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صبح پنج‌شنبه

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«اگر دانشگاه اصلاح شود مملکت اصلاح می‌شود.»

امام خمینی (ره)

جمهوری اسلامی ایران  
وزارت علوم، تحقیقات و فناوری  
سازمان سنجش آموزش کشور

آزمون ورودی دوره‌های کارشناسی ارشد ناپیوسته داخل - سال ۱۳۹۷

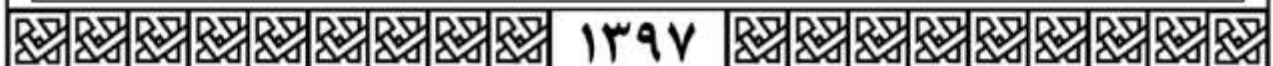
عنوان مواد امتحانی، تعداد و شماره سؤالات

ردیف	مواد امتحانی	تعداد سؤال	از شماره	تا شماره
۱	زبان عمومی و تخصصی (انگلیسی)	۳۰	۱	۳۰

استفاده از ماشین حساب مجاز نیست.

این آزمون نمره منفی دارد.

حل جابجایی و انتشار سؤالات به هر روش (الکترونیکی و...) پس از برگزاری آزمون، برای تمامی اشخاص حقیقی و حقوقی تنها با مجوز این سازمان مجاز می‌باشد و با متخلفین برابر مقررات رفتار می‌شود.



۱۳۹۷

\* داوطلب گرامی، عدم درج مشخصات و امضا در مندرجات جدول ذیل، به منزله عدم حضور شما در جلسه آزمون است.

اینجانب ..... با شماره داوطلبی ..... در جلسه این آزمون شرکت می‌نمایم.

امضا:

زبان عمومی و تخصصی (انگلیسی):

**PART A: Vocabulary**

**Directions:** Choose the word or the phrase (1), (2), (3), or (4) that best completes the blank. Then mark the correct choice on your answer sheet.

- 1- Fierce winds and deadly waves were only one ----- many explorers like Christopher Columbus confronted when sailing to unknown lands.  
1) suspension      2) obstacle      3) shortage      4) variation
- 2- In urban desert areas potable water supplies are stressed by increasing demands that leave water managers ----- to find new supplies.  
1) discouraging      2) refusing      3) invading      4) struggling
- 3- The sense of smell diminishes with advancing age—much more so than the sensitivity to taste. This ----- may result from an accumulated loss of sensory cells in the nose.  
1) decrease      2) merit      3) ambiguity      4) defense
- 4- True, all economic activities have environmental consequences. Nevertheless, the goal of shrimp producers should be to reduce the ----- effects on the environment as much as possible.  
1) indigenous      2) competitive      3) deleterious      4) imaginary
- 5- Like most successful politicians, she is pertinacious and single-minded in the ----- of her goals.  
1) pursuit      2) discipline      3) permanence      4) involvement
- 6- Knowing that everyone would ----- after graduation, she was worried that she would not see her friends anymore.  
1) emerge      2) conflict      3) differentiate      4) diverge
- 7- Certain mental functions slow down with age, but the brain ----- in ways that can keep seniors just as sharp as youngsters.  
1) composes      2) conveys      3) compensates      4) corrodes
- 8- It is argued by some that hypnosis is an effective intervention for ----- pain from cancer and other chronic conditions.  
1) displacing      2) alleviating      3) exploring      4) hiding
- 9- Children who get ----- atmosphere at home for studies perform better than students who are brought up under tense and indifferent family atmosphere.  
1) favorable      2) valid      3) obedient      4) traditional

10- The post office has promised to resume first class mail ----- to the area on Friday.

- 1) attention                      2) progress                      3) expression                      4) delivery

**PART B: Cloze Passage**

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

Colette began painting while she was still in her youth. (11) ----- 1970, she completed her first performance with *Hommage a Delacroix*, (12) ----- was the beginning of an artistic career (13) ----- to the oneness of art and life. (14) -----, actions and performances on streets and public squares, followed by her "living environments" and the "windows", (15) ----- in a selected pose with an elaborate arrangement of fabrics and lace.

- 11- 1) Since the year                      2) During a year of  
3) For a year of                      4) In the year
- 12- 1) that it                      2) which                      3) that                      4) it
- 13- 1) devoted                      2) was devoted                      3) to devote                      4) devoting
- 14- 1) Street works then came                      2) Then came street works  
3) There coming then street works with                      4) With street works then to come
- 15- 1) she remained motionless                      2) that in there she remained motionless  
3) in which she remained motionless                      4) that in it motionless she remained

**PART C: Reading Comprehension:**

*Directions: Read the following three passages and answer the questions by choosing the best choice (1), (2), (3), or (4). Then mark the correct choice on your answer sheet.*

**PASSAGE 1:**

There are two types of agricultural crop residues. Field residues are materials left in an agricultural field or orchard after the crop has been harvested. These residues include stalks and stubble (stems), leaves, and seed pods. The residue can be ploughed directly into the ground, or burned first. Good management of field residues can increase efficiency of irrigation and control of erosion. Process residues are materials left after the crop is processed into a usable resource. These residues include husks, seeds, bagasse, molasses and roots. They can be used as animal fodder and soil amendment, fertilizers and in manufacturing. Nutrients in most crop residue are not immediately available for crop use. Their release (called generalization) occurs over a period of years. The biological processes involved in soil nutrient cycles are complex. As a rough guide, cereal straw releases about 10 to 15 per cent of its nutrients and pea residues release about 35 percent of their nutrients by the next year. The speed of generalization depends on the nitrogen and lignin content, soil moisture, temperature, and degree of mixing with the soil. N is released fairly quickly from residue when the content is higher than 1.5 per cent. In contrast, below 1.2 per cent, soil-available N is fixed (called

immobilization) by the microbes as they decompose the residue. Thus pea residue would have short- and long-term benefits to soil fertility, whereas cereal straw would reduce next year's soil supply of available nutrients. Over time, the nutrients fixed by soil microbes and humus are released and available to crops. Nutrients from residue are not fully recovered by crops. Just like fertilizer nutrients, nutrients released from crop residue into the soil are susceptible to losses such as leaching, denitrification, immobilization, and fixation.

- 16- **It is stated in the passage that -----.**
- 1) process residues are the materials collected from crop processing
  - 2) pea residue has over seven short-term benefits to soil fertility
  - 3) soil-available N is fixed by 1 per cent of soil's microorganisms
  - 4) generalization occurs faster in pea residues than cereal straw
- 17- **The passage points to the fact that -----.**
- 1) seed pods are among field residues
  - 2) crop use depends heavily on crop residue
  - 3) husks have very little nutritive value
  - 4) microbes fix the soil's needed humus
- 18- **According to the passage, -----.**
- 1) process residue denitrification happens very quickly
  - 2) fertilizer nutrients are not immune to immobilization
  - 3) orchard residues release far more N than field residues
  - 4) field residues cannot be ploughed directly into the ground
- 19- **We understand from the passage that -----.**
- 1) soil's lignin content is an index of its moisture
  - 2) field residue lowers the efficiency of irrigation
  - 3) animal fodder is often used for soil amendment
  - 4) processes involved in nutrient cycles are simple
- 20- **The word 'stubble' in the passage (underlined) is closest to -----.**
- 1) 'root'                      2) 'branch'                      3) 'straw'                      4) 'trunk'

**PASSAGE 2:**

A genetically modified tree (GMt) is a tree whose DNA has been modified using genetic engineering techniques. In most cases the aim is to introduce a novel trait to the plant which does not occur naturally within the species. Examples include resistance to certain pests, diseases, environmental conditions, and herbicide tolerance, or the alteration of lignin levels in order to reduce pulping costs. Genetically modified forest trees are not yet approved for commercial use, with the exception of insect-resistant poplar trees in China and one case of GM Eucalyptus in Brazil. Several genetically modified forest tree species are undergoing field trials for deregulation, and much of the research is being carried out by the pulp and paper industry, primarily with the intention of increasing the productivity of existing tree stock. Certain genetically modified orchard tree species have been deregulated for commercial use in the United States including the papaya and plum. The development, testing and use of GM trees remains at an early stage in comparison to GM crops. Several companies in the pulp and paper industry are interested in utilizing GM technology to alter the lignin

content of plantation trees. It is estimated that reducing lignin in plantation trees by genetic modification could reduce pulping costs by up to \$15 per cubic metre. Lignin removal from wood fibres conventionally relies on costly and environmentally hazardous chemicals. By developing low-lignin GM trees it is hoped that pulping and bleaching processes will require fewer inputs, therefore, mills supplied by low-lignin GM trees may have a reduced impact on their surrounding ecosystems and communities. However, it is argued that reductions in lignin may compromise the structural integrity of the plant, thereby making it more susceptible to pathogens and disease, which could necessitate more pesticide use.

- 21- **We may understand from the passage that -----.**
- 1) GM crops are generally more extensively developed than GMTs
  - 2) DNA modification increases the productivity of herbaceous stocks
  - 3) the two GM forests in commercial use are both in the United States
  - 4) GM technology has already altered the lignin content of spruce trees
- 22- **The passage points to the fact that -----.**
- 1) bleaching processes take more inputs for non-GM trees
  - 2) GMTs whose DNA is modified are often called GMtNA
  - 3) GMTs are more immune to pathogens and pesticide use
  - 4) low-lignin GMTs have been used in mills for two decades
- 23- **The passage mentions that -----.**
- 1) novel traits do not occur naturally within tree species
  - 2) GM orchard trees, such as papaya, are grown in China
  - 3) lignin is conventionally a hazardous and costly chemical
  - 4) GM Eucalyptus in Brazil is approved for commercial use
- 24- **According to the passage, -----.**
- 1) GMTs have stronger structural integrity compared to other trees
  - 2) pulping costs go down by %15 through genetic modification
  - 3) industrial GMt research is limited pulp and paper industry
  - 4) GMTs may be more herbicide tolerant than non-GMTs
- 25- **The word 'compromise' in the passage (underlined) is closest to -----.**
- 1) 'require'
  - 2) 'reduce'
  - 3) 'function'
  - 4) 'affect'

**PASSAGE 3:**

Mangoes are juicy stone fruit (drupe) from numerous species of tropical trees belonging to the flowering plant genus *Mangifera*, cultivated mostly for their edible fruit. The majority of these species are found in nature as wild mangoes. The genus belongs to the cashew family Anacardiaceae. Mangoes are native to South Asia, from where the "common mango" or "Indian mango", *Mangifera indica*, has been distributed worldwide to become one of the most widely cultivated fruits in the tropics. There are many hundreds of named mango cultivars. In mango orchards, several cultivars are often grown in order to improve pollination. Many desired cultivars are monoembryonic and must be propagated by grafting. A common monoembryonic cultivar is 'Alphonso', an important export product, considered as "the king of mangoes". Cultivars that excel in one climate may fail elsewhere. For example, Indian cultivars such as 'Julie', a prolific cultivar in Jamaica, require annual fungicide treatments to escape the lethal fungal disease anthracnose in Florida. The current

world market is dominated by the cultivar 'Tommy Atkins', a seedling of 'Haden' that first fruited in 1940 in southern Florida and was initially rejected commercially by Florida researchers. Growers and importers worldwide have embraced the cultivar for its excellent productivity and disease resistance, shelf life, transportability, size, and appealing color. Although the Tommy Atkins cultivar is commercially successful, other cultivars may be preferred by consumers for eating pleasure, such as Alphonso. Generally, ripe mangoes have an orange-yellow or reddish peel and are juicy for eating, while exported fruit are often picked while underripe with green peels. Although producing ethylene while ripening, unripened exported mangoes do not have the same juiciness or flavor as fresh fruit.

- 26- **We may understand from the passage that -----.**
- 1) mango cultivars excelling in one climate will also excel elsewhere
  - 2) the seedling of 'Haden' that first imported to Florida in the early 1940s
  - 3) native Asian mangoes are known as the 'common' or 'Indian' mango
  - 4) 'Tommy Atkins' is far more common mango cultivar than "Alphonso"
- 27- **According to the passage, -----.**
- 1) there are wild varieties of all edible fruit species in nature
  - 2) anthracnose was first sighted by Jamaican mango growers
  - 3) unripe mangoes have a reddish peel and are not juicy enough
  - 4) the cashew family Anacardiaceae includes *Mangifera indica*
- 28- **The passage points to the fact that -----.**
- 1) disease resistance in mangoes depends on their size
  - 2) the Indian mango is noted for its transportability
  - 3) fresh mangoes taste better than exported mangoes
  - 4) many hundreds of mango cultivars are not named
- 29- **It is stated in the passage that -----.**
- 1) tropical trees consist mostly of large flowering drupes
  - 2) pollination in mango orchards is mostly done by hand
  - 3) 'the king of mangoes' must be propagated by grafting
  - 4) the Indian mango 'Julie' cannot be grown in Jamaica
- 30- **The word 'embrace' in the passage (underlined) is closest to -----.**
- 1) 'purchase'                      2) 'import'                      3) 'accept'                      4) 'grow'