

高雄醫學大學九十三學年度學士後醫學系招生考試試題

科目：普通生物學

考試時間：80 分鐘

共 7 頁

說明：一、選擇題用 2B 鉛筆在「答案卡」上作答，修正時應以橡皮擦拭，切勿使用修正液（帶），未遵照正確作答方法而致無法判讀者，考生自行負責。
二、試題及答案卡必須繳回，不得攜出試場。

I. 單選題：1-30 題，每題 1 分。30%。答錯一題倒扣 0.25 分，倒扣至本大題零分為止，未作答者，不給分亦不扣分。

1. What are the two classifications of prokaryotes?
(A) Domain Bacteria and Domain Archaea. (B) Domain Eukarya and Domain Archaea.
(C) Domain Archaea and Kingdom Monera. (D) Domain Bacteria and Kingdom Monera.
(E) Domain Bacteria and Domain Eukarya.
2. A linkage map
(A) reflects the frequency of crossing over between X and Y sex chromosomes.
(B) can pinpoint actual loci of genes.
(C) is a genetic map based on recombination frequencies.
(D) requires preparation of karyotypes.
(E) always has a total of 100 map units.
3. The snowball Earth hypothesis provides a possible explanation for the
(A) oxygenation of Earth's seas and atmosphere.
(B) existence of hydrothermal vents on the ocean floor.
(C) diversification of animals start at the Precambrian era.
(D) colonization of land by plants and fungi.
(E) origin of O₂-releasing photosynthesis.
4. As a group, acoelomates are characterized by
(A) deuterostome development.
(B) the absence of a brain.
(C) a coelom that is not completely lined with mesoderm.
(D) a solid body without a cavity surrounding internal organs.
(E) the absence of mesoderm.
5. Diets rich in fat release enterogastrones that inhibit
(A) gastric secretion. (B) stomach peristalsis.
(C) esophageal peristalsis. (D) intestinal secretion.
(E) pancreatic secretion.
6. If mammalian cells receive a go-ahead signal at the G1 checkpoint, they will
(A) move directly into telophase. (B) exit the cycle and switch to a nondividing state.
(C) complete the cycle and divide. (D) complete cytokinesis and form new cell walls.
(E) show a drop in maturation-promoting factor (MPF) concentration.
7. Catastrophism was Cuvier's attempt to explain
(A) natural selection. (B) uniformitarianism. (C) evolution.
(D) the fossil record. (E) the origin of new species.
8. The shaping of an animal and its individual parts into a body form with specialized organs and tissues is called

- (A) induction. (B) pattern formation. (C) organogenesis. (D) determination. (E) differentiation.
9. The first group with flowers was the
 (A) angiosperms. (B) algae. (C) fern allies. (D) ferns. (E) gymnosperms.
10. Which of the following is descriptive of protosomes?
 (A) spiral and indeterminate cleavage, schizocoelous development.
 (B) radial cleavage and determinate cleavage, schizocoelous development.
 (C) spiral and determinate cleavage, schizocoelous development.
 (D) radial and indeterminate cleavage, enterocoelous development.
 (E) radial cleavage and determinate cleavage, enterocoelous development.
11. Which of the following statements is **correct**?
 (A) Speciation occurs when mutations generate observable differences.
 (B) A species is composed of organisms located in the same habitat.
 (C) Speciation occurs when natural selection pressures reach their maximum.
 (D) A species is composed of a group of reproductive females.
 (E) Speciation occurs after populations become reproductively isolated and diverge.
12. Which of the following is **not true** about micronutrients in plants?
 (A) They generally help in catalytic functions.
 (B) They are elements required in relatively small amounts.
 (C) Overdoses of them can be toxic.
 (D) They are essential elements of plants' small size and molecular weight.
 (E) They are required for a plant to grow from a seed and complete its life cycle.
13. Which of the following statements about primary productivity is **correct**?
 (A) The highest primary productivity occurs in the open ocean.
 (B) The highest primary productivity per square meter occurs in the open ocean.
 (C) The highest primary productivity per square meter occurs in the savannah.
 (D) The highest primary productivity occurs in the tropical rain forest.
 (E) The highest primary productivity occurs in the temperate forest.
14. Which of the following statements is **true**?
 (A) The Hardy-Weinberg law applies to small, unstable populations.
 (B) Crossing over decreases variation.
 (C) Migration leads to genetic variation.
 (D) Dominant genes always occur more frequently in a population than recessive genes.
 (E) Nonrandom mating always affects no changes in gene frequency.
15. Which of the following terms did E. O. Wilson use to describe our innate appreciation of wild environments and living organisms?
 (A) biophobia. (B) bioethics. (C) biophilia.
 (D) biodiversity. (E) restoration ecology.
16. Almost all of the major animal phyla we see today appeared in the fossil record at the beginning of the
 (A) Cretaceous period. (B) Mesozoic period.
 (C) Carboniferous period. (D) Jurassic period.
 (E) Cambrian period.
17. Aphids reproduce asexually or sexually. They are likely to rely on asexual reproduction when
 (A) environmental conditions are good and unchanging.
 (B) environmental conditions are bad and changeable.
 (C) they are threatened by predators.
 (D) there is a shortage of females.
 (E) there are too many aphids for the host plant to support.
18. Membranes from cells grown in media enriched with stearate are less fluid than normal membranes. This is because
 (A) there are more transmembrane proteins.

- (B) the membranes probably have less sterols.
 (C) the membranes have a lower transition temperature.
 (D) the membranes have more saturated fatty acids.
 (E) the membranes have more unsaturated fatty acids.
19. MPF (maturation-promoting factor) turns itself off by
 (A) activating an enzyme that dissociates cyclin from cyclin-dependent kinase (Cdk).
 (B) activating an enzyme that phosphorylates cyclin.
 (C) activating an enzyme that phosphorylates Cdk.
 (D) activating an enzyme that destroys cyclin.
 (E) activating an enzyme that destroys Cdk.
20. The plasma cell is specialized for the production and secretion of antibodies, and thus contains more
 (A) DNA. (B) nuclear pore complexes. (C) mitochondria.
 (D) endoplasmic reticulum. (E) lysosomes.
21. A harmless fly has yellow and black stripes on its abdomen like a wasp's. This is an example of
 (A) coevolution. (B) mimicry.
 (C) divergent evolution. (D) disruptive selection.
 (E) camouflage.
22. Living in a group confers what advantage on an animal?
 (A) access to mate (B) increased ability to forage
 (C) protection from diseases (D) A and B
 (E) B and C
23. How are the action potentials of pacemaker cells spread to other cardiac cells?
 (A) via cardiac innervation
 (B) via neuromuscular junctions
 (C) by the sudden and instantaneous depolarization of all cardiac cells
 (D) via gap junctions
 (E) A and B
24. The percentage of the human genome that encodes proteins is approximately
 (A) 90 %. (B) 70 %. (C) 35 %. (D) 20 %. (E) 3 %.
25. The nuclear envelope breaks down at the end of
 (A) S phase. (B) G2 phase. (C) prophase. (D) metaphase. (E) anaphase.
26. Which of the following domains combines dimerization and DNA-binding surfaces in a long helix?
 (A) homeodomain (B) zinc finger (C) leucine zipper (D) helix-turn-helix (E) acidic domain
27. Why do the kidney's activities require large amounts of energy?
 (A) Filtration requires high blood pressure.
 (B) Tubular reabsorption involves active transport.
 (C) Water is removed from the urine by active transport.
 (D) Osmosis occurs in energized proteins in the walls of capillaries.
 (E) All of the above.
28. Hypophosphatemia is inherited as an X-linked dominant. A woman without hypophosphatemia and a man with hypophosphatemia have a daughter. The daughter mates with a male without hypophosphatemia. What is the expected phenotypic ratio of their offspring?
 (A) 3 unaffected females : 1 male with hypophosphatemia
 (B) 2 unaffected females : 1 unaffected male : 1 male with hypophosphatemia
 (C) 1 unaffected female : 1 female with hypophosphatemia : 1 unaffected male : 1 male with hypophosphatemia
 (D) 1 unaffected female : 1 male with hypophosphatemia
 (E) 1 female with hypophosphatemia : 1 unaffected male
29. Birds are like their reptile ancestors, but their bodies are highly modified for flight. Which of the following characteristics is

not an adaptation for flight?

- (A) feathers (B) amniotic eggs (C) a short tail
(D) bones with air sacs (E) endothermic metabolism

30. All of the following are reasons why gas exchange is more difficult for aquatic animals than it is for terrestrial animals **except**

- (A) water is harder to pump than air.
(B) water is denser than air.
(C) water contains much less O₂ than air per unit volume.
(D) gills have less surface area than lungs.
(E) exchanging gases with water causes substantial heat loss.

II. 單選題：31-65 題，每題 2 分。70%。答錯一題倒扣 0.5 分，倒扣至本大題零分為止，未作答者，不給分亦不扣分。

31. Which of the following is an example of polygenic inheritance?

- (A) skin pigmentation in humans (B) pink flowers in snapdragons
(C) sex linkage in humans (D) white and purple color in sweet peas
(E) the ABO blood groups in humans

32. Where is the attachment site for RNA polymerase?

- (A) operator region (B) initiation region
(C) structural gene region (D) promoter region
(E) regulator region

33. Gene flow is a concept best used to describe an exchange between

- (A) individuals. (B) chromosomes.
(C) species. (D) males and females.
(E) populations.

34. Differentiation of teeth is greatest in

- (A) reptiles. (B) mammals. (C) bony fishes. (D) sharks. (E) amphibians.

35. The primary role of oxygen in respiration is to

- (A) combine with carbon, forming CO₂.
(B) catalyze the glycolysis reaction.
(C) act as an acceptor for electrons and hydrogen, forming water.
(D) yield energy in the form of ATP as it is passed down the respiratory chain.
(E) combine with lactic acid to form pyruvic acid.

36. A long-day plant will flower if

- (A) it is kept in continuous far-red light.
(B) the duration of continuous darkness exceeds a critical length.
(C) the duration of continuous light is less than a critical length.
(D) the duration of continuous darkness is less than a critical length.
(E) the duration of continuous light exceeds a critical length.

37. The first plants arose during the _____ era.

- (A) Cenozoic (B) Mesozoic (C) Paleozoic (D) Precambrian (E) Tertiary

38. Which of the following substances is **incorrectly** matched with its producer?

- (A) aldosterone--kidney (B) ADH--hypothalamus

- (C) atrial natriuretic factor-- heart (D) angiotensinogen--liver
- (E) renin--juxtaglomerular apparatus
39. Which of the following may explain genomic imprinting?
- (A) post-translational modification of proteins (B) oncogenes (C) DNA methylation
- (D) microsatellite DNA (E) retrotransposons
40. The repeated use of insecticides may lead to the evolution of insecticide resistance in insects. What mechanism is involved?
- (A) directional selection (B) disruptive selection (C) stabilizing selection
- (D) genetic drift (E) population bottleneck
41. Biomes are
- (A) recognized on the basis of the dominant animal life.
- (B) all of the populations of a particular species.
- (C) a major type of ecosystem.
- (D) unaffected by climatic factors.
- (E) limited to aquatic regions.
42. *Archaeopteryx*
- (A) was a transitional form between birds and mammals.
- (B) had feathers and had no teeth.
- (C) was a transitional form between fish and amphibians.
- (D) had feathers and had a long bony tail.
- (E) was a transitional form between reptiles and mammals.
43. Genetic variation is the result of all **but**
- (A) the role of environment in controlling genetic expression.
- (B) alteration in chromosome structure or number.
- (C) gene mutation.
- (D) independent assortment.
- (E) genetic recombination.
44. Consider a field plot containing 200 kg of plant material. How many kg of carnivore production can be supported?
- (A) 200 (B) 100 (C) 50 (D) 20 (E) 2
45. The most common pattern of dispersion in nature is
- (A) random. (B) uniform. (C) indeterminate. (D) dispersive. (E) clumped.
46. Which of the following statements about movement corridors is **true**?
- (A) A movement corridor connects otherwise isolated patches of quality habitat for a species.
- (B) Corridors can be constructed only by humans.
- (C) Riparian habitats frequently serve as effective corridors.
- (D) A and C are true.
- (E) A, B, and C are true.
47. Which of the following combination is **correct**?
- (A) Porifera – coelomate, branch radial.
- (B) Nematoda – earthworm, pseudocoelomate.
- (C) Platyhelminthes – flatworms, pseudocoelomate.
- (D) Echinodermata – branch bilateria, diploblastic.
- (E) Cnidaria – radial symmetry, diploblastic.
48. A person suffering from AIDS would be unlikely to suffer from which of the following diseases?
- (A) Rheumatoid arthritis (B) Hepatitis (C) Tuberculosis
- (D) Influenza (E) Cancer
49. The vascular system of a three-year-old dicot stem consists of

- (A) 3 rings of xylem and 3 of phloem. (B) 2 rings of xylem and 2 of phloem.
 (C) 3 rings of xylem and 1 of phloem. (D) 1 rings of xylem and 3 of phloem.
 (E) 2 rings of xylem and 3 of phloem.
50. Within the female gametophyte, three mitotic divisions of the megaspore produce
 (A) the triple fusion nucleus and two synergids.
 (B) three pollen grains and three antipodal cells.
 (C) two antipodals and two eggs.
 (D) three antipodal cells, two polar nuclei, one egg, and two synergids.
 (E) a tube nucleus, a generative cell, an egg, and a sperm.
51. A pathogenic fungus invades a plant. Which of the following does the plant produce in response to the attack?
 (A) antibiotics (B) antisense RNA (C) phytochrome (D) phytoalexins (E) statoliths
52. Which of the following is **correctly** paired?
 (A) forebrain – diencephalons (B) midbrain – cerebellum
 (C) spinal cord – brainstem (D) both A and B are correct
 (E) both B and C are correct
53. Which of the following statements is **false**?
 (A) Estuaries support many semiaquatic species.
 (B) Many lakes in temperate regions are characterized by seasonal thermal stratification.
 (C) The distribution of photosynthetic organisms is limited by the quality and intensity of light in marine ecosystems.
 (D) Estuaries usually contain no or few producers.
 (E) Many aquatic biomes exhibit pronounced vertical stratification of chemical variables.
54. The following organism with the greatest number of *Hox* genes should be a(n)
 (A) fish. (B) fly. (C) flatworm. (D) fluke. (E) fruit fly.
55. Which of the following does **not** have a coefficient of relatedness of 0.5 in humans?
 (A) a brother to his brother (B) a mother to her son
 (C) an uncle to his nephew (D) a father to his daughter
 (E) a sister to her brother
56. Which of the following is **true** in the logistic model of population growth?
 (A) as *N* approaches *K*, the growth rate will approach zero
 (B) as *N* approaches *K*, the death rate decreases
 (C) as *N* approaches *K*, the carrying capacity of the environment will increase
 (D) as *N* approaches *K*, the growth rate increases
 (E) both C and D are correct
57. The population cycle of the snowshoe hare and its predator indicates that
 (A) predators are not the only factor controlling the size of prey populations.
 (B) the two species must have evolved in close contact because one cannot live without the other.
 (C) both populations are controlled mainly by abiotic factors.
 (D) the hare populations is r-selected, whereas the lynx population is K-selected.
 (E) both C and D are correct.
58. A gastrovascular cavity, with a single opening, is the characteristic digestive system of animals in which phylum?
 (A) Nematoda (B) Platyhelminthes (C) Arthropoda (D) Mollusca (E) Porifera
59. Which of the following statements about endocrine system is **false**?
 (A) Hormones from the adrenal cortex control salt and water balance.
 (B) An increase in endorphins blocks pain.
 (C) An iodine deficiency might interfere with the production of thyroxine.
 (D) Some cells can conduct nerve signals and secrete hormones.
 (E) Most endocrine glands produce steroid hormones.
60. If two modern organisms are distantly related in an evolutionary sense, then one should **expect** that
 (A) they should live in very different habitats.
 (B) their chromosomes should be very similar.

- (C) they shares a common ancestor relatively recently.
 (D) they should share fewer homologous organs than two closely related organisms.
 (E) they should be members of the same genus.
61. How do cleavage divisions differ from normal mitotic cell divisions?
 (A) Cleavage divisions occur by meiosis, not mitosis.
 (B) Cleavage divisions are slower than normal cell divisions.
 (C) Cleavage divisions occur without much mRNA synthesis.
 (D) Cleavage divisions divide cells into daughters with different gene sets.
 (E) Both C and D are correct.
62. The endoplasmic reticulum and Golgi apparatus are very similar among the groups of alga-like protists, but chloroplasts differ significantly and appear to be related to different prokaryotes. These facts imply that
 (A) The Golgi apparatus evolved before the endomembrane system.
 (B) Chloroplasts evolved before the endoplasmic reticulum.
 (C) Endomembrane systems evolved before chloroplasts.
 (D) Endomembrane systems evolved from symbiotic prokaryotes.
 (E) Both C and D are correct.
63. In the presence of an antibiotic prokaryotic translation can initiate, but only dipeptides that remain bound to the ribosome are formed. This antibiotic appears to block
 (A) binding of fMet-tRNA_i to P site.
 (B) binding of aminoacyl-tRNA to A site.
 (C) peptide bond formation.
 (D) translocation.
 (E) termination.
64. According to the **wobble rules**, a tRNA with the anticodon 5'-GAU-3' can recognize the codons
 (A) 5'-CUA-3' and 5'-UUA-3'.
 (B) 5'-CUA-3' and 5'-CUG-3'.
 (C) 5'-AUC-3' and 5'-GUC-3'.
 (D) 5'-AUC-3' and 5'-AUU-3'.
 (E) 5'-IUC-3'.
65. Cephalization is generally associated with all of the following **except**
 (A) bilateral symmetry.
 (B) a brain.
 (C) a longitudinal nerve cord.
 (D) a sessile existence.
 (E) concentration of sensory structures at the anterior end.

高雄醫學大學 93 年度學士後西醫招生考試 - 試題詳解

科目：生物

後醫生物試題解答

題號	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
答案	A	C	C	D	B	C	D	B	A	C	E	D	A	C	C	E	A	D	D	D	B	D	D	E	C
題號	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
答案	C	B	C	B	D	A	D	E	B	C	D 或 E	C	A	C	A	C	D	A	E	E	D	E	A	C	D
題號	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65										
答案	D	A	D	A	C	A	A	B	E	D	C	C	D	D	D										

後醫生物試題評析

評析：曾正老師

- (1) 儘管今年後醫生物試題本身還是取自標準教本 - **Biology by Campbell**，但卻與往年幾次的考題方向有著極大的不同：
- (1)生態、演化佔分重；分生部份略嫌不足
 - (2)動物分類學亦出了多道題
 - (3)動物生理題目太少，光合作用也沒挑選到，連粒線體也僅挑了一題
 - (4)親緣系數(coefficient of relatedness)首次登上題目（但課堂上已有教過了！哈哈）
 - (5)The snowball earth 假說是去年補充資料(以中文翻譯)，沒有想今年才出現
 - (6)地質年代亦出現多道題（這太刁鑽了吧！）
- (2) 綜觀班內學員應可獲得滿意的表現，細心的同學拿到 85 分以上應無問題，粗心者得 75 分亦不是難事！

後醫生物試題講義命中事實

題目	考題出處	題目	考題出處
1	第 1 回 (p10)	34	第 13 回 (p20、p32)
2	第 3 回 (p139、p141)	35	第 2 回 (p72)
4	第 17 回 (p5)	36	第 16 回 (p147)
5	第 13 回 (p49)	37	第 18 回 (p96、p98)
6	第 3 回 (p34、p38)	38	第 8 回 (p100)
7	第 18 回 (p4)	39	第 3 回 (p177)
8	第 20 回 (p1、p2)	40	第 18 回 (p46)
9	第 15 回 (p1)	41	第 18 回 (p243)
10	第 17 回 (p11)	42	第 17 回 (p106)
11	第 18 回 (p52)	43	第 18 回 (p29)
12	第 16 回 (p94)	44	第 17 回 (p192、p193)
13	第 18 回 (p202~203)	45	第 18 回 (p135、p136)
14	第 18 回 (p20、p21、p27、p29)	47	第 17 回 (p13、p15、p16、p17)
16	第 18 回 (p94、p95、p99)	48	第 6 回 (p93、p97)
17	第 9 回 (p1、p2)	49	第 16 回 (p45、p46)
18	第 1 回 (p138)	50	第 15 回 (p75)
19	第 3 回 (p40)	51	第 16 回 (p140、p141)
20	第 1 回 (p106)	52	第 11 回 (p73)
21	第 18 回 (p167、p168)	53	第 18 回 (p252、p253、p254)
22	第 22 回 (p135、p136)	54	第 20 回 (p45、p46、p47)
23	第 5 回 (p67、p68)	55	第 18 回 (p282、p283)
24	第 4 回 (p26)	56	第 18 回 (p148)
25	第 3 回 (p45)	57	第 18 回 (p148、p154、p167)
26	第 4 回 (p142)	58	第 17 回 (p17)
27	第 7 回 (p30)	59	第 8 回 (p67、p72、p73、p90)
28	第 3 回 (p167、p169)	60	第 18 回 (p53)
29	第 17 回 (p106、p107)	61	第 3 回 (p43)
30	第 7 回 (p1)	62	第 18 回 (p90~p92)
31	第 3 回 (p107)	63	第 4 回 (p87~p90)
32	第 4 回 (p61)	64	第 4 回 (p59)
33	第 18 回 (p27)	65	第 11 回 (p68)、第 17 回 (p34)

高雄醫學大學 93 年度學士後西醫招生考試 - 試題解析

科目：生物

黃志清 老師提供

一、試題分佈

內 容	題數	分數	內 容	題數	分數
1 概論	0	0	11 動物分類學	6	9
2 生命分子	1	1	12 植物生理學 (一)	2	3
3 細胞學	0	0	13 植物生理學 (二)	3	6
4 光合作用	0	0	14 動物組織營養消化與排泄	3	4
5 細胞呼吸	1	1	15 血液循環免疫與呼吸	4	5
6 孟氏與細胞遺傳學	5	7	16 內分泌與生殖	2	3
7 分子遺傳學	7	10	17 動物胚胎發育	3	5
8 演化論	7	11	18 神經與肌肉	2	4
9 生命起源與微生物	4	5	19 行為與生態學	12	20
10 植物分類學	2	3	20 DNA 技術學	0	0

二、試題解析

1. 細胞學、光合作用、植物激素與訊號轉導一題都沒有考。
2. 遺傳學計算完全沒有命題。分子遺傳學考題超級簡單，DNA 技術學遺傳工程一題都未考。
3. 動物生理太簡單了，神經生理完全未命題，僅考一點神經解剖學與演化。
4. 依 SSUrRNA 的新分類學並未命題，原生生物、真菌幾乎一題都沒有。
5. 行為學、演化論、生態學（特別是保育生態學）命題最多。
6. 除底下 3 題外(一共 4 分)，用功的本人學生至少可以考 90 分以上，成績特優有 95 分機會。
 - (1) 第 3 題，the snowball Earth 假說是部分基於地質上的證據，認為 7 億 5000 萬年前到 5 億 7000 萬年前，由北極到南極的陸地被冰河覆蓋，連海洋都蓋滿冰層。這個假說有助於解釋前寒武紀時多細胞真核生物的多樣性與分佈較受限制。此題來自 Campbell Biology (6th/ed) p.514
 - (2) 第 15 題，關於預測生物圈的未來命運，Edward O. Wilson 提出 biophilia 這個術語，認為生物圈的未來端視人類的 biophilia 觀。此題出自 Campbell Biology (6th/ed) p.1245
 - (3) 第 46 題，是保育生態學中探討生態學之間的 edges 與 movement corridors 對 landscape biodiversity 的影響，出自 Campbell Biology (6th/ed) p.1239

三、這份試題出自拙著普通生物學精輯第 20 版的代號用(Textbok:T)

出自試題集錦(Text Bank)代號用 TB

- | | | |
|----------------------------|--------------------------|-------------------------------|
| 1. p.421 (T) | 23. p.138 & p.755 (T) | 45. p.1061 (T) |
| 2. p.241 & p.1142 (T) | 24. p.315 (T) | 46. Campbell (p.1239) |
| 3. Campbell (p.514) | 25. p.128 (T) | 47. p.496~498 (T) |
| 4. p.493 (T) | 26. p.334 (T) | 48. p.741 & p.744 (T) |
| 5. p.690 (T) | 27. p.665 (T) | 49. p.564 (T) |
| 6. p.370 (T) | 28. p.250~251 (T) | 50. p.612 (T) |
| 7. p.989 (T) | 29. P.531 & 536 (T) | 51. p.631(T) & p.840(TB) |
| 8. p.556 & p.873 (T) | 30. p.767(T) & p.907(TB) | 52. p.924 (T) |
| 9. p.477 (T) | 31. p.235 (T) | 53. p.1092~1096 (T) |
| 10. p.494 (T) | 32. p.294 (T) | 54. p.883 (T) |
| 11. p.1018, 1021, 1022 (T) | 33. p.1008 (T) | 55. p.1058 (T) |
| 12. p.569~570 (T) | 34. p.531 (T) | 56. p.1065 & p.1082 (T) |
| 13. p.1079~1080 (T) | 35. p.175 (T) | 57. p.1069 (T) |
| 14. p.1006, 1008, 1011 (T) | 36. p.622~623 (T) | 58. p.504, 537 & 679 (T) |
| 15. Campbell (p.1245) | 37. p.388 & p.469 (T) | 59. p.790~791,801,804,806 (T) |
| 16. p.389 (T) | 38. p.668~669 (T) | 60. p.409~411 & 996 (T) |
| 17. p.830~831 (T) | 39. p.240 (T) | 61. p.846 & 863 (T) |
| 18. p.63~64 (T) | 40. p.1012 (T) | 62. p.403~405 (T) |
| 19. p.369~373 (T) | 41. 1088 (T) | 63. p.300, 302 (T) |
| 20. p.737 (T) | 42. p.534 & p.996 (T) | 64. p.298~299 (T) |
| 21. p.1070 (T) | 43. p.1011 (T) | 65. p.504 & 891(T),1185(TB) |
| 22. p.1051~1052 (T) | 44. p.1078 (T) | |

說明：在筆者採用的普通生物學精輯(第 20 修訂本)至少可以找到 61 題，加上課堂補充就有 62 題。

有 3 題來自最新版的 Campbell Biology(一共 1247 頁)，筆者教到的有 62 題，另 3 題共 4 分，有 2 題很好猜。基礎觀念正確就可以猜中答案。

94 學年度試題預測

1. 題目的分佈一樣會廣，每一個基本術語都要懂，不可有一個遺漏，就像今年生命起源的 snowball Earth 理論，保育生物學的 biophilia，與 corridor 等術語漏懂一個得分就會減少。
克服這個問題其實也不是很容易，4 餘頁的原文書，課堂上老師無論如何都教不完，所以有賴老師面面俱到的全面資料整理。筆者的普通生物學精輯第 21 修訂本就是因應這個趨勢做大規模修訂。
2. 題目會不會變深？
廣度會維持，深度不易預料。這三年來的試題都不難，有些專門術語的選擇題熟讀筆者的“試題集錦”一書專門名詞解釋可獲高分。如果題目變深，大抵上不脫原版書習題或專門陪伴學生學習

的 study Guide 或是 test bank。不過這兩本書不易買到。筆者由特殊管道獲得，編入新版的普通生物學精輯與試題集錦。只要做習題不怕題目變深。

3. Campbell 教科書每一章節後的考題還是要做，只是完全一樣的題目愈來愈少。怕被批評減題之故。其它版本 Solomon, Davis & Martin 所著的 Biology, Mader Biology, Starr Biology 的習題一樣有練習的必要，因為“ I do, I understand ”（題目做愈多，愈瞭解）。筆者所著作有列入。
4. 筆者大膽預測，熟讀拙著普通生物學精輯（第 2 1 修訂版）與試題集錦。保證 9 0 分以上。就像今年至少有 9 5 分以上。

建國