高雄醫學大學九十二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 五 頁
說明:一.選擇題用 2B 鉛筆在「答案卡 未遵照正確作答方法而致無 二.試卷必須繳回,不得攜出試	」上作答,修正時應以橡皮擦拭, 去判讀者,考生自行負責。 湯。	切勿使用修正液(帶),
 目. 單選題: 1-30 題,每題1分。30 不給分亦不扣分。 	。答錯一題倒扣 0.25 分,倒扣至	本大題零分為止,未作答者,
 Why is meiosis impossible in the bananas w (A) Bananas have been genetically engineer (B) They are polyploid and have three sets o (C) Their genome is too large to undergo me (D) They have too many transposable eleme (E) They are blocked in the G1 phase by che 	e buy in the supermarket? ed to stop meiosis. of chromosomes. eiosis. nts. emicals.	
 2. All reptiles reproduce sexually by (A) external fertilization in which eggs are form (B) external fertilization in which eggs are form (C) internal fertilization only. (D) both internal and external fertilization. (E) external fertilization in which the male content of the set of	ertilized in water. ertilized in a moist terrestrial environment. leposits a spermatophore outside the body.	
 3. Carbon fixation requires the expenditure of A (A) the Calvin cycle. (B) replenishment (C) the light reactions. (D) the oxidative (E) the substrate level phosphorylation in cy 	ATP molecules. This ATP is generated by of the photosynthetic pigment. phosphorylation in mitochondria. tosol.	
 4. Animal cells do not have cell walls, but plan (A) animal cells: isosmotic; plant cells: hype (B) animal cells: hyperosmotic; plant cells: I (C) animal cells: hyperosmotic; plant cells: i (D) animal cells: isosmotic; plant cells: hype (E) animal cells: hypoosmotic; plant cells: h 	at cells do. What osmotic environment is the erosmotic hyperosmotic isosmotic posmotic ypoosmotic	e best to them?
 5. Which of the following structure—function (A) nucleolus—ribosome production (C) ribosome—protein synthesis (E) Golgi—secretion of cell products 	pairs is mismatched? (B) lysosome—intracellular digesti (D) microtubules—muscle contract	on
6. Evolutionary biologists generally agree that (A) speciation. (B) adaptive radia	the primary mechanism responsible for evo tion. (C) ecological niche. (D) natura	olution is l selection. (E) microevolution.
 7. Which of the following factors would tend to (A) a greater proportion of unsaturated phose (B) a lower temperature (C) a relatively high protein content in the m (D) a greater proportion of relatively large g (E) a high membrane potential 	o increase membrane fluidity? pholipids nembrane lycolipids compared to lipids having small	er molecular weights
 8. Brian was found to be heterozygous (Ss) for (A) linked. (B) on the same cl (D) on the homologous chromosomes. 	sickle-cell trait. The alleles represented by promosome but far apart. (C) on the (E) both present in each of Brian's s	the letters S and s are X and Y chromosomes. sperm cells.
 9. Which colors are absorbed by chlorophyll? (A) violet, blue and red (B) violet, green at (E) blue, green and red 	and red (C) blue, yellow and red (D) violet,	blue and orange
 10. The sodium-potassium pump is termed elect (A) it hydrolyzes ATP. (B) it pumps positive charges out of the cell (C) it pumps three positive charges out of th (D) it pumps H⁺ out of the cell along with N 	and negative charges into the cell. e cell for every two positive charges it pun a^+ .	nps into the cell.

(E) it pumps electrons into the cell.

第一頁

11.	Most of the zygotic segm (A) special transfer RNA (D) histones.	entation genes code for	(B) enzyme.(E) transport proteins.	(C) transcription factors	
12.	Most CO ₂ from catabolist (A) glycolysis. (D) electron transport.	m is released during (B) lactate fermentation (E) oxidative phosphory	Vlation.	(C) the Krebs cycle.	
13.	The only taxon that actua (A) class.	lly exists as a natural uni (B) family.	t is the (C) genus.	(D) phylum.	(E) species.
14.	The organisms in your ba Together, all these organi (A) an ecosystem. (E) an experimental group	ckyard include trees, shr sms make up (B) a community. p.	ubs, grass, ants, mushro (C) a population.	oms, birds, spiders, beetles (D) an ecosociety.	s, flies, and bacteria.
15.	The main contributing fac (A) decomposition in land (D) leaking refrigerators	ctor to the release of CFC d fills. and air conditioners.	C's is (B) acid rain. (E) burning of tropical	(C) emission from feedle forests.	ots.
16.	Lipids are absorbed by th (A) urinary	e system. (B) blood vascular	(C) reproductive	(D) respiratory	(E) lymphatic
17.	The diploid sporophyte st (A) a fern.	tage is dominant in the lif (B) a moss.	fe cycles of all of the fol (C) a pine tree.	lowing except (D) a dandelion.	(E) a rose bush.
18.	Which of the following is (A) fungi	not a part of lichens? (B) green algae	(C) brown algae	(D) cyanobacteria	(E) both C and D
19.	Mark found an organism aquatic fungus. How can (A) See if it can swim. (C) Look for cell walls un (E) Figure out whether it	in a pond, and he thinks they decide whether it is nder a microscope. is autotrophic or heterotr	it's a freshwater sponge. an animal or a fungus? (B) See if it is a eukary (D) Determine whether ophic.	His friend Ralph thinks it ote or a prokaryote. r it is unicellular or multice	looks more like an ellular.
20.	DNA replication occurs in (A) meiosis.	n (B) mitosis.	(C) G1 phase.	(D) G2 phase.	(E) S phase.
21.	 A major difference in the (A) steroid hormones main proteins already in the (B) target cells react more (C) steroid hormones ente (D) steroid hormones affered 	mechanism of action bet inly affect the synthesis of e cell. e rapidly to steroid hormo er the nucleus, whereas p d to a receptor protein, w ect metabolism, whereas	ween steroid and peptid of proteins, whereas pept ones than they do to pep eptide hormones stay in hereas peptide hormone peptide hormones affect	e hormones is that tide hormones mainly affec tide hormones. the cytoplasm. s bind to G protein. membrane permeability.	ct the activity of
22.	Which of the following p (A) nervous and endocrim (C) circulatory and muscu (E) lymphatic and integu	airs of body systems prin le systems ular systems mentary systems	narily regulates the activ (B) endocrine and lym (D) integumentary and	vities of the other systems? phatic systems nervous systems	
23.	Which of the following is (A) photophosphorylation (D) harvesting light energy	s not directly associated n gy by chlorophyll	with photosystem II? (B) splitting water (E) P680	(C) release of oxygen	
24.	A man who carries an X-I(A) all of his sons.(E) all of his children.	linked allele will pass it o (B) half of his sons.	n to (C) all of his daughters	s. (D) half of his daughters	S.
25.	Which of the following b (A) All the cells of the bo (B) Most adult human be (C) The lungs and intestin (D) When oxygen in the b (E) When blood salt conc	est illustrates homeostasi ody are about the same siz- ings are between 5 and 6 nes have large surface are plood decreases, you may rentration goes up, the kid	s? ze. feet tall. as for exchange. y feel light-headed. dney expels more salt.		
26.	A technique used in mole is referred to as	cular systematics relies o	on the comparison of cyt	ochrome c in different anim	mals. This technique

- (A) DNA-DNA hybridizatioin.(D) electron transport.
- (B) protein comparison.(E) gene cloning.
- (C) restriction mapping.

- 27. Countercurrent exchange in the gills of a fish
 - (A) maintains a gradient that enhances diffusion.
 - (B) speeds up the flow of water through the gills.
 - (C) interferes with the efficient absorption of oxygen.
 - (D) means that blood and water flow in the same direction.
 - (E) enables the fish to obtain oxygen while swimming backward.
- 28. Which of the following is a characteristic of all organisms, but not of viruses?
 - (A) genetic information stored as nucleic acid (B) ability to control metabolism
 - (C) ability to reproduce
 - (E) plasma membrane

(D) structure includes proteins

29. Researchers suspect that cytotoxic T cells are usually able to find and attack cancer cells because

- (A) B cells help them.
- (B) cancer is induced by bacteria. (D) cancer cells release antibodies into the blood. (C) cancer is an autoimmune disease.
- (E) cancer changes the surfaces of cancerous cells.

30. Which of the following statements is not true?

- (A) Chloroplast and mitochondria generate ATP by the same mechanism: chemiosmosis (a H⁺ gradient across the membrane).
- (B) The inner membrane of the mitochondria translocate H⁺ from the intermembrane space to the matrix.
- (C) Phosphorylation of ADP occurs as the H⁺ flow back across the membrane through the ATP synthase.
- (D) ATP is made on the matrix side of the mitochondrial membrane.
- (E) When ATP synthesis in chloroplast, things occur in the stroma is similar to that occurs in the matrix of mitochondria.

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

- 31. The extinction of plants has severe consequences because:
 - (A) plants do not have the extensive ranges that animals do.
 - (B) plants require more nutrients than animals.
 - (C) plants require longer periods of time to reproduce than animals.
 - (D) plants are more susceptible to environmental changes than animals.
 - (E) plants are bases of foundations of food webs.
- 32. A woman had several miscarriages. Her doctor suspected that a hormonal insufficiency was causing the lining of the uterus to break down, as it does during menstruation, terminating her pregnancies. Treatment with which of the following might help her remain pregnant?
 - (A) prolactin (B) oxytocin (C) testosterone (D) luteinizing hormone (E) follicle-stimulating hormone
- 33. In eukaryotes, what is the active transcription generally associated with? (C) Highly methylated DNA only (A) Euchromatin only (B) Heterochromatin only
 - (D)Very tightly packed DNA only (E) Both euchromatin and highly methylated DNA
- 34. Which of the following can be used as a cloning vector? (A) E. coli (D) bacterial plasmid (B) Eco RI (C) lambda phage (E) Both C and D are correct
- 35. Which of the following is **not true** of a codon?

(A) It consists of three nucleotides. (B) It may code for the amino acid as another codon does.

- (C) It never codes for more than one amino acid. (D) It extends from one end of a tRNA molecule.
- (E) It is the basic unit of the genetic code.

36. The theory that suggests that eukaryotic organelles such as mitochondria and chloroplasts may have originated from a mutualistic relationship between two prokaryotes is referred to as

- (A) eukaryotic symbiosis. (B) eukaryotic germ theory.
- (C) eukaryotic coevolution. (D) eukaryotic microevolution.
- (E) endosymbiotic theory.

7. What percentage of the DNA in a typical eukaryotic cell is expressed at any given time?				
(A) 3-5%	(B) 5-20%	(C) 20-40%	(D) 40-60%	(E) 60-90%
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38. What hormone is essential for a tadpole to develop into an adult frog? (A) growth hormone (B) insulin (C) calcitonin (D)glucagons (E) thyroxine

- 39. Three kinds of selection occur that cause changes in the normal distribution of phenotypes in a population. They are (A) directional selection, disruptive selection, and stabilizing selection.
 - (B) natural selection, artificial selection, and environmental selection.
 - (C) natural selection, genetic drift, and stabilizing selection.
 - (D) microevolution, macroevolution and natural selection.
 - (E) natural selection, artificial selection, and differential selection.
- 40. In a population that is in Hardy-Weinberg equilibrium, the frequency of the allele a is 0.2. What is the percentage of the population that is heterozygous for this allele?
- **(B)** 4 (A) 2 (C) 16 (D) 8(E) 32 41. Yeast is a member of which division? (C) Basidiomycota (D) Deuteromycota (A) Ascomycota (B) Zygomycota (E) Chytridiomycota 42. What is the important component retain the violet dye in the Gram-positive bacteria cell wall? (B) lipopolysaccharide (C) phospholipids (A) peptidoglycan (D) fibers (E) chitin 43. Among the invertebrates, arthropods are unique in possessing (A) a notochord. (B) open circulation. (C) segmented bodies. (D) ventral nerve cords. (E) jointed appendages. 44. Important terrestrial adaptations that evolved exclusively in seed plants include all of the following except (A) pollination by wind or animal instead of fertilization by swimming sperm (B) transport of water through vascular tissue. (C) retention of the gametophyte plant within the sporophyte. (D) dispersal of new plants by seed. (E) protection and nourishment of the embryo within the seed. 45. Which of the following enzymes has the lowest pH optimum? (A) lipase (B) pepsin (C) trypsin D)sucrase (E) amylase 46. Which of the following definitions of "Animal" is not true? (A) Animals are multicellular eukaryotes distinguished by a specific type of heterotrophy called ingestion. (B) In most animals, cells are successively organized into tissues, organs, and organ systems. (C) Animal cells lack cell walls and store carbohydrate reserves as starch. (D) Animal reproduction is primarily sexual; asexual budding or regeneration occurs in some species. (E) Muscles and nerves, which control active behavior, are unique to animals 47. Transport in plants include all of the following except (A) absorption of water and minerals from the soil by cells of a root. (B) that transpiration creates a force within leaves that pulls xylem sap upward. (C) leaves exchange gases through stomata, taking in the CO_2 that provides carbon for photosynthesis and expelling O_2 . (D) active transport of sugar from one sieve-tube to the next. (E) that potassium is uptaken by guard cells during stomatal opening. 48. A hummingbird with a beak that is too short to pollinate a flower is an example of (A) behavioral isolation. (B) temporal isolation. (C) gametic isolation. (D) mechanical isolation. (E) postzygotic isolation. 49. Antibodies of the different classes IgM, IgG, IgA, IgD and IgE differ from each other in (A) the way they are produced. (B) the type of cell that produces them. (C) the way they interact with the antigen (D) the antigenic determinants that they recognize. (E) the number of carbohydrate subunits they have. 50. Which of the following signal transduction molecules is not bound to the plasma membrane? (A) G proteins (B) Phospholipase C (C) Adenylyl cyclase (D) Second messengers (E) Receptors for peptide hormones 51. Reabsorption of useful components of glomerular filtrate occurs in (A) Bowman's capsule. (B) proximal convoluted tubule. (C) distal convoluted tubule. (D) collecting duct. (E) gall bladder. 52. Which of the following is true? (A) The leaves of both angiosperms and gymnosperms are covered by a waxy cuticle that helps to protect the leaves from desiccation. (B) Both angiosperms and gymnosperms produce ovules in a specialized structure called an ovary.
 - (C) "Double fertilization" to produce a fertilized egg and a triploid endosperm is characteristic of both angiosperms and gymnosperms.
 - (D) The gametophyte is the dominant generation in both the angiosperms and gymnosperms.
 - (E) All of the statements are true.

- 53. Two animal species live in the same biome but on different continents. Although these two are not closely related, they may appear quite similar as a result of
 - (A) gene flow. (B) parallel evolution.
 - (D) divergent evolution. (E) allopatric speciation.

(C) convergent evolution.

54. Suppose a mutation occurred in *Drosophila* in the region of DNA that codes for the protein called bicoid. What is most likely to happen during development?

- (A) The fertilized egg will be bipolar.
- (B) The embryos will express their father's genotype.
- (C) The polarity of the fertilized egg will be disrupted.
- (D) The transcription of developmental genes will stop.
- (E) Two sets of limbs will form in a mirror-image arrangement.
- 55. What is the basis for the difference in the synthesis of the leading and lagging strands of DNA molecules?
 - (A) The origins of replication occur only at the 5' end of the molecule.
 - (B) Helicases and single-strand binding proteins work at the 5' end.
 - (C) DNA polymerase can join new nucleotides only to the 3' end of the growing strand.
 - (D) DNA ligase works only in the 3' 5' direction.
 - (E) Polymerase can only work on one strand at a time.
- 56. Which of the following statements about photosynthesis is **not true**?
 - (A) Photosynthesis is a redox process in which water is oxidized and carbon dioxide is reduced.
 - (B) There are two linked stages of photosynthesis: the light reaction and the Calvin cycle.
 - (C) The light reaction occurs in stroma, and the Calvin cycle occurs in grana.
 - (D) The Calvin cycle uses ATP for energy and NADPH for reducing power to form sugar from CO2.
 - (E) The flow of electron during photosynthesis is H_2O NADPH Calvin cycle.
- 57. The Genetic Code is almost universal, that is, it is the same in all living systems.What is the exception?(A) fungi(B) virus(C) plants(D) prokaryotes(E) mitochondria
- 58. The direct energy source that drives ATP synthesis during oxidative phosphorylation is
 - (A) the oxidation of glucose and other organic compounds.
 - (B) the endergonic flow of electrons down the electron transport chain.
 - (C) the affinity of oxygen for electrons.
 - (D) a difference of H⁺ concentration on opposite sides of the inner mitochondrial membrane.
 - (E) the transfer of phosphate from Krebs cycle intermediates to ATP.
- 59. Which of the following statements is a correct distinction between autotrophs and heterotrophs?
 - (A) Only heterotrophs need to acquire chemical compounds from the environment.
 - (B) Cellular respiration is unique to heterotrophs.
 - (C) Only heterotrophs have mitochondria.
 - (D) Autotrophs, but not heterotrophs, can nourish themselves beginning with nutrients that are entirely inorganic.
 - (E) Only heterotrophs require oxygen.
- 60. A _____ is a membrane-enclosed bag of hydrolytic enzymes that the cell uses to digest macromolecules.(A) lysosome(B) ribosome(C) macrosome(D) hydrosome(E) peroxisome
- 61. Which of the following pieces of evidence most directly contradicted the hypothesis that viruses were some kind of cell?(A) Organisms could develop immunity to virus. (B) Viruses could pass through fine filters.(C) Viruses can form crystals. (D) Viruses contain proteins.
 - (E) Viruses cause disease.
- 62. Nitrogen fixation involves the conversion of gaseous nitrogen to (A) ammonia. (B) nitrite. (C) nitrate.
- 63. Of the plant hormones, which one most directly stimulates cell division and delays senescence? (A) auxin (B) ethylene (C) cytokinin (D) gibberellin
- 64. Eukaryotic promoters usually have a nucleotide sequence about 25 nucleotides upstream from the transcriptional start point. The nucleotide sequence is called
 - (A) ATAT box. (B) TATA box. (C) promoter sequence. (D) TAATTAT sequence.
 - (E) Shine-Dalgarno sequence.

65. What part of the brain affects the emotional aspects of behaviors?

- (A) reticular activating system
- (C) parasympathetic system
- (E) cerebellum

(B) limbic system

(D) amine.

(D) peripheral nervous system

(E) amino acid.

(E) abscisic acid

第五頁

高雄醫學大學 92 年度學士後西醫招生考試試題詳解

科目: 生物學

黃志清 老師解題

出處:黃志清老師普通生物學精輯第19版(代號:textbook) 試題集鎳第五版(代號:textback) 節稱 th)

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題號	答案	說明	出處	
1.	В	超市的香蕉是3N,藉試管或營養繁殖	t.b.上冊P.376	
2.	С	Reptiles已演化出體內受精	textbook P.490	
3.	С	光反應產生之ATP供carbon fixation用	textbook P.185	
4.	D	高張環境對動植物cell皆不利 動物cell缺cell wall在低張易破裂	textbook P.102 Q5 & 6	
5.	D	肌肉收縮用microfilament	textbook P.117	
6.	D	natural selection是evolution的主要機制	textbook P.906-907	
7.	Α	不飽和磷脂比例愈高膜愈是fluid	textbook P.97	
8.	D	Ss代表同源染色體同一locus的兩個alleles	textbook P.207圖	
9.	A	chl a 是blue-green, chl b是yellow-green, (A)與(D)均有 violet & blue,不得已祇好選(A)	textbook P.180	
10.	С	Na ⁺ -K ⁺ pump:一次唧出3Na ⁺ ,唧入2K ⁺ ,故產電	textbook P.103	
11.	С	Segmentation genes的產品是TF	textbook P.806 Q6	
12.	C	Glycolysis不產生CO ₂ ; 一次Krebs cycle產生2CO ₂ ; 一次transition reaction產生1 CO ₂	textbook P.158 159	
13.	E	任何categories項下的全部生物都是taxa,但僅有species 是自然單位	textbook P.39 Q4	
14.	В	有動物、植物、真菌與細菌 , 但不包括無生命的環境 , 故選(B)	textbook P.967	
15.	D	CFCs由冰箱冷氣機漏出來	t.b.下冊P.1272 Q11	
16.	Е	短鏈脂肪酸由capillary吸收,長鏈脂肪酸由lacteal吸 收,一般選lymphatic system	textbook P.628	
17.	В	Moss的dominant generation是gametophytes	textbook P.432 Q2	
18.	С	lichens不含褐藻	textbook P.416	
19.	С	fungus有cell wall,動物cell 缺	textbook P.413	
20.	Е	Sphase進行DNA replication	textbook P.339	
21.	A	Steroid hormones活化基因合成蛋白質;peptide hormones透過second messenger活化已存在的enzymes	textbook P.135~137	
22.	A	神經系與內分泌聯合起來支配其它系統	textbook	
			(1)r.393 Q4 (2)0601 03	
			(2)Q004Q3 (3)Q625Q8	
			(4)0688 06	
23.	Α	photophosphorylation不直接與photo-system II有關,而	textbook P.185	

		與ETS及H ⁺ gradient有關	
24.	C	男性的x-linked genes隨著生殖傳遞至所有的女兒	textbook P.232
25.	E	血中 濃度由恆定調節	textbook P.604 605
26.	В	直接比較不同動物的cytochrome C 之amino acid序列	textbook P.910
27.	Α	逆流交換可維持最佳concentration gradient有利於	t.b.下冊P.909 Q12
		diffusion	
28.	C	Viruses絕對無法自行reproduce,而其repressor gene一旦	textbook
		表現可壓制host cell代謝活動, Enveloped virion的	⊕P.315 @P389
		encelope米目則一個host cell的原生質膜,所以低好選	91.507
29	E	(C) T。會監督cancer cell表面的戀化	textbook P 673 O2
30	B	псашасансегсендануето 時間腔的H ⁺ 僅能經由Fo-Fi- ATPase回到matrix	textbook P 161
31	E	快同性的T 僅能產出T 0-T 1- ATT as 白到加加A	textbook P 979
31		III 金制物 progestorong 之公讼以实的	textbook P.777 778
32.		LET言刺激progesterone之力必以及加	textbook
55.	А	躍	@P.306
			@P.307 308
34.	E	λ與plasmids均可充當cloning vectors	textbook P.1007 Q2
35.	D	codon不在tRNA上,而是在mRNA上	textbook P.282
36.	E	探討葉綠體與粒線體的起源是endosymbiotic theory	t.b.上冊 P.514 Q4
37.	Α	任何時間僅有3 5%的DNA在活動	t.b.上冊 P.324 Q300
38.	Е	thyroxine參與tadpole之變態	textbook P.733課堂補 充
39.	Α	天擇三型分別是穩定性型、方向性型與分裂型	textbook P.922
40.	Е	$2pq = 2 \times 0.8 \times 0.2 = 0.32$	textbook P.914 915
41	Α	酵母菌是一種子囊菌	textbook P.414 Q2
42.	Α	G(+) cell wall含大量peptidoglycan	textbook P.263
43.	Е	節肢動物有jointed appendages	textbook P.478 ~ 479
		維管植物由vascular tissue運輸水,此特徵非seed plant	touthool
44.	В	獨有。種子植物的配子體,例如被子植物的ovule在	Textbook P $437 \sim 439 $ 超P 443
		ovary內發育,所以不可以選(C)。	1.137 1.37
45.	В	pepsin在pH2.0效果最佳	textbook P.73
46.	С	動物儲存glycogen	textbook P.56
47.	D	由-sieve-tube-到另一sieve-tube可經sieve-plates上的孔	textbook P.533
48.	D	是一種機械隔離	textbook P.926~927
49.	С	五群Ab間彼此不同是其effector sites不同 而其	textbook P 665.666
	C		$(210)^{++}$
	C	recognition sites可以相同,故選(C)	Q10補充
50.	C D	recognition sites可以相同,故選(C) second messengers不在plasma membrane上,而是在	Q10補充 textbook P.136~137
50.	C D	recognition sites可以相同,故選(C) second messengers不在plasma membrane上,而是在 cytosoi中作用	Q10補充 textbook P.136~137
50. 51.	C D B	recognition sites可以相同,故選(C) second messengers不在plasma membrane上,而是在 cytosol中作用 有用的成分主要在近曲小管被再吸收	Q10補充 textbook P.136~137 textbook P.601 textbook P.601
50. 51. 52.	C D B A	recognition sites可以相同,故選(C) second messengers不在plasma membrane上,而是在 cytosol中作用 有用的成分主要在近曲小管被再吸收 裸子植物不具ovary也不會發生雙重受精	Q10補充 textbook P.136~137 textbook P.601 textbook P.439 Q5 textbook P.027 Q2

54.	С	bicoid是一種egg-polarity genes	textbook P.1066
55.	С	DNA pol僅能將new nucleotides加入growing chain的3 '端	textbook P.270
56.	С	光反應發生在grana, Calvin cycle發生在stroma	textbook P.185
57.	E	粒線體的genetic code system與universal的略不同	textbook P.280
58.	D	直接能源是H ⁺ gradient	textbook P.160
59.	D	自營性生物利用無機物	textbook P.398
60.	А	lysosomes含有hydrolytic enzymes	textbook P.108 Q6
61	С	病毒可以形成結晶,但是即使最小的cell也無法形成結 晶,故選(C),但選(B)也不能說錯,因即使最小的細菌 也不能通過fine filters	textbook P.315補充
62.	А	$N_2 + 8H^+ + 8e^- 2NH_3 + H_2$	textbook P.522
63.	С	最直接刺激cell division並防止老化的是cytokinin	textbook P.546 547
64.	В	稱為TATA box (或Hogness box)	textbook P.309 Q1
65.	В	limbic system是emotional set	textbook P.852

二、評析

1.這份試題是近年來最淺顯易答的選擇題。全部都是課堂上教過的,如果加上上 課補充的內容,那麽筆者敢宣稱100%教過,拙著都可以找到出題所在。

2.這些題目幾乎都是原版教科書的習題或是text bank或是study guide的題目被搜 羅在筆者積22年教學經驗的著作中。

3.預估優秀的考生至少有90分,一般也會有70分以上。達不到70分的話太爛了。