ПРОГРАММА ВСТУПИТЕЛЬНОГО ИСПЫТАНИЯ ПО АНГЛИЙСКОМУ ЯЗЫКУ ДЛЯ ПРОФЕССИОНАЛЬНЫХ ЦЕЛЕЙ ДЛЯ ПОСТУПАЮЩИХ В МАГИСТРАТУРУ ПО ПРОГРАММЕ «СОЗДАНИЕ И РАЗВИТИЕ ВЫСОКОТЕХНОЛОГИЧНОГО БИЗНЕСА»

1. ЦЕЛЬ ВСТУПИТЕЛЬНОГО ИСПЫТАНИЯ

Цель вступительного испытания — определить уровень владения англоязычными коммуникативными умениями, а также оценить такие аспекты когнитивной деятельности абитуриентов, как анализ таблиц, текста, изображений; навыки решения проблем; способности к абстрактному мышлению и обобщению и концентрацию внимания.

2. ТРЕБОВАНИЯ К ПОСТУПАЮЩИМ

На вступительном испытании абитуриент должен продемонстрировать владение английским языком как средством профессионального общения, что подразумевает: адекватное коммуникативной ситуации употребление языковых средств английского языка на всех уровнях; знание лексических, грамматических и стилистических норм современного английского литературного языка и правил употребления вариантов языковых единиц, определяемых стилевыми и жанровыми требованиями в разговорнобытовой, официально-деловой и научной сферах коммуникации; владение базовой профессиональной лексикой; знание основной терминологии (математика, менеджмент, экономика) в рамках Федерального государственного образовательного стандарта среднего (полного) основного образования.

3. ТРЕБОВАНИЯ К СОДЕРЖАНИЮ ЯЗЫКОВОЙ КОМПЕТЕНЦИИ АБИТУРИЕНТОВ

3.1 Математическая часть. Вопросы, связанные с решением математических задач тестируют математические навыки, понимание основных математических концепций, способность рассуждать математически и решать количественные задачи. Вопросы, связанные с оценкой достаточности имеющихся данных, оценивают способность кандидата анализировать математическую задачу, распознавать информацию, релевантную для данной задачи, и определять, когда имеющейся информации достаточно для решения задачи.

3.2. Вербальная часть.

Чтение (Reading). Понимание прочитанного текста, ответы по тексту общего и частного характера. Тексты подбираются из экономики, истории, биологии, геологии и других областей. Вопросы проверяют умение выделить основную мысль текста, определить цель написания, позицию автора, определить функции отдельных параграфов, понять, с какой целью автором была упомянута та или иная информация или описано то или иное явление, описанное в тексте.

Критическое мышление (Critical Reasoning). Понимание утверждения и его логический анализ, критическое обоснование собственных мыслей. Логическая аргументация, опровержение и подтверждение доводов, умение делать сложные выводы.

Грамматика (Sentence correction). Исправление грамматических, орфографических, стилистических и синтаксических ошибок в предложениях.

3.3. Примеры экзаменационных заданий

Математическая часть.

Решение проблемы (Problem-solving)

Solve the problem and indicate the best of the answer choices given.

Numbers: All numbers used are real numbers.

Figures: A figure accompanying a problem solving question is intended to provide information useful in solving the problem. Figures are drawn as accurately as possible. Excerptions will be clearly noted. Lines shown as straight are straight, and lines that appear jagged are also straight. The positions of points, angles, regions, etc. exist in the order shown, and angle measures are greater than zero. All figures lie in a plane unless otherwise indicated.

• In a certain sequence, every term after the first is determined by multiplying the previous term by an integer constant greater than 1. If the fifth term of the sequence is less than 1000, what is the maximum number of nonnegative integer values possible for the first term?

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A) 60 B) 61 C) 62 D) 63 E) 64
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• A student committee on academic integrity has 90 ways to select a president and vice-president from a group of candidates. The same person cannot be both president and vice-president. How many students are in the group?

Определение достаточности данных (Data Sufficiency)

Each data sufficiency problem consists of a question and two statements. In data sufficiency problems that ask for the value of a quantity, the data given in the statements are sufficient only when it is possible to determine exactly one numerical value of quantity.

- (A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- (B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- (C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- (D) EACH statement ALONE is sufficient.
- (E) Statements (1) and (2) TOGETHER are NOT sufficient.
 - If x is a positive integer, is x 1 a factor of 104?
 - (1) x is divisible by 3.
 - (2) 27 is divisible by x.

Вербальная часть.

Чтение.

Each of the reading comprehension questions is based on the content of a passage. After reading the passage, answer all questions pertaining to it on the basis of what is stated or implied in the passage. For each question, select the best answer of the choices given.

Ecoefficiency (measures to minimize environmental impact through the reduction or elimination of waste from production processes) has become a goal for companies worldwide, with many realizing significant cost savings from such innovations. Peter Serge and Goran Carstedt see this development as laudable but suggest that simply adopting ecoefficiency innovations could actually worsen environmental stresses in the future. Such innovations reduce production waste but do not alter the number of products manufactured nor the waste generated from their use and discard; indeed, most companies invest in ecoefficiency improvements in order to increase profits and growth. Moreover, there is no guarantee that increased economic growth from ecoefficiency will come in similarly ecoefficient ways, since in today's global markets, greater profits may be turned into investment capital that could easily be reinvested in old-style eco-inefficient industries. Even a vastly more ecoefficient industrial system could, were it to grow much larger, generate more total waste and destroy more habitat and species than would a smaller, less ecoefficient economy. Senge and Carstedt argue that to preserve the global environment and sustain economic growth, businesses must develop a new systemic approach that reduces total material use and total accumulated waste. Focusing exclusively on ecoefficiency, which offers a compelling business case according to established thinking, may distract companies from pursuing radically different products and business models.

Questions 1-3 refer to the passage above.

- 1. The primary purpose of the passage is to
- (A) explain why a particular business strategy has been less stressful than was once anticipated
 - (B) propose an alternative to a particular business strategy that has inadvertently caused ecological damage
- (C) present a concern about the possible consequences of pursuing a particular business strategy
 - (D) make a case for applying a particular business strategy on a larger scale than is currently practiced
 - (E) suggest several possible outcomes of companies' failure to understand the economic impact of a particular business strategy
- 2. The passage mentions which of the following as a possible consequence of companies' realization of greater profits through ecoefficiency?

- (A) The companies may be able to sell a greater number of products by lowering prices.
- (B) The companies may be better able to attract investment capital in the global market.
- (C) The profits may be reinvested to increase economic growth through ecoefficiency.
- (D) The profits may be used as investment capital for industries that are not ecoefficient.
- (E) The profits may encourage companies to make further innovations in reducing production waste.
- 3. The passage implies that which of the following is a possible consequence of a companies' adaptation of innovations that increase its ecoefficiency?
 - (A) Company profits resulting from such innovations may be reinvested in that company with no guarantee that the company will continue to make further improvements in ecoefficiency.
 - (B) Company growth fostered by cost savings from such innovations may allow that company to manufacture a greater number of products that will be used and discarded, thus worsening environmental stress.
 - (C) A company that fails to realize significant cost savings from such innovations may have little incentive to continue to minimize the environmental impact of its production processes.
 - (D) A company that comes to depend on such innovations to increase its profits and growth may be vulnerable in the global market to competition from old-style ec0-inefficient industries.
 - (E) A company that meets its ecoefficiency goals is unlikely to invest its increased profits in the development of new and innovative ecoefficient measures.

Критическое мышление (Critical Reasoning)

Each of the critical reasoning questions is based on a short argument, a set of statements, or a plan of action. For each question, select the best answer of the choices given.

- Studies have shown that an automobile that runs on a blend of 85% ethanol/15% gasoline gets better mileage than an otherwise similar car equipped with a gasoline engine. Many American legislators have concluded that an increase in tax incentives for ethanol production would lessen our dependence on foreign oil. Which of the following, if true, casts the most doubt upon the validity of the legislators' conclusion?
 - (A) It takes 1.5 gallons of oil to produce 1 gallon of ethanol.

- (B) Electric cars are cheaper to operate than cars running on the ethanol fuel mix.
- (C) It costs thousands of dollars to retrofit an automobile to run on the ethanol fuel mix.
- (D) The ethanol/gasoline blend emits more pollution that regular gasoline.
- (E)The ethanol/gasoline blend has not been widely adopted in Europe.
- Sharks have a higher ratio of cartilage mass to body mass than any other organism. They also have a greater resistance to cancer than any other organism. Shark cartilage contains a substance that inhibits tumor growth by stopping the development of a new blood network. In the past 20 years, none of the responses among terminal cancer patients to various therapeutic measures has been more positive than the response among those who consumed shark cartilage. If the claims made above are true, then each of the following could be true

EXCEPT:

- (A) No organism resists cancer better than sharks do, but some resist cancer as well as sharks.
- (B) The organism most susceptible to cancer has a higher percentage of cartilage than some organisms that are less susceptible to cancer.
- (C) The substance in shark cartilage that inhibits tumor growth is found in most organisms.
- (D) In the past 20 years many terminal cancer patients have improved dramatically following many sorts of therapy
- (E) Some organisms have immune systems more efficient than a shark's immune system.
- Astronomer: I have asserted that our solar system does not contain enough meteoroids and
 other cosmic debris to have caused the extensive cratering on the far side of the moon. My
 opponents have repeatedly failed to demonstrate the falsity of this thesis. Their evidence is
 simply inconclusive; thus they should admit that my thesis is correct. The reasoning in the
 astronomer's argument is flawed because this argument
 - A. criticizes the astronomer's opponents rather than their arguments
 - B. infers the truth of the astronomer's thesis from the mere claim that it has not been proven false
 - C. ignores the possibility that alternative explanations may exist for the cratering
 - D. presumes that the astronomer's thesis should not be subject to rational discussion and criticism
 - E. fails to precisely define the key word "meteoroids"

Грамматика (Sentence correction)

Follow the requirements of standard written English to choose your answer, paying attention to grammar, word choice, and sentence construction. Select the answer that produces the most effective sentence; your answer should make the sentence clear, exact, and free of grammatical errors. It should also minimize awkwardness, ambiguity, and redundancy.

- As its sales of computer products have surpassed those of measuring instruments, the company has become increasingly willing to compete for the mass market <u>sales they would</u> in the past have conceded to rivals.
 - (A) they would in the past have conceded to rivals
 - (B) they would have conceded previously to their rivals
 - (C) that in the past would have been conceded previously to rivals
 - (D) it previously would have conceded to rivals in the past
 - (E) it would in the past have conceded to rivals

4. СОДЕРЖАНИЕ ВСТУПИТЕЛЬНОГО ИСПЫТАНИЯ

Вступительное испытание состоит из трех разделов, общая продолжительность экзамена – примерно 2 часа.

- 1. Вербальная часть— 36 вопросов, 60 минут.
 - Задание: прочитать тексты и ответить на ряд вопросов. Вербальная часть тестирует вашу способность читать и понимать тексты, выделять из них аргументы, а также ваши познания в области грамматики английского языка.
- 2. Математическая часть 31 вопрос, 60 минут.

Задание: проанализировать данные и сделать выводы, используя свои навыки рассуждения. В этой части также нужно задействовать базовые знания из области математики.

Литература

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