Структура экзамена кандидатского минимума

Кандидатский экзамен по иностранному языку проводится в два этапа:

* на первом этапе аспирантом выполняется письменный перевод научного текста по специальности с иностранного языка на русский. Объем текста - 15000 печатных знаков. В качестве источников используются оригинальная монографическая и периодическая литера­тура по тематике широкого научного профиля, по узкой специальности аспиранта и статьи из журналов, издаваемых за рубежом.

Успешное выполнение письменного перевода является условием допуска ко второму этапу экзамена. Качество перевода оценивается по зачетной системе.

* второй этап экзамена проводится в письменной и устной форме и включает в себя следующие задания:
1. Изучающее чтение оригинального текста по специальности. Объем - 3000 печатных знаков. Время выполнения работы - 60 минут. Форма проверки - чтение текста на иностран­ном языке вслух (выборочно) и проверка выполненного перевода. Пользование словарем разрешается.
2. Устное реферирование на иностранном языке общенаучного текста объемом 1500-2000 печатных знаков без использования словаря. Время подготовки - 5 минут.
3. Беседа с экзаменаторами на иностранном языке по вопросам, связанным со специ­альностью, образованием и научной работой аспиранта (соискателя).

Phyllosphere bacteria can promote plant growth and both suppress and stimulate the colonization and infection of tissues by plant pathogens (Lindow and Brandl 2003; Rasche et al. 2006a). Simi­larly, fungal endophytes of leaves may deter herbivores, protect against pathogens and increase drought tolerance (Arnold et al. 2003; Schweitzer et al. 2006). Furthermore, interactions in the phyllosphere zone determine the extent to which human pathogens are able to colonize and survive on plant tissues, an area of increasing importance with the rise in cases of human disease associated with consumption of fresh salad, fruit and vegetable produce (Whipps et al. 2008).

There is evidence for functional roles within the phyllosphere microbial community which given the size of the habitat could have global significance. The best studied of these is nitrogen fix­ation. Measured rates of bacterial nitrogen fixation in the phyllosphere vary widely, but in the phyl­losphere of trees in some tropical habitats rates of over 60 kg N ha)l have been reported, although amounts fixed in the phyllosphere of temperate trees is generally considerably lower (Freiberg 1998). Furthermore, nitrogen fixation or the presence of nitrogen-fixing bacteria has been reported in the phyllosphere of many crop plants (e.g. Murty 1983; Miyamoto et al. 2004). Other environ­mentally important microbial processes for which there is evidence in the phyllosphere include methanol degradation (Corpe and Rheem 1989; Van Aken et al. 2004) and nitrification (Papen et al. 2002), although the rates of these processes and their ubiquity within the phyllosphere remains to be elucidated.

Образец текста для реферирования общенаучного текста (2 вопрос)

The procaryotic cell. The cellular organization of procaryotes is of fundamental importance to their physiological and biochemical processes, and their differences from those of eucaryotes are well described. Three features are especially relevant, (i) Nuclear membranes are absent, which al­lows coupled transcription and translation. Because the DNA is not segregated to the nucleus, it is also possible to regulate transcription with repressors and activators that bind metabolites. In this sense, transcriptional regulation is further coupled to metabolism. In the eucaryotes, the major met­abolic processes occur in the mitochondria, chloroplast, and the cytoplasm and are isolated from transcription in the nucleus.

(ii) Procaryotic cells are usually smaller than eucaryotic cells. There are some notable ex­ceptions. The sulfur-oxidizing bacterium Thiomargarita has a diameter up to 750 urn, which is lar­ger than that of many protists. The eucaryotic marine picoalgae, which are 1 to 2 um in diameter, are similar in size to many procaryotes. In spite of this diversity, size remains an important distin­guishing characteristic. Size establishes the surface-to-volume ratio of the cell, which limits the rate and type of nutrient uptake. It also allows for rapid diffusion of small molecules and proteins throughout the entire cell, which provides a mechanism for coupling metabolism and regulation.

Примерные вопросы для проведения беседы на английском языке (3 вопрос)

1. What university did you graduate from? What diploma do you have?
2. Do you work anywhere? What is your position?
3. What is the area of your scientific interests?
4. What is the topic of your PhD research?
5. How long have you worked at this topic?
6. What is the purpose of your research?
7. What research methods do you use in your work?
8. Tell us about your scientific supervisor.
9. Tell us about the laboratory where you carry on your research.
10. Tell us about the scientific journals with most interesting articles in your field of research.
11. Have you taken part in any scientific conferences?
12. Have you published any articles/abstracts? Where?