آزمون ورودی
دوره‌های کارشناسی ارشد نانویسته داخل سال ۱۳۸۷

مهندسی کشاورزی - علوم باغبانی
(کد ۱۳۰۵)

نام و نام خانوادگی داوطلب:
شماره داوطلبی:
تعداد سوال: ۱۸۰ دقیقه
مدت پاسخگویی: ۱۵۰ دقیقه

عنوان مواد امتحانی، تعداد و شماره سوالات

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اسفند ماه سال ۱۳۸۶

استفاده از ماشین حساب مجاز نمی‌باشد.
PART A: Vocabulary

Directions: Choose the number of the answer (1), (2), (3), or (4) that best completes the sentence. Then mark your choice on your answer sheet.

1. This decision marks another change of direction in the ________ of the country’s education policy.
   1) evolution  2) deduction  3) transmission  4) generation
2. The newspaper report did not ________ how the men were killed.
   1) assign  2) debate  3) assume  4) specify
3. Children inevitably suffer problems of ________ to their parents’ divorce.
   1) controversy  2) adjustment  3) appreciation  4) compensation
4. Although she had been ill for a long time, it still came as a shock when she ________ died.
   1) randomly  2) reluctantly  3) eventually  4) specifically
5. The police department ________ that the number of violent crimes will increase this year by about 15%.
   1) imposes  2) advocates  3) estimates  4) identifies
6. The city’s population ________ mainly Asians and Europeans.
   1) compiles  2) deviates  3) comprises  4) eliminates
7. ________ dictates that it is the man who asks the woman to marry him and not the reverse.
   1) Foundation  2) Convention  3) Constitution  4) Orientation
8. To secure our future, we need a(n) ________ economic strategy for the nineties.
   1) ultimate  2) considerate  3) imminent  4) consistent
9. There is no doubt that the Italian ________ of the play sounds better than the English one.
   1) version  2) equation  3) appendix  4) document
10. Crude oil is industrially ________ to purify it and separate out the different elements.
    1) refined  2) modified  3) converted  4) condensed

PART B: Grammar

Directions: Read the following passage and decide which choice (1), (2), (3), or (4) best fits each blank. Then mark your choice on your answer sheet.

Boyd is producing a film documentary that will present Randall’s biography ________ his poetry. Randall served as general editor of the Press ________ 1965 to 1977. In the mid-seventies, printing costs and the closing of many small bookstores ________ he had extended credit ________ the Press in financial straits. Boyd hopes her documentary on Randall ________ more people to African American literature.

11- 1) or  2) despite  3) as well as  4) in addition
12- 1) in  2) from  3) during  4) between
13- 1) that  2) where  3) from whom  4) to which
14- 1) left  2) had left  3) was leaving  4) would have left
15- 1) introduces  2) will introduce  3) is introducing  4) would introduce
Part C. Reading Comprehension

Directions: Read the following three passages and choose the best choice (1), (2), (3), or (4). Then mark it on your answer sheet.

PASSAGE 1:

Raised bed gardening is a form of gardening in which the soil is formed in 3-4 foot (1.0-1.2m) wide beds, which can be of any length. The soil is about 0.5-1 foot (15-30cm) above the surrounding soil, sometimes enclosed by a frame generally made of wood or concrete blocks, and enriched with compost made from leaves and grass clippings. The vegetable plants are spaced in geometric patterns, much closer together than conventional row gardening. The spacing is such that when the vegetables are fully grown, their leaves just barely touch each other, creating a microclimate in which moisture is conserved and weed growth suppressed. Since the gardener does not walk on the raised beds, the soil is not compacted and the roots have an easier time growing. The close plant spacing and the use of compost generally result in higher yields with raised beds in comparison to conventional row gardening. Raised beds lend themselves to the development of complex agriculture systems that utilize many of the principles and methods of Permaculture. They can be used effectively to control erosion and recycle and conserve water and nutrients by building them along contour lines on slopes. This also makes more space available for intensive crop production.

16- It is stated in the passage that in raised bed gardening

1) there is a limit to the length of the bed
2) the height of the bed is much less than its width
3) the width of the bed is the same as its length
4) there's a natural frame of compost around the raised bed

17- The passage mentions that in raised bed gardening

1) wood, leaves and grass clippings enrich the soil
2) vegetable plants preserve their geometric patterns
3) weed growth and soil moisture can both be kept under control
4) conventional row gardening is followed for the space between vegetable plants

18- Which of the following is TRUE about raised bed gardening according to the passage?

1) One of its advantages is intensive crop production.
2) It naturally results in the methods of Permaculture.
3) The use of compost is because of higher yields.
4) Close plant spacing makes it hard to use compost freely.

19- The word 'They' in line 13 refers to

1) 'raised beds'
2) 'principles and methods'
3) 'complex agriculture systems'
4) 'conventional row gardening'

20- The expression 'contour line' (underlined) originally refers to a line on

1) 'bed'
2) 'fence'
3) 'map'
4) 'soil'
PASSAGE 2:

Variations in fruit structures largely depend on the mode of dispersal of the seeds they contain. This dispersal can be achieved by animals, wind, water, or explosive dehiscence. Some fruits have coats covered with spikes or hooked burrs, either to prevent themselves from being eaten by animals or to stick to the hairs, feathers or legs of animals, using them as dispersal agents. Examples include cocklebur and unicorn plant. The sweet flesh of many fruits is "deliberately" appealing to animals, so that the seeds held within are eaten and "unwittingly" carried away and deposited at a distance from the parent. Likewise, the nutritious, oily kernels of nuts are appealing to rodents (such as squirrels) who hoard them in the soil in order to avoid starving during the winter, thus giving those seeds that remain uneaten the chance to germinate and grow into a new plant away from their parent. Other fruits are elongated and flattened out naturally and so become thin, like wings or helicopter blades, e.g., maple, tuliptree and elm. This is an evolutionary mechanism to increase dispersal distance away from the parent via wind. Other wind-dispersed fruit have tiny parachutes, e.g., dandelion and salsify.

21- The passage states that ————.
   1) fruit structure causes variation in the seeds
   2) animals, wind and water achieve seed dispersal
   3) animals do not eat fruit as they are covered with spikes
   4) explosive dehiscence is a mode of seed dispersal

22- The word 'them' in line 5 best refers to ————.
   1) 'hairs'
   2) 'feathers'
   3) 'legs of animals'
   4) 'hairs, feathers or legs of animals'

23- It is mentioned in the passage that ————.
   1) animals do not eat fruit to disperse their seeds
   2) oil kernels of nuts are able to avoid winter starvation
   3) fruit seeds are often deposited away from their parent
   4) squirrels usually raise nuts away from their parent

24- Which of the following is TRUE according to the passage?
   1) maple, tuliptree and elm have helicopter blades.
   2) dandelion, tuliptree and maple are all wind-dispersed fruit
   3) dispersal distance depends on evolutionary mechanisms
   4) wind increases dispersal distance away from the parent seed

25- The word 'unwittingly' in line 7 basically means without ————.
   1) 'eating'
   2) 'realizing'
   3) 'digesting'
   4) 'covering'
PASSAGE 3:

Gericke originally defined hydroponics as crop growth in mineral nutrient solutions, with no solid medium for the roots. He objected in print to people who applied the term hydroponics to other types of soilless culture such as sand culture and gravel culture. The distinction between hydroponics and soilless culture of plants has often been blurred. Soilless culture is a broader term than hydroponics; it only requires that no soils with clay or silt are used. Note that sand is a type of soil yet sand culture is considered a type of soilless culture. Hydroponics is always soilless culture, but not all soilless culture is hydroponics. Many types of soilless culture do not use the mineral nutrient solutions required for hydroponics. Billions of container plants are produced annually, including fruit, shade and ornamental trees, shrubs, forest seedlings, vegetable seedlings, bedding plants, herbaceous perennials and vines. Most container plants are produced in soilless media representing soilless culture. However, most are not hydroponics because the soilless medium often provides some of the mineral nutrients via slow release fertilizers, cation exchange and decomposition of the organic medium itself.

26- It is stated in the passage that
1) crops grow best in mineral nutrient solutions
2) the roots grow in a solid medium in hydroponics
3) hydroponics is essentially the same as sand culture
4) gravel culture and hydroponics can both be considered as soilless cultures

27- The passage mentions that
1) mineral nutrients are not essential to all types of soilless culture
2) we can develop soilless culture with clay or silt
3) sand culture is soilless culture because sand and soil differ
4) nearly all types of soilless culture are some form of hydroponics

28- The passage implies that the plants raised in a soilless culture are called
1) 'forest'
2) 'bedding'
3) 'container'
4) 'soilless'

29- We may understand from the passage that
1) the organic medium decomposes into fertilizers in hydroponics
2) soilless media produce higher yields in soilless cultures
3) hydroponics does not depend on slow release fertilizers
4) cation exchange provides the organic medium in ornamental trees

30- The word 'blurred' in line 5 means
1) 'mixed'
2) 'discussed'
3) 'drawn'
4) 'unclear'