

110 學年度學生轉系考試試題參考答案疑義釋疑

考科	題號	釋疑答覆	釋疑結果
普通 生物 學	5	The key/fundamental concept is “what is the definition of organism” in contrast to a “living form”. By definition, organism is an individual living thing, consisting of one or more cells (Campbell, 11 th edition, Page G-23).	The answer is the same (E)
	9	The key concept is actually in the answer B, which illustrated an integrative process in apoptosis. A single signaling cannot constitute apoptosis. Therefore, death-signaling molecules alone cannot trigger apoptosis (think of at least it needs a proper receptor, which may not be expressed in healthy cells, and a programmed-to-death cells surrounding it).	The answer is the same (A)
	12	The answer is looking for the stage of cells first become a haploid form in the genetic materials (see page 310 of Campbell 11 th ed), which is clearly stated in the questions. The question is not about when cells divided into haploid cells. The point is to tell if students understand the concept of haploid, the status that homologous chromosomes are separated, of which could be observed within cells.	The answer is the same (B)
	18	Only pyrophosphate was released from the process. NOT primers. Primers would be removed after the process of Polymerase I.	The answer is the same (E)
	23	The question is asking which one does not involve in an activation of operon in <i>E. coli</i> . Activation should be interpreted as the initiation of operon instead of activity. Therefore, regulatory gene could be involved in the activation. However, repressor is to “switch-off” or deactivate the gene.	The answer stays the same (D)
	28	This question demonstrated the importance of understanding a cutting-edge technique through the history of science. In the text book, or any other sources about this history, students could easily find the Human Genome Project is ended in 2003 (the following sequencing of the human genomic parts is not called Human Genome Project anymore). However, the so-called next-generation sequencing (NGS), which shotgun sequencing is one of them, has only been invented 2004. There is no way that the	The answer stays the same (B)

		human genome project could have used any of the NGS techniques.	
普通 生物 學	32	The branch length in a phylogenetic tree could be an estimate of the genetic distance, thus could be converted into number of mutations. However, without external information about the function genomics, one cannot know the functional changes of a mutation.	The answer stays the same (E)
	33	Genetic drift removes genetic variation via randomly shift the gene frequency and fix this frequency in one allele. Therefore, it is only population genetic process in the answers that reduce the genetic variation (noted that the question is asking the factor(s) maintain or increase genetic variation).	The answer stays the same (D)
	37	The glycoprotein is produced in ER but modified in Golgi apparatus as stated in Fig. 19.8 and related text in Campbell 11 th ed., which evidenced the answer (D) is correct.	The answer stays the same (D)
	40	B and C are both correct.	Answering (B) or (C) would get credit.
	44	The wording is not clear thus the answers B and C are both correct.	Answering (B) or (C) would get credit.
	45	Following figure 41.20 in Campbell 11 th ed, the answer (B) is incorrect.	The answer stays the same (B)
	46	There is indeed no proper answer.	All answers would be credited.

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考科	題號	釋疑答覆	釋疑結果
普通 化學	1	<p>題目上已提供 benzene 密度為 0.880 g/cm^3(三位有效數字), 而非 0.88 g/cm^3(兩位有效數字)。因此, 正確的 benzene 體積, 為 38.4 mL (三位有效數字); 所以根據固體的體積及質量, 該固體的密度, 也必須是三位有效數字, 在計算之後, 得到固體的密度 $d = 2.16 \text{ g/cm}^3 = 2160 \text{ g/dm}^3$. 答案依然為(A)</p>	維持原答案 A