The 130 km stretch of coast south of Cancun extending to Tulum is arguably



Mexico's best destination for family beach holidays. All-inclusive resorts dot the coast, with all the usual amenities plus some elaborate pool complexes. Outings are terrific: snorkelling on the second largest barrier reef in the world; visiting the extensive ruins at Tulum and Coba, where kids learn about Mayan history; day-trips to the unique «eco-archeological» theme park, Xcaret, or sister park Xel-ha, or to «cenotes»... So much to do.

### **12. Mazatlan for Families**

Moving over to Mexico's west coast: Mazatlan has been one of Mexico's best tourist draws for decades, and has long stretches of beach, a historic downtown, a busy tourist zone, an aquarium, water park, and reputation for sportfishing. Families can find a couple of «playas» (beaches) with calm waters, in other areas, kids can learn to surf.

### **13. Puerto Vallarta for Families**

South of Mazatlan and north of Acapulco, about mid-way on Mexico's Pacific coast, Puerto Vallarta has nearly 30 miles of golden sand. Watersports include snorkelling and surfing, plus kayaking, windsurfing, parasailing, sportfishing. Visitors can explore an old town with cobblestone streets, and ogle the mansions that belonged to Elizabeth Taylor and Richard Burton back in the days when they put «PV» on the map. Jungle and canopy tours are nearby.

### **14. Riviera Nayarit**

Until recently, the stretch of Mexico's west coast north of Puerto Vallarta was an off-the-beaten-path area where surfers might go for an unspoiled break. Now, this 130-mile stretch of coast and lush tropics is called the Riviera Nayarit, and more visitors are coming to enjoy its white-sand beaches, many of which have good surfing. Some resorts have been built, but development is still at an early stage — which may be just what some families want. (And you can find serious pampering, plus kids' club, at the Four Seasons Resort Punta Mita.)

### **15. Los Cabos**

The long Baja California peninsula extends about half-way down the west side of Mexico, and at the bottom tip sits this popular vacation spot. Los Cabos has two «Cabos» («Capes»): San Jose del Cabo, and (the party town) Cabo San Lucas, connected by a 17-mile «Corridor» with resorts and golf courses. Los Cabos offers whale-watching in winter; some good snorkelling; horseriding; and sightseeing in the artists' town of Todos Santos. Currents can be strong at the beaches, so choose your resort carefully if you want a swimmable beach.

### **16. Merida**

Kids interested in the «lost» Maya civilization will be delighted to find the culture thriving in a modern city. The zócalo is always a spot of family activity, and the city sponsors nightly cultural events around the historic centre, from traditional Yucatecan dancing to guitar trovas (trios) to folkloric ballet to serenades; every Sunday, downtown streets close for a full day of concerts, feasts, puppet shows

and dancing. The anthropology museum, in the ornate Palacio Cantón, is small enough to keep kids engaged with its displays of limestone jaguars, skulls with jade-encrusted teeth, stelae and sacrificial instruments.

(By Teresa Plowright)

**Which place is ideal if \_\_\_\_\_**

- A you want to indulge in the world of national music and dancing.
- B you are crazy about fishing.
- C you are a very skillful swimmer and aren't afraid of a strong water tide.
- D your task is to learn about the race of people living in America when Europeans arrived.
- E you need to practice the sport of riding on the crest or along the tunnel of a wave.
- F you dream about having a rest in a lagoon.
- G you have decided to examine the old residence of famous movie stars.
- H you enjoy uncrowded beaches.

**Task 4. Read the text below. Choose from (A-H) to one which best fits each space (17-22). There are two choices you do not need to use.**

I

### The Victory

The term victory (from Latin *victoria*) originally applied to warfare, and 17) \_\_\_\_\_, after military operations in general or, by extension, in any competition. Success in a military campaign is considered a strategic victory, while the success in a military engagement is a tactical victory.

*Hemp for Victory*, a short 1942 documentary 18) \_\_\_\_\_ and shown during World War II.

In terms of human emotion, victory accompanies strong feelings of elation, and in human behaviour often exhibits movements and poses paralleling threat

display preceding the combat, 19)\_\_\_\_\_. Victory dances and victory cries similarly parallel war dances and war cries performed before the outbreak of physical violence.

Examples of victory behaviour reported in Roman antiquity, 20)\_\_\_\_\_, include: the victory songs of the Batavi mercenaries serving under Gaius Julius Civilis after the victory over Quintus Petillius Cerialis in the Batavian rebellion of 69 AD (according to Tacitus); and also the "abominable song" to Wodan, sung by the Lombards at their victory celebration in 579. The sacrificial animal was a goat, around whose head the Langobards danced in a circle while singing their victory hymn. The Roman Republic and Empire celebrated victories with triumph ceremonies and with monuments such as victory columns (e.g. Trajan's Column) and arches. A trophy is a token of victory taken from the defeated party, 21)\_\_\_\_\_ (as in the case of head hunters).

Mythology often deifies victory, as in the cases of the Greek Nike or the Roman Victoria. The victorious agent is 22)\_\_\_\_\_a (as Saint George slaying the dragon, Indra slaying Ahi, Thor slaying the Midgard Serpent etc.). Sol Invictus ("the Invincible Sun") of Roman mythology became an epithet of Christ in Christianity. Paul of Tarsus presents the resurrection of Christ as a victory over Death and Sin (1 Corinthians 15:55).

The Latinate English-language word *victory* (from the 14th century) replaced the Old English equivalent term *sige* (cognate with Gothic *sigis*, Old High German *sigu* and *Sieg* in modern German), a frequent element in Germanic names (as in Sigibert, Sigurd etc.), cognate to Celtic *sego* and Sanskrit *sahas*.

**A)** produced by the United States Department of Agriculture

**B)** where the term *victoria* originated

**C)** what is necessary to know

**D)** which are associated with the excess endorphin built up preceding and during combat.

**E)** such as the enemy's weapons (*spolia*), or body parts

- F) hero, often portrayed as engaging in hand-to-hand combat with a monster
- G) where it was mentioned
- H) denotes success achieved in personal combat

### USE OF ENGLISH

**Task 5. Read the text below. For questions 23-32 choose the correct answer (A, B, C or D)**

#### **Let's Get Rid of Stereotypes**

Not many people like being 23)\_\_\_\_\_ old .The language used to describe people in their fifties and beyond almost always has negative connotations. Old is associated with elderly, frail, past, over the hill - even *mature*, *senior* or *pensioner* are 24) \_\_\_\_\_ that reduce the value of older adults. It might have been an attempt by society to 25)\_\_\_\_\_ for its oldest members who may have become less able to 26)\_\_\_\_\_ themselves in the past. But society must move on from stereotyped views that predetermine how we think about chronological age.

The 27)\_\_\_\_\_ shows that the vast majority of over -50s , when asked whether they feel old, say "no". When asked at what age they thought they might be old, most 28)\_\_\_\_\_ - until we reach our 80s - if at all". Life is changing, but attitudes and 29)\_\_\_\_\_ norms have been slow to break up. Of particular concern is that the word "old" has negative implications when it (30)\_\_\_\_\_ employment. Being 50, 60 or 70 in the 21st century is no longer a predictor of physical or mental 31)\_\_\_\_\_. People at that stage of their lives could be 32)\_\_\_\_\_ for a whole new beginning, a new career. Many want or need to carry on working and have considerable experience to offer employers.

	A	B	C	D
23	illustrated	mentioned	predicted	called
24	opinions	terms	citations	sayings
25	appreciate	respect	care	value
26	look after	look back	look on	look to
27	learning	survey	question	inspection
28	spoke	told	said	tall
29	social	moral	physical	logical
30	comes	arrives	goes	touches
31	possibilities	qualifications	facilities	abilities
32	valuable	costly	pricey	affordable

**Task 6. Read the texts below. For questions (33-42) choose the correct answer (A, B, C, or D).**

### **Individual differences influencing academic performance**

Individual differences in academic performance 33)\_\_\_\_\_ to differences in intelligence and personality. Students with higher mental ability as demonstrated by IQ tests and those who are 34)\_\_\_\_\_ in conscientiousness (linked to effort and achievement motivation) tend to achieve

highly in academic settings. A recent meta-analysis suggested that mental 35)\_\_\_\_\_ (as measured by typical intellectual engagement) has an important influence on academic achievement 36)\_\_\_\_\_ intelligence and conscientiousness.

Children's semi-structured home learning environment transitions into a more structured learning environment when children start first grade. Early academic 37)\_\_\_\_\_ enhances later academic achievement.

Parent's academic socialization is a term 38)\_\_\_\_\_ the way parents influence students' academic achievement by shaping students' skills, behaviors and attitudes towards school. Parents influence students through the environment and discourse parents have with their children. Academic socialization can be influenced by 39)\_\_\_\_\_ socio-economic status. Highly educated parents tend to have more stimulating learning environments. Further, recent research indicates that the relationship quality with parents will influence the development of academic self-efficacy among adolescent-aged children, which will in turn affect their academic 40)\_\_\_\_\_.

Children's first few years of life are crucial to the development of language and social 41)\_\_\_\_\_. School preparedness in these areas help students adjust to academic expectancies. Studies have shown that physical activity can 42)\_\_\_\_\_ neural activity in the brain, specifically increasing executive brain functions such as attention span and working memory; and improve academic performance in both elementary school children and college freshmen.

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
33	had been linked	have been linked	has linked	linked
34	higher	highest	high	more highest

35	interest	curiosity	wonder	peculiarity
36	moreover	in	for	in addition to
37	achievement	gaining	reaching	realization
38	description	describing	described	being described
39	parents'	parents	parent's	parents'es
40	complotion	performance	production	show
41	art	ability	skills	knowledge
42	increase	decrease	enlarge	grow

#### **VARIANT 4.**

#### **READING**

**Task 1. Read the texts below. Match choices (A-H) to (1-5). There are three choices you do not need to use**

#### **Experiments and their diversity**

1)\_\_\_\_\_ often compares the results obtained from experimental samples against *control* samples, which are practically identical to the experimental sample except for the one aspect whose effect is being tested (the independent variable). A good example would be a drug trial. The sample or group receiving the drug would be the experimental group (treatment group); and the one receiving the placebo or regular treatment would be the control one. In many laboratory experiments it is good practice to have several replicate samples for the test being performed and have both a positive control and a negative control. The results from replicate samples can often be averaged, or if one of the

replicates is obviously inconsistent with the results from the other samples, it can be discarded as being the result of an experimental error (some step of the test procedure may have been mistakenly omitted for that sample).

2)\_\_\_\_\_ rely solely on observations of the variables of the system under study, rather than manipulation of just one or a few variables as occurs in controlled experiments. To the degree possible, they attempt to collect data for the system in such a way that contribution from all variables can be determined, and where the effects of variation in certain variables remain approximately constant so that the effects of other variables can be discerned. The degree to which this is possible depends on the observed correlation between explanatory variables in the observed data. When these variables are *not* well correlated, natural experiments can approach the power of controlled experiments. Usually, however, there is some correlation between these variables, which reduces the reliability of natural experiments relative to what could be concluded if a controlled experiment were performed.

3)\_\_\_\_\_ are so named to distinguish them from laboratory experiments, which enforce scientific control by testing a hypothesis in the artificial and highly controlled setting of a laboratory. Often used in the social sciences, and especially in economic analyses of education and health interventions, field experiments have the advantage that outcomes are observed in a natural setting rather than in a contrived laboratory environment. For this reason, field experiments are sometimes seen as having higher external validity than laboratory experiments..

4)\_\_\_\_\_ is an empirical interventional study used to estimate the causal impact of an intervention on target population without random assignment. Quasi-experimental research shares similarities with the traditional experimental design or randomized controlled trial, but it specifically lacks the element of random assignment to treatment or control. Instead, quasi-experimental designs typically allow the researcher to control the assignment to the treatment condition, but using some criterion other than random assignment (e.g.,



an eligibility cutoff mark)

5) \_\_\_\_\_ are the set of procedures used on natural sciences such as chemistry, biology, physics to conduct an experiment, all of them follow the scientific method; while some of them involve the use of complex laboratory equipment from laboratory glassware to electrical devices, and others require more specific or expensive supplies.

- A) Laboratory techniques
- B) A controlled experiment
- C) validity concerns
- D) Field experiments
- E) the observer bias
- F) A quasi-experiment
- G) Natural experiments
- H) A hypothesis

**Task 2. Read the text below. For questions (6-10) choose the correct answer (A, B, C or D)**

### **Why I chose to Volunteer Abroad**

Volunteering isn't so expensive that it's only an option for the well off. I spent 10 weeks volunteering in Arizona with America Conservation Experience, helping to preserve America's natural beauty. The trip was arranged through Bunac, a work and volunteer organisation. Altogether, it cost me around £ 1,000 – a sum which I covered mostly by working in my student bar.

Despite the self-indulgent image associated with overseas volunteer projects, the work can be hard going. I spent my time abroad maintaining trails, building fences and implementing re-vegetation projects in some of the national parks and national monuments of America.

Summer temperatures in Arizona stay well above 35C, not ideal if you're carrying 50kg of concrete for 10 hours at a time. And then there's the wildlife

to deal with. One afternoon nap took a less subdued turn when I realised that a rattlesnake was resting only 3 metres from me. The experience, needless to say, improved my strength of character – and reduced my fear of the English household spider.

Most people volunteer because they want to give something back to the world. But in reality, you benefit just as much as the local communities and ecosystems you're helping. Spending 10 weeks in America's most beautiful national parks and forests was an unforgettable experience. I gained a far deeper understanding of the local environment than the average tourist, meeting ex-national park rangers, who had a unique knowledge of the area's history and ecosystem.

The most challenging aspects of working abroad are also the most beneficial. Being placed in an unfamiliar environment forces you to use your initiative and develop self-confidence – *surviving 10 days of camping in the wild is something that three years of university could never provide*. When I look back on the work I completed, it makes writing a dissertation and academic deadlines seem a lot more manageable.

But best of all, my 10 weeks were spent volunteering with young people from a mix of cultures and backgrounds – from Belgians to South Koreans. When I left Arizona, I returned home having made friends with students from across the world.

6 Where did the author get the money for his trip?

- A) He got a grant from a volunteer organization.
- B) He managed to cover the expenses himself.
- C) He was supported by the local community.
- D) He was sponsored by his university.

- 7** According to the text, what was part of Andrew's duties working in Arizona?
- A) He tracked down old historical sites.
  - B) He kept the parks in proper condition.
  - C) He guided visitors round the parks.
  - D) He studied local endangered species.
- 8** Andrew had to face all of the following EXCEPT\_.
- A) oppressive heat
  - B) dangerous animals
  - C) exhausting work
  - D) unfriendly locals
- 9** What does the author mean by saying "*surviving 10 days of camping in the wild is something that three years of university could never provide*" (paragraph 7)?
- A) Camping was a valuable learning experience.
  - B) Surviving in the wild was an upsetting practice.
  - C) Going to university is a waste of time and money.
  - D) Being in a strange environment is an exciting activity.
- 10** What did Andrew like most of all about his trip?
- A) Coping with various challenges far from his home country
  - B) Gaining invaluable experience useful for his future life
  - C) Contributing to the preservation of the local environment
  - D) Making the acquaintance of people from different countries

**Task 3. Read the text below. Match choices (A-H) to (11-16). There are two choices you need not to use.**

11. \_\_\_\_\_ There are many species of fungi including lichen-forming species, and the mycobiota is less poorly known than in many other parts of the world. The most recent checklist of Basidiomycota (bracket fungi, jelly fungi, mushrooms and toadstools, puffballs, rusts and smuts), published in 2005, accepts over 3600 species. The most recent checklist of Ascomycota (cup fungi and their allies, including most lichen-forming fungi), published in 1985, accepts another 5100 species. These two lists did not include conidial fungi (fungi mostly with affinities in the Ascomycota but known only in their asexual state) or any of the other main fungal groups (Chytridiomycota, Glomeromycota and Zygomycota).

12. \_\_\_\_\_ Great Britain has been subject to a variety of plate tectonic processes over a very extended period of time. Changing latitude and sea levels have been important factors in the nature of sedimentary sequences, whilst successive continental collisions have affected its geological structure with major faulting and folding being a legacy of each orogeny (mountain-building period), often associated with volcanic activity and the metamorphism of existing rock sequences. As a result of this eventful geological history, the island shows a rich variety of landscapes.

13) \_\_\_\_\_ Great Britain lies on the European continental shelf, part of the Eurasian Plate and off the north-west coast of continental Europe, separated from this European mainland by the North Sea and by the English Channel, which narrows to 34 km (18 nmi; 21 mi) at the Straits of Dover. It stretches over about ten degrees of latitude on its longer, north-south axis and covers 209,331 km<sup>2</sup> (80,823 sq mi), excluding the much smaller surrounding islands. The North Channel, Irish Sea, St George's Channel and Celtic Sea separate the island from the island of Ireland to its west

14)\_\_\_\_\_ The island has a wide variety of trees, including native species of birch, beech, ash, hawthorn, elm, oak, yew, pine, cherry and apple. Other trees have been naturalised, introduced especially from other parts of Europe (particularly Norway) and North America. Introduced trees include several varieties of pine, chestnut, maple, spruce, sycamore and fir, as well as cherry plum and pear trees.

15)\_\_\_\_\_ It grew from a small rural settlement on the River Clyde to become the largest seaport in Scotland, and tenth largest by tonnage in Britain. Expanding from the medieval bishopric and royal burgh, and the later establishment of the University of Glasgow in the 15th century, it became a major centre of the Scottish Enlightenment in the 18th century. From the 18th century onwards, the city also grew as one of Britain's main hubs of transatlantic trade with North America and the West Indies. With the onset of the Industrial Revolution, the population and economy of Glasgow and the surrounding region expanded rapidly to become one of the world's pre-eminent centres of chemicals, textiles and engineering; most notably in the shipbuilding and marine engineering industry,

**Which of the choices gives a chance to know about:**

- A) geology
- B) population
- C) geography
- D) fungi
- E) settlement
- F) flora
- G) industry
- H) Glasgow

**Task 4. Read the text below. Choose from (A-H) to one which best fits each space (17-22). There are two choices you do not need to use.**

### Antibodies

An antibody (Ab), also known as an immunoglobulin (Ig), is a large, Y-shaped protein used by the immune system to identify and neutralize foreign objects such as pathogenic bacteria and viruses. The antibody recognizes a unique molecule of the pathogen, called an antigen. Each tip of the "Y" of an antibody contains a paratope (analogous to a lock) 17)\_\_\_\_\_, allowing these two structures to bind together with precision. Using this binding mechanism, an antibody can *tag* a microbe or an infected cell for attack by other parts of the immune system, or can neutralize it directly (for example, by blocking a part of a virus that is essential for its invasion).

To allow the immune system to recognize millions of different antigens, the antigen-binding sites at both tips of the antibody come in an equally wide variety. In contrast, the remainder of the antibody is relatively constant. It only occurs in a few variants, 18)\_\_\_\_\_ : IgA, IgD, IgE, IgG, or IgM. The constant region at the trunk of the antibody includes sites involved in interactions with other components of the immune system. The class hence determines the function triggered by an antibody after binding to an antigen, in addition to some structural features. Antibodies from different classes also differ in 19)\_\_\_\_\_.

Together with B and T cells, antibodies comprise the most important part of the adaptive immune system. They occur in two forms: one that is attached to a B cell, and the other, a soluble form, that is unattached and found in extracellular fluids such as blood plasma. Initially, all antibodies are of the first form, attached to the surface of a B cell – these are then referred to as B-cell receptors (BCR). 20)\_\_\_\_\_, the B cell activates to proliferate and differentiate into either plasma cells, which secrete soluble antibodies with the same paratope,

or memory B cells, which survive in the body to enable long-lasting immunity to the antigen. Soluble antibodies are released into the blood and tissue fluids, 21)\_\_\_\_\_. Because these fluids were traditionally known as humors, antibody-mediated immunity is sometimes known as, or considered a part of, humoral immunity. The soluble Y-shaped units can occur individually as monomers, or 22)\_\_\_\_\_.

- A) which define the antibody's *class* or *isotype*
- B) as well as many secretions
- C) in complexes of two to five units
- D) that is specific for one particular epitope (analogous to a key) on an antigen
- E) that is unbelievable
- F) where they are released in the body and at what stage of an immune response.
- G) which is known to be important
- H) After an antigen binds to a BCR

### USE OF ENGLISH

<p><b>Task 5. Read the text below. For questions 23-32 choose the correct answer (A, B, C or D)</b></p>
---

#### **Proteins**

Proteins are large biomolecules and macromolecules that comprise one or more long chains of amino acid residues. Proteins perform a vast 23)\_\_\_\_\_ of functions within organisms, including catalysing metabolic reactions, DNA replication, responding to stimuli, providing structure to cells and organisms, and transporting molecules from one location to another. Proteins differ from one another primarily in their sequence of amino acids, which is dictated by the nucleotide sequence of their genes, and which usually 24)\_\_\_\_\_ in protein folding into a specific 3D structure that 25)\_\_\_\_\_ its activity.

A linear chain of amino acid residues is called a polypeptide. A protein contains at least one long polypeptide. Short polypeptides, containing less than 20–30 residues, are rarely considered to be proteins and are commonly called peptides,

or sometimes oligopeptides. The individual amino acid residues are bonded together by peptide bonds and adjacent amino acid residues. The sequence of amino acid residues in a protein is defined by the sequence of a gene, which is encoded in the genetic code. In general, the genetic code specifies 20 standard amino acids; but in certain organisms the genetic code can 26)\_\_\_\_\_ selenocysteine and—in certain archaea—pyrrolysine. Shortly after or even during synthesis, the residues in a protein are often chemically modified by post-translational modification, which alters the physical and chemical properties, folding, stability, activity, and ultimately, the function of the proteins. Some proteins have non-peptide groups 27)\_\_\_\_\_, which can be called prosthetic groups or cofactors. Proteins can also work together 28)\_\_\_\_\_ a particular function, and they often associate to form stable protein complexes.

Once formed, proteins only exist for a certain period and are then degraded and recycled by the cell's machinery through the process of protein turnover. A protein's lifespan is measured 29)\_\_\_\_\_ its half-life and covers a wide range. They can exist for minutes or years with an average lifespan of 1–2 days in mammalian cells. Abnormal or misfolded proteins are degraded more rapidly either due to being targeted for destruction or due to being unstable.

Like other biological macromolecules such as polysaccharides and nucleic acids, proteins are 30)\_\_\_\_\_ parts of organisms and participate in virtually every process within cells. Many proteins are enzymes that catalyse biochemical reactions and are vital to metabolism. Proteins also have structural or mechanical functions, such as actin and myosin in muscle and the proteins in the cytoskeleton, which form a system of scaffolding that maintains cell shape. Other proteins are important in cell signaling, immune 31)\_\_\_\_\_, cell adhesion, and the cell cycle. In animals, proteins are needed in the diet to provide the essential amino acids that cannot be synthesized. Digestion breaks the proteins down for use in the metabolism.



Proteins may be purified from other cellular components 32)\_\_\_\_\_ a variety of techniques such as ultracentrifugation, precipitation, electrophoresis, and chromatography; the advent of genetic engineering has made possible a number of methods to facilitate purification. Methods commonly used to study protein structure and function include immunohistochemistry, site-directed mutagenesis, X-ray crystallography, nuclear magnetic resonance and mass spectrometry.

	A	B	C	D
23	order	array	group	arrangement
24	results	outcome	reaction	effect
25	intend	determines	calculate	controll
26	involve	cover	include	Take in
27	added	connected	devoted	attached
28	to achieve	complete	obtain	reach
29	In conditions	In means of	in terms of	under
30	important	needed	required	essential
31	reply	responses	answers	turning backs
32	employing	applying	using	taking

**Task 6. Read the texts below. For questions (33-42) choose the correct answer (A, B, C, or D).**

### The English Language

In the Late Bronze Age, Britain 33)\_\_\_\_\_ part of a culture called the Atlantic Bronze Age, held together by maritime trading, which also included Ireland, France, Spain and Portugal. In contrast to the generally accepted view that Celtic originated in the context of the Hallstatt culture, since 2009, John

T. Koch and others 34)\_\_\_\_\_ that the origins of the Celtic languages are to be sought in Bronze Age Western Europe, especially the Iberian Peninsula. Koch et al.'s proposal 35)\_\_\_\_\_ to find wide acceptance among experts on the Celtic languages.

All the modern Brythonic languages (Breton, Cornish, Welsh) are generally considered to derive from a common ancestral language termed *Brittonic*, *British*, *Common Brythonic*, *Old Brythonic* or *Proto-Brythonic*, which is thought 36)\_\_\_\_\_ from Proto-Celtic or early Insular Celtic by the 6th century AD. Brythonic languages were probably spoken before the Roman invasion at least in the majority of Great Britain south of the rivers Forth and Clyde, though the Isle of Man later 37)\_\_\_\_\_ a Goidelic language, Manx. Northern Scotland mainly spoke Pritennic, which became Pictish, which may have been a Brythonic language. During the period of the Roman occupation of Southern Britain (AD 43 to c. 410), Common Brythonic borrowed a large stock of Latin words. Approximately 800 of these Latin loan-words 38)\_\_\_\_\_ in the three modern Brythonic languages. *Romano-British* is the name for the Latinised form of the language used by Roman authors.

British English 39)\_\_\_\_\_ in the present day across the island, and developed from the Old English brought to the island by Anglo-Saxon settlers from the mid 5th century. Some 1.5 million people speak Scots—which 40)\_\_\_\_\_ indigenous language of Scotland and has become closer to English over centuries. An estimated 700,000 people speak Welsh, an official language in Wales. In parts of north west Scotland, Scottish Gaelic 41)\_\_\_\_\_ widely spoken. There are various regional dialects of English, and numerous languages 42)\_\_\_\_\_ by some immigrant populations.

	A	B	C	D
33	was	had been	is	will be

34	has proposed	proposed	have proposed	was proposed
35	has failed	had been failed	failed	have faild
36	to be developed	to have developed	developed	to develop
37	has	have been	had	has
38	have survived	has survived	survived	survive
39	speaked	spoke	was spoken	is spoken
40	is	was	has been	had
41	remains	remained	has remained	had remained
42	speak	spoke	spoken	speaked

## KEYS

VARIANT 1	VARIANT 2	VARIANT 3	VARIANT 4
1.E	1.C	1.G	1.B
2.A	2.B	2.B	2.G
3.D	3.A	3.E	3.D
4.B	4.C	4.H	4.F
5.F	5.B	5.C	5.A
6.C	6.A	6.C	6.B
7.B	7.C	7.D	7.B
8.C	8.B	8.B	8.D
9.D	9.A	9.A	9.A
10.	10.B	10. his speech	10.D
11.F	11.A	11.D	11.D
12.E	12.B	12.B	12.A
13.G	13.C	13.G	13.C
14.C	14.B	14.E	14.F
15.B	15.A	15.C	15.H
16.A	16.F	16.A	16.
17.H	17.B	17.H	17.D
18.D	18.C	18.A	18.A
19 A	19 A	19 D	19 F
20.F	20.D	20.B	20.H
21.B	21.B	21.E	21.B
22.C	22.B	22.F	22.C
23.B	23.A	23.D	23.B
24.A	24.A	24.B	24.A
25.C	25.A	25.C	25.B
26.B	26.B	26.A	26.C
27.A	27.A	27.B	27.D
28.B	28.A	28.C	28.A
29.C	29.A	29.B	29.C
30.A	30.C	30.D	30.D
31.B	31.B	31.D	31.B
32.C	32.A	32.A	32.C
33.B	33.B	33.B	33.A
34.C	34.C	34.A	34.C
35.A	35.B	35.B	35.A
36.B	36.A	36.D	36.B
37.D	37.C	37.A	37.C
38.A	38.C	38.B	38.A
39.B	39.D	39.A	39.D
40.C	40.B	40.B	40.B
41.A	41.D	41.C	41.A
42.D	42.A	42.A	42.C

*Методичне видання*  
Буданова Л.Г.,  
Карасьова О.В.,  
Ченишенко О.О.

Навчально-методичні рекомендації з дисципліни «Іноземна мова за профпризначенням»

ENGLISH TESTS FOR UNIFIED ENTRANCE EXAM TRAINING

*Відповідальна за випуск*  
*Карасьова О.В.*

Підписано до друку 06.09.2016. Формат 60x84/16. Папір офсетний.  
Гарнітура Times ET. Ум. друк. арк.. 3,2. Друк ризографічний . Наклад 620  
примЗамовлення № 0609/2-16.  
Національний фармацевтичний університет.  
вул. Пушкінська, 53, м. Харків, 61002  
Свідоцтво серії ДК № 3420 від 11.03.2009 р.

---

Надруковано з готового оригінал – макету у друкарні ФОП Петров В,В,  
Єдиний державний реєстр юридичних осіб та фізичних осіб-підприємців  
Запис № 2480000000106167 від 08.01.2009 р.  
61144, м. Харків, вул.. Гв. Широнінців, 79в, к.137  
тел.(057) 778-60-34 ; e-mail : bookfabri