

系 級	科 目	授 課 教 師	考 試 日 期	學 號	姓 名
醫 技	生 物 學	呂 恩 博	90 年 1 月 18 日 第 2 節		

※①請注意本試題共 2 張。如發現頁數不足及空白頁或缺印，應當場請求補齊，否則缺少部分概以零分計。  
 ②每張試題卷務必填寫(學號)、(姓名)。

**General Biology Final Exam**      **Fall 2000**      **Instructor: Dr. Liang-Yo Yang**  
**Department: Medical Technology**      **Student ID and Name: \_\_\_\_\_**

There are 33 questions for Part I and each question is worth 3 points. There are 10 questions for Part II points and each is worth 2 points. The total points are 119. Please choose **ONLY ONE BEST** answer. Good Luck to everyone! May you all have a nice Holiday!

- Homeostasis depends on
  - negative feedback control.
  - predictable environmental conditions.
  - predictable internal conditions.
  - positive and negative feedback control.
  - positive feedback control.
- What kind of connective tissue has a liquid matrix?
  - adipose tissue
  - cartilage
  - loose connective tissue
  - blood
  - nerve tissue
- Which of the following is the most common type of connective tissue in the typical human body?
  - bone
  - adipose tissue
  - loose connective tissue
  - fibrous connective tissue
  - loose adipose tissue
- The main function of muscle tissue is
  - sensation.
  - contraction.
  - absorption.
  - support.
  - covering surfaces.
- Which of the following is the most common type of connective tissue in the typical human body?
  - adipose tissue
  - loose connective tissue
  - fibrous connective tissue
  - loose adipose tissue
  - bone
- Which of the following distinguishes cardiac muscle from both smooth and skeletal muscle?
  - Its cells contract.
  - Its cells are branched.
  - It generally cannot be contracted at will.
  - Its cells are striped.
  - It generally can be contracted at will.
- Structure in the living world is organized at hierarchical levels. Which of the following choices lists several of these, from least inclusive to most inclusive?
  - cell, molecule, tissue, organ, organ system, organism
  - cell, molecule, organ, organ system, tissue, organism
  - molecule, cell, tissue, organ system, organ, organism
  - molecule, cell, tissue, organ, organ system, organism
  - molecule, cell, organ, organ system, tissue, organism
- The structural and functional unit of nervous tissue is
  - the neuron.
  - the dendrite.
  - the axon.
  - the cell body.
  - the nerve.
- The tongue does all of the following except
  - taste food.
  - push food into the pharynx.
  - shape food into a bolus.
  - secrete saliva.
  - manipulate food.
- Proteins are digested by which of the following enzymes?
  - maltase
  - lipase
  - lactase
  - amylase
  - chymotrypsin
- Movement of food from the stomach into the esophagus is usually prevented by
  - the pharynx.
  - the pyloric sphincter.
  - reverse peristalsis.
  - a constriction at the base of the esophagus.
  - peristalsis.

系 級	科 目	授 課 教 師	考 試 日 期	學 號	姓 名
醫技一	普通生物學		____年____月____日第____節		

\*①請注意本試題共\_\_\_\_張。如發現頁數不足及空白頁或缺印，應當場請求補齊，否則缺少部份概以零分計。  
 ②每張試題卷務必填寫(學號)、(姓名)。

General Biology Final Exam Fall 2000 Instructor: Dr. Liang-Yo Yang  
 Department: Medical Technology Student ID and Name: \_\_\_\_\_

12. Essential fatty acids are  
 (A) the fatty acids that we can synthesize from simpler molecules.  
 (B) those fatty acids that we are unable to synthesize and that must be included in our diet.  
 (C) only required by several bird species.  
 (D) required to synthesize most vitamins.  
 (E) both A and D.
13. Most nutrient absorption occurs in which part of the digestive system?  
 (A) pancreas (B) large intestine (C) liver (D) stomach (E) small intestine
14. The parietal cells of the stomach's gastric glands secrete  
 (A) mucus. (B) lactic acid. (C) hydrochloric acid. (D) pepsinogen. (E) pepsin.
15. Which of the following nutrients does not begin undergoing digestion until it reaches the small intestine? (A) fat (B) protein (C) complex carbohydrate (D) polypeptide (E) starch
16. Oxygen is mostly transported through the body  
 (A) dissolved in red blood cells. (B) bound to hemoglobin. (C) bound to carbon. (D) bound to dissolved iron. (E) dissolved in the blood.
17. When you are breathing gently, exhalation results mainly from  
 (A) the relaxation of the chest muscles and diaphragm. (B) contraction of the diaphragm.  
 (C) contraction of muscles in the lungs. (D) contraction of muscles in the chest.  
 (E) low pressure in the lungs.
18. Gas exchange in animals always involves  
 (A) cellular respiration. (B) active transport of gases. (C) diffusion. (D) breathing movements.  
 (E) osmosis.
19. Air leaving human lungs during exhalation contains  
 (A) mostly carbon dioxide and carbon monoxide. (B) no oxygen. (C) mostly carbon dioxide.  
 (D) carbon dioxide and oxygen. (E) none of the above.
20. The chief advantage of exchanging gases in water is that  
 (A) water can contain more oxygen than air.  
 (B) no energy need be expended to keep the exchange surface wet.  
 (C) the contact between the respiratory surface and the gas-containing medium is more intimate in water than in air.  
 (D) carbon dioxide is easier to eliminate in water than in air.  
 (E) less energy is required to ventilate gills than lungs.
21. When you hold your breath, which of the following blood gas changes leads initially to the urge to breathe again?  
 (A) rising oxygen concentration (B) rising carbon dioxide concentration (C) falling oxygen concentration (D) rising carbon dioxide concentration and falling oxygen concentration (E) falling carbon dioxide concentration
22. Most CO<sub>2</sub> is transported to the lungs (A) as carbonic anhydrase. (B) dissolved in the plasma. (C) as carbonic acid. (D) attached to hemoglobin. (E) as carboxyl.
23. The largest blood vessel in the human body is the (A) maximus artery. (B) aorta. (C) vena cava. (D) superior vena cava. (E) pulmonary artery.

系級	科目	授課教師	考試日期	學號	姓名
技一	養生		____年____月____日第____節		

※①請注意本試題共 4 張。如發現頁數不足及空白頁或缺印，應當場請求補發，否則缺少部份概以零分計。  
 ②每張試題卷務必填寫(學號)、(姓名)。

禁止帶入  
作弊

**General Biology**                      **Final Exam**                      **Fall 2000**                      **Instructor: Dr. Liang-Yo Yang**  
**Department: Medical Technology**                      **Student ID and Name: \_\_\_\_\_**

24. During which phase of the heartbeat does the heart fill with blood?  
 (A) resting phase (B) diastole (C) systole (D) atrial phase (E) interphase
26. Which of the following neurotransmitters is associated with sleep, mood, attention, and learning?  
 (A) epinephrine (B) GABA (C) acetylcholine (D) endorphins (E) serotonin
27. The gray matter of brains is largely composed of (A) dendrites. (B) dendrites and axons. (C) cell bodies. (D) myelinated axons. (E) synapses.
28. In a chemical synapse, what is the name of the gap between the transmitting and receiving neurons?  
 (A) gap myelin (B) synaptic node (C) synaptic cleft (D) synaptic knob (E) gap junction
29. Action potentials normally travel along an axon (A) from axons into dendrites. (B) toward the cell body. (C) in either direction, depending on the needs of the animal. (D) away from the cell body. (E) away from the synapse.
30. \_\_\_\_\_ is/are responsible for increased speed of impulse conduction along an axon.  
 (A) Neurotransmitters (B) The myelin sheath (C) A graded potential (D) IPSPs (E) EPSPs
31. The two major divisions of the nervous system are the (A) sympathetic and parasympathetic. (B) voluntary and involuntary. (C) CNS and PNS. (D) sensory and motor. (E) ANS and SNS.
32. Which division of the human nervous system carries signals to skeletal muscles?  
 (A) sympathetic nervous system (B) autonomic nervous system (C) somatic nervous system (D) sensory nervous system (E) parasympathetic nervous system
33. What is the functional unit of the nervous system?  
 (A) neuron (B) axon (C) cell body (D) synapse (E) dendrite

系級	科目	授課教師	考試日期	學號	姓名
技一	普通生物學	呂思潔	90年1月18日第2節		

\*①請注意本試題共 5 張。如發現頁數不足及空白頁或缺印，應當場請求補齊，否則缺誤部份概以零分計。  
 ②每張試題卷務必填寫(學號)、(姓名)。

ECOLOGY

- \_\_\_\_\_ A place where an organism lives is called (生物棲住之處稱為) (a) biodiversity. (b) biome. (c) biosphere. (d) habitat. (e) territory.
- \_\_\_\_\_ Which biome is a region of dense, spiny shrubs with tough, evergreen leaves? (何種生物區之主要植被為：具有堅韌、常綠樹葉的密生灌木) (a) chaparral (b) coniferous forest (c) desert (d) savannas (e) tundra
- \_\_\_\_\_ Of the following factors with the potential to limit growth of a natural populations, which one is density-dependent? (在下列限制族群成長的因子中，何種為 density-dependent?) (a) a limited amount of food (b) fire (c) flood (d) snow (e) typhoon
- \_\_\_\_\_ In a population, the number of individuals that an environment can sustain is called (在一族群中，環境所能維持的最多個體數稱為) (a) biomass. (b) biodiversity. (c) carrying capacity. (d) competitive exclusion. (e) sustainable development..
- \_\_\_\_\_ A population with an equilibrial life history (具有 equilibrial life history 的族群) (a) is controlled by density-independent factors (受 density-independent factors 所控制). (b) lives in an unpredictable environment (存活於不可預期的環境中) (c) produces few offspring (產生較少的子代). (d) reproduces when young (性早熟). (e) tends to grow exponentially (呈指數成長).
- \_\_\_\_\_ A "niche" is (a) a group of interacting individuals of a particular species (源自於同一種類、具有交互作用的一群生物). (b) a population's role in its community, or the appropriate combination of conditions for a species to thrive. (一族群在其群聚中所扮演的角色；或最適合某種生物生長的最佳環境因子組成). (c) an area that individuals defend and from which other members of the same species usually excluded (某生物個體為了防禦或排斥同種生物而界定出的地域範圍). (d) an interaction between two or more species in which one species lives in or on another species (兩種或多種生物共同生活的交互作用). (e) an interaction where one species eats another (某種生物捕食另一種生物的交互作用).
- \_\_\_\_\_ The gray tree frog can blend into its surroundings by turning shades of gray, brown, or green and is usually hard to spot, because of (灰樹蛙能隨環境背景而改變體色，以致難以辨認，是因為牠們具有以下何種能力) (a) Batesian mimicry. (b) camouflage. (c) imitation. (d) imprinting. (e) Müllerian mimicry.

私立臺北醫學院八十九學年度第一學期~~期中~~考(試)題紙

系級	科目	授課教師	考試日期	學號	姓名
技一	普通生物學	呂思潔	90年1月18日第2節		
※①請注意本試題共 <u>七</u> 張。如發現頁數不足及空白頁或缺印，應當場請求補齊，否則缺少部份概以零分計。 ②每張試題卷務必填寫(學號)、(姓名)。					

- \_\_\_\_\_ The European cuckoo's egg-lying behavior is out of (歐洲布穀鳥的產卵行為是源自於) (a) habituation. (b) innate behavior. (c) innovation. (d) imitation. (e) imprinting.
- \_\_\_\_\_ The "peck order" among hens is a kind of (母雞群中的 peck order 是一種) (a) cognition. (b) courtship ritual. (c) dominance hierarchy. (d) optimal foraging. (e) reciprocal altruism.
- \_\_\_\_\_ What kind of material will damage the O<sub>3</sub> layer? (何種物質會破壞 O<sub>3</sub> layer) (a) CFCs (b) CO<sub>2</sub> (c) DDT (d) FAPs (e) PVC

此卷為  
試卷  
請勿  
外借