題號: 354

國立臺灣大學 110 學年度碩士班招生考試試題

科目:專業英文(G)

節次: 5

題號: 354

共 | 乙 頁之第 | 頁

單選題,每題 2 分,答錯倒扣 0.5 分,請於試卷上「選擇題作答區」內依序作答。

Article 1

(Source: Kwong, HK. 2018. Enhanced Antioxidant Activity of Chenopodium formosanum Koidz. Using Lactic Acid Bacteria Fermentation. Master thesis. Institute of Biotechnology, National Taiwan University)

Djulis (Chenopodium formosanum Koidz.) is a traditional crop from the same genus as quinoa (Chenopodiun quinoa), and it is cultivated and consumed as food or wine starter in Taiwan. Reports showed that Djulis exhibits beneficial effects on antiinflammation, antidiabetes, antioxidation, and immune regulation. In this study, different probiotics commonly used in the production of fermented dairy products were inoculated independently for Chenopodium formosanum Koidz. fermentation. The strain with the highest antioxidant activity was selected and fermentation process was further optimized by using response surface methodology (RSM). Lactobacillus plantarum BCRC 11697 was chosen due to the increased phenolic compounds, DPPH (from 72.6% to 93.2%), and ABTS (from 64.2% to 76.9%) free radical scavenging ability compared to that of other lactic acid bacteria. After applying RSM, the optimal initial fermentation pH, agitation speed, and temperature with highest antioxidant activity (73.5% of DPPH and 93.8% of ABTS) were recognized as pH 5.55, 104 rpm, and 24.4°C. Phenolic compounds, DPPH, and ABTS free radical scavenging ability increased significantly during the fermentation process (p < 0.05). The IC₅₀ of the DPPH and ABTS free radical scavenging ability were 0.33 and 2.35 ± 0.32 mg/ml, and both protease and tannase activities increased after RSM. An increase of protein hydrolysates with lower molecular weight (<24 kDa) were also observed.

- 1. In this study, what kind of crop was used? (A) Ganoderma formosanum, (B) Chenopodium formosanum, (C) Chenopodiun quinoa, (D) Lentinus edodes.
- 2. In this study, what kind of function was the authors looking for? (A) Blood sugar lowering, (B) anti-bacterial activity, (C) antioxidant activity, (D) anti-tumor activity.
- 3. Which step is NOT included for Djulis application? (A) Reducing body fat, (B) antiinflammation, (C), antidiabetes, (D) immune regulation.
- 4. What's the DPPH activity before and after RSM? (A) 64.2% to 76.9%, (B) 72.6% to 76.9%, (C) 72.6% to 93.2%, (D) 73.5% to 93.2%.
- 5. The authors also evaluated the enzyme activity of (A) α -amylase, (B) β -glucoisomerase, (C) β -galactosidase, (D) tannase, in this study.

科目:專業英文(G)

超號・334

節次: 5 共 7 頁之第 2

Which factor is not included for RSM analysis in this study? (A) pH, (B) agitation,
 (C) turnover rate, (D) temperature.

- 7. What's the meaning of ± 0.32 in this study? (A) Production yield, (B) standard deviation, (C) concentration, (D) control number.
- 8. What's the full name of RSM? (A) response surface methodology, (B) response surface master, (C) response solid methodology, (D) result of surface methodology.
- 9. Which one is NOT discussed in this abstract? (A) Djulis, (B) probiotics, (C) protein hydrolysates, (D) evaluation of cost.
- 10. What's the main purpose of this study? (A) to study the appearance of Chenopodium formosanum, (B) to investigate the antioxidant activity of fermented djulis C) to investigate the influence of production cost on probiotcis, (D) to raise fund from foreigners.

Article 2

(Source: Food Research International, 2017 99(1):58-71)

During the last century, industrialized countries have overcome lack of food security with the key contribution of agrifood industrialization. Food processing has played a crucial role as it allowed extending the shelf life of food products, reduced food losses and waste, as well as improved nutrient availability and optimization. However, day-to-day consumer perception focuses on other aspects than these achievements. In modern societies, the increasingly globalized markets and greater processing in the food chain has contributed to a perceived distance and knowledge gap between people and food manufacturers (e.g. how food is produced, where is it produced, etc.).

For instance, food contamination accidents have affected Europe in the last decades, such as BSE and dioxin. Consumers are concerned about the heavy use of pesticides in the conventional and intensive agricultural practices, the use of artificial ingredients, additives or colourants such as E133, and the adoption of controversial food technologies like GMOs. This has prompted consumers to become skeptical or worried about adverse health effects entailed in this food system. Moreover, the growing public concern about the contribution of the food system to climate change and its overall negative effects on sustainability have led consumers to question the environmental and social consequences of food production.

The trends of healthiness and sustainability have triggered consumers into considering which components are used in the food products that they eat in everyday life. A new trend in food products has emerged, which is often summarized under the

國立臺灣大學 110 學年度碩士班招生考試試題

題號: 354 科目:專業英文(G) 題號: 354

共1乙 頁之第 ? 節次: 頁

> umbrella of the so-called "clean label" and has been taken up by a multitude of food industry stakeholders. The term clean label itself appeared for the first time during the 1980s when consumers started to avoid the E-numbers listed on food labels because they were allegedly associated with negative health effects. The food industry has started to respond to the increasing consumer demand of such clean label products by supplying food products that are perceived as 'cleaner'. For example, in 2010 Heinz tomato ketchup was reformulated to remove high fructose corn syrup from the ingredient list and was renamed as Simply Heinz.

> To date there is no an established, objective and common definition of what a clean label is, but rather several definitions or interpretations, often provided by market trend reports but not backed up by consumer behavior research or theory. Ingredion (2014) recommends to consumers that "a 'clean label' positioned on the pack means the can be positioned as 'natural', 'organic' and/or 'free from additives/preservatives'." Edwards (2013) defines a clean label "by being produced free of 'chemicals' additives, having easy-to-understand ingredient lists, and being produced by use of traditional techniques with limited processing." One of the key questions is which ingredients may be part of a clean label, or, more importantly, which ingredients define a clean label product by their absence. Busken (2013) proposes that the answer to this depends on the consumer perception of an ingredient.

> With regard to the clean label trend, we argue that hints about the item being a clean label food are used as such cues. We argue that their easy usage and inference to desirable, but unobservable characteristics explains the popularity of clean label. Typically, consumers might use cues found on the front of the package (FOP) such as visuals indicating naturalness, organic certification logos, or free-from claims of producers, thus, these products might be perceived as clean label. However, we argue that not only peripheral processing is expected to play a role for clean label, but also central processing. In some cases consumers might proceed to access information on the back of the pack (BOP) in store or, even more likely, at home. There is a greater likelihood that consumers who are engaging in this effort are characterized by greater involvement and thus motivation to process, or that the situation at home provides better opportunity to look at information and engage with it, thus, identifying the product as clean label. Therefore, central, more in-depth and conscious information processing will occur more likely at home. Consumers might then look at the ingredient information or nutrition facts more closely, and inspect and assess whether or not they think the product is a clean label food in their opinion. However, given that consumers might not find this easy to assess, they might nevertheless rely on heuristics, such as the degree to which ingredient names sound chemical or are unknown, or the mere length of the ingredient list. In addition to using this observable feature as a cue to a

科目:專業英文(G)

題號: 354

がな: 5 節次: 5

共12 頁之第4 頁

desired quality, consumers might also favor products with understandable, short, known and simple ingredient lists in order to reduce the cognitive effort needed in assessing the product.

We suggest to define clean label, both in a broad sense, where consumers evaluate the cleanliness of product by assumption and through inference looking at the front-of-pack label and in a strict sense, where consumers evaluate the cleanliness of product by inspection and through inference looking at the back-of-pack label. Results show that while 'health' is a major consumer motive, a broad diversity of drivers influence the clean label trend with particular relevance of intrinsic or extrinsic product characteristics and socio-cultural factors. However, 'free from' artificial additives/ingredients food products tend to differ from organic and natural products. Food manufacturers should take the diversity of these drivers into account in developing new products and communication about the latter. For policy makers, it is important to work towards a more homogenous understanding and application of the term of clean label and identify a uniform definition or regulation for 'free from' artificial additives/ingredients food products, as well as work towards decreasing consumer misconceptions.

- 11. Which purpose is **WRONG** for food processing? (A) Augment the expiration date of food. (B) Diminish resource abuse. (C) Ameliorate the nutrition of food. (D) Falsify the quality of food.
- 12. Which factor may **NOT** recognize as the food contamination? (A) Bovine spongiform encephalopathy. (B) Environmental pollutants. (C) Colourants. (D) Pesticides.
- 13. What is "E133" stand for? (A) Unclean label. (B) Brilliant Blue. (C) Genetically modified organisms. (D) Preservative.
- 14. Why consumers suspect adverse effects in the food system? (A) Abuse of artificial allegedly associated with negative health effects. (B) Food processing cause hygiene issue. (C) No definition of a clean label. (D) Consumers prefer foods that are organic and natural.
- 15. What is the meaning of "E-number"? (A) Food contaminant. (B) Hazardous substance. (C) Food additive. (D) Dirty compound.
- 16. What the manufactory can do for "clean label"? (A) Remove unnecessary sweetener.(B) Renamed the brand mark. (C) Keep the plant clean. (D) Expand all ingredients.
- 17. Which sentence is NOT the aim of "clean label"? (A) Represented the natural food.(B) Avoid food additives. (C) Provide reliable information. (D) Keep food safe.
- 18. Which one is **NOT** the practical action for "clean label"? (A) Redundancy list (B) Visuals information on the FOP. (C) Straightforward information on the BOP. (D) Recognizable claim or logos.

科目:專業英文(G)

行日· 寻亲央义(b) 節次: 5 題號: 354

共 乙 頁之第 万 頁

19. How could consumers evaluate the cleanliness of product? (A) Ignore the front-of-pack label. (B) Inquire the back-of-pack label. (C) Verify healthy food. (D) Select organic food.

20. What is "clean label"? (A) Safety guarantee. (B) Quality ensures. (C) Authenticity accreditation. (D) Transparency information.

Article 3

(Source: Applied and Environmental Microbiology, 2021, DOI: 10.1128/AEM.02380-20)

The occurrence of viable-but-nonculturable (VBNC) bacteria poses a potential risk to food safety due to failure in conventional colony detection. In this study, induction of VBNC Staphylococcus aureus was conducted by exposure to an atmospheric-pressure air dielectric barrier discharge-nonthermal-plasma (DBD-NTP) treatment with an applied energy of 8.1 kJ. The stress resistance profiles and pathogenicity of VBNC S. aureus were further evaluated. We found that VBNC S. aureus showed levels of tolerance of heat, acid, and osmosis challenges comparable to those shown by culturable S. aureus, while VBNC S. aureus exhibited enhanced resistance to oxidative and antibiotic stress, relating to the mechanisms of cellular energy depletion, antioxidant response initiation, and multidrug efflux pump upregulation. Regarding pathogenicity, NTP-induced VBNC S. aureus retained the capacity to infect the HeLa host cells. Compared with the culturable counterparts, VBNC S. aureus caused reduced immune responses (Toll-like receptor [TLR], nucleotide-binding oligomerization domain [NOD]) in HeLa cells, which was attributed to suppression of biosynthesis of the recognized surface ligands (e.g., peptidoglycan). Additionally, the proteomic analysis revealed that upregulation of several virulence factors (ClfB, SdrD, SCIN, SasH, etc.) could ensure that VBNC S. aureus would adhere to and internalize into host cells and avoid the host attack. The camouflaged mechanisms described above led to VBNC S. aureus causing less damage to the host cells, and their activity might result in longer intracellular persistence, posing potential risks during NTP processing.

The consumer demand for freshness and nutrition has accelerated the development of mild decontamination technologies. The incomplete killing of nonthermal (NT) treatments might induce pathogens to enter into a viable-but-nonculturable (VBNC) status as a survival strategy. The use of nonthermal plasma (NTP) as a novel food decontamination technology received increased attention in food industry during recent decades. Our previous work confirmed that the foodborne pathogen *S. aureus* was induced into VBNC status in response to NTP exposure. This work further revealed the

科目:專業英文(G)

題號: 354

共1乙 頁之第 6 頁

development of stress resistance and virulence retention of NTP-induced VBNC S. aureus through the mechanisms of energy suppression, oxidative stress defense, and immune escape. The data provide fundamental knowledge of the potential risks posed by NTP-induced VBNC S. aureus, which require further parameter optimization of the NTP process or combination with other techniques to avoid the occurrence of VBNC bacteria.

- 21. Which word is close to the meaning of "camouflaged" mechanisms in the abstract?

 (A) Important (B) Necessary (C) Hiding (D) Internalization.
- 22. Which phenotype is not included in the description of the VBNC cells (A) Cells are survived (B) Cells can be detected by conventional colony forming assay (C) Cells can retain their pathogenicity (D) It is often induced by environmental stress.
- 23. According to this article, VBNC *S. aureus* can infect host cells mainly due to (A) the increase of the gene expression of host immune response (B) down-regulation of peptidoglycan synthesis (C) increase the cell wall formation (D) scavenge the free radical produced by NTP.
- 24. According to this article, what is the effects of NTP on the *S. aureus* (A) increased heat resistance (B) enhanced tolerant to low temperature (C) increased acid sensitive (D) enhanced sensitive to salt.
- 25. According to this article, what is the best strategy that can be used for the future decontamination process to reduce the survival of S. aureus in food products? (A) Reduce the energy of NTP (B) Use heat treatment (C) Apply hurdle technology with NTP (D) None of above.

Article 4

(Source: Moossavi et al., 2019, Cell Host & Microbe 25, 324-335)

Although previously considered sterile, breastmilk is now known to contain a complex community of bacteria that helps establish the infant gut microbiota. If this process is disrupted, the infant may develop a dysbiotic microbiota, causing predisposition to chronic diseases such as allergy, asthma, and obesity. Recent studies on human milk microbiota suggest that it might be affected by local pathologies of the breast, mode of delivery, antibiotics, maternal health, and gestational age. However, these findings have not been reproduced in large-scale studies, and the determinants of milk microbiota are still mostly unknown.

Two main pathways have been proposed to explain the origin of milk microbiota: entero-mammary translocation of the maternal gut microbiota and retrograde inoculation by the infant's oral microbiota. The fact that colostrum collected even before the first infant feeding already contains a microbial community supports the

科目:專業英文(G)

題號: 354

行日·母亲央文(b) 節次: 5

共 1乙 頁之第 17 頁

entero-mammary pathway, while the similarity of infant oral microbiota to breastmilk microbiota supports the retrograde pathway. It is plausible that both pathways are contributing to the bacterial content of human milk. Depending on the source of bacteria, different factors could contribute to shaping the milk microbiota. Factors influencing the mother's gut microbiota such as obesity or diet could affect the bacteria originating from the maternal gut, while factors influencing the infant's microbiota such as mode of delivery, older siblings, complementary feeding, and mode of breastfeeding (directly at the breast versus pumped and bottled breastmilk) could potentially alter the bacteria derived from the infant's oral cavity. Other milk components such as human milk oligosaccharides (HMOs), milk fatty acids, hormones, immune cells, and antibodies could also modulate the milk "microenvironment" and create a niche constraint affecting composition of the microbial community. Additionally, factors that could impact the overall milk composition such as circadian rhythm and lactation stage could indirectly affect the milk microbial community.

Studies addressing these potential determinants of milk microbiota have been limited by small sample size, low sequencing depth, and lack of control for confounding factors. The objective of this study was to profile the milk microbiota in a large sample of healthy mother-infant dyads and examine the association of maternal, infant, early-life, and milk factors with milk microbiota composition.

- 26. What is the meaning of "dysbiotic microbiota" in this article? (A) Microbial imbalance (B) Beneficial bacteria in the gut (C) Pathogenic microbes in the milk (D) Microbes that can generate oligosaccharides.
- 27. According to the article, what is the best evidence to show the entero-mammary translocation of the maternal gut microbiota? (A) Breast-feeding baby has the similar microbiota pattern with their mothers' (B) The bacteria derived from infant's oral cavity are similar to breastmilk microbiota (C) Colostrum collected before the infant feeding already contains a microbial community (D) None of the above statements is correct.
- 28. According to the article, which factor may not influence the microbiota in infant's oral cavity? (A) Older siblings (B) Pumped and bottled breastmilk (C) Complementary feeding, (D) Mother's diet.
- 29. According to the article, which is not included in the milk "microenvironment"? (A) Oligosaccharides (B) Milk fatty acids (C) Antibodies (D) Microbes
- 30. According to the article, the authors examine human milk microbiota in the CHILD birth cohort study. Which of the following features does not represent the "cohort study?" (A) It is a type of longitudinal study (B) It is a type of epidemiology study (C) It often contains multi-variable and multi-method approaches (D) It provides the

見背面

國立臺灣大學 110 學年度碩士班招生考試試題

科目:專業英文(G)

題號: 354

題號: 354 共 1乙 頁之第 🛇 頁 節次:

correlation trends, thus the statistical analysis is not required.

Article 5

(Source: Trends in Food Science and Technology, 2020)

Due to the imminent danger presented by the rapidly spreading COVID-19, viable prophylactic and therapeutic measures which can be developed and applied at the level of the general public are being sought after. This urgent requirement for a solution are reflected on the individual level by an unprecedented rise in consumer sales of supplementary nutrients, nutraceutical products and functional foods which were considered to be effective against influenza and SARS virus, have been on the front burner during this pandemic.

Such findings are consistent with Google and Tastewise research which demonstrated there is rising trend for vitamin C, D, zinc, elderberry, rosemary, echinacea, melatonin, phosphatidylserine, collagen, and mushrooms, Although, consumers are seeking to use any functional food that is used self-medicating their moods. As data from in vitro studies accumulates, several viable mechanistic targets for combatting COVID-19 are evident. These include those targeting specific elements of the SARS-CoV-2 genome, including the spike protein (S), the RNA-dependent RNA polymerase, the membrane protein (M), the envelope protein (E), the NTPase/helicase, required for virus budding and SARS-CoV main protease (3CL protease) are gaining popularity to prevent the entrance of CoV into the cells of the human body.

Whilst it was initially thought that children were not as susceptible to infection with virulent strains COVID-19, SARS-CoV-2 infection in neonates, infants and children have been reported. The first report of COVID-19 infection in children came from the USA and comprised of a sample of infants and children aged between 2 months and 15 years. Following this, this first incidence of child mortality resulting from COVID-19 came from Iran's North Khorasan province, on March 24, 2020. This received significant attention from global media and heightened interest in the relatively cost-effective and realistic solutions being suggested in the field of pediatric nutrition. In this connection, breastfeeding represents an important prophylactic agent against a host of communicable and non-communicable diseases, and also has well-established therapeutic effects. This message has been clearly communicated by the media and breastfeeding has subsequently been reported to be significantly more popular amongst mothers than in previous years. It is well-known that breastmilk transmits antibodies from the mother and that this confers enhanced immunity against likely microbial exposures to the newly born infant. It has recently been shown that secretory

國立臺灣大學 110 學年度碩士班招生考試試題 題號: 354

題號: 354

共12 頁之第 9

科目:專業英文(G) 節次: 5

> immunoglobulin A which constitutes 90% of the immunoglobulins content in breastmilk, plays an important role in the immune response against COVID-19. The importance so secretory immunoglobulin A has also been demonstrated in other viral infections, such as infection with the rotavirus; the human immuno-deficiency virus (HIV), the norovirus, the herpes simplex viruses, echoviruses 6 and 9, and polioviruses 1, 2 and 3. Finally, there is data to suggest that the risk of viral infection with COVID-19 in infants changes according to the duration of breastfeeding episodes. Short episodes appear to represent a negative independent risk factor for infection and it is in this connection that WHO have issued guidelines for breastfeeding at home and in a hospital setting.

- 31. Due to the rapid spreading of COVID-19, people seek for dietary supplements that may prevent them from getting sick. Which one of the prophylactic and therapeutic effect is not considered an urgent need for consumer during the crisis? (A) antiviral properties (B) immune response enhancement (C) aging delay (D) Respiratory protection.
- 32. As summarized in this article, which of the following is not considered as a dietary supplement that contribute to the prevention of COVID-19 (A) Vitamin and minerals (B) therapeutic drugs (C) Phytochemicals (D) probiotics.
- 33. Several mechanistic targets are found to combat COVID-19. Which one of the following is not a potential biological mechanism? (A) entrance prevention (B) inhibit virus budding (C) protein lysis (D) mutation.
- 34. To prevent infant from infecting COVID-19, professionals are suggesting feeding them more of (A) fruit juice (B) vegetable puree (C) breast milk (D) meat
- 35. Which one of the following constitutes 90% of the immunoglobulins content in breastmilk, plays an important role in the immune response against COVID-19? (A) IgG (B) IgA (C) sIgA (D) IgE
- 36. In the article, the word "Viable" was mentioned several times. It means (A) feasible (B) alive (C) enough (D) many.
- 37. Select the wrong statement: breastmilk may help to strengthen the immune system of infant because it is a good source of (A) antibody (B) vitamin D (C) fatty acid (D) probiotics.
- 38. The first reported child death from COVID-19 was from (A) China (B) USA (C) Iran (D) Italy.
- 39. Pediatric nutrition are not dietary suggestion for (A) infant (B) teens (C) toddler (D) adult.
- 40. Which of the following word has similar meaning with susceptible? (A) intermittent;
- (B) frequent; (C) vulnerable; (D) constant.

科目:專業英文(G)

題號: 354

節次: 5 共 1 互 頁之第 10

Article 6

(source: IEEE journal of translational engineering in health and medicine. 2018; 6:190050)

Silent Myocardial Ischemia (SMI) is an issue of public health that leads to heart attack and significantly influences the mortality rate in patients with type 2 diabetes. SMI is myocardial ischemia without chest discomfort and other angina symptoms. The incidence rate of SMI in diabetic patients was 2.2 times higher than the incidence rate of SMI in nondiabetic patients. SMI had been investigated and confirmed with a 6%-23% prevalence in diabetic patients using Myocardial Perfusion Imaging (MPI) and invasive coronary angiography. SMI can lead to acute myocardial infarction, adverse cardiac events, and poor prognosis outcomes, that are severe in diabetic care. Therefore, it is quite important to have an early predictor of SMI that can feasibly screen diabetic patients and give a risk stratification of heart ischemia and may prevent many diabetic patients from sudden cardiac death or adverse cardiovascular events. Holter devices, the ambulatory electrocardiography (ECG), has proven to be a useful tool to detect patients at high risk of SMI. However, Holter devices need to monitor the patients over the course of 24 hours or even up to 72 hours to detect abnormal electrical signals from the electrocardiogram. This long-term measurement makes the Holter less effective for screening the whole population of high cardiovascular risk group such as diabetic groups. Besides the ambulatory ECG, low ankle-brachial index (ABI) and microalbuminuria, the albumin-tocreatinine ratio (ACR) between 30mg/g to 300mg/g, have also been investigated in the detection of SMI. Another potential method of detecting SMI is using arterial pulse spectrum analysis. The spectrum of arterial pulse wave reflects the loading condition of the arterial system, which has been investigated, modeled, applied, and interpreted in many clinical studies. According to Lin's model, radial pulse spectrum analysis can reveal the arterial-ventricular function by its harmonics change. Chen et al. validated this concept and proved that the specific characteristic of radial pulse spectrum changed from the resting state to the onset of acute, uncomplicated myocardial infarction state, and gradually shifted to other resting characteristics a week after surgery. Furthermore, the cross-sectional study showed that the harmonics of the radial pulse spectrum were correlated with the ischemic heart disease. To summarize results from those studies, the ventricular-arterial coupling system distributed the pressure pulse wave to different organs in proportions of harmonics according to the system state. Therefore, the pattern of harmonic components could reveal the blood flow condition of organs, and more specifically, reveal the condition of myocardial perfusion. However, there is still a lack of direct

科目:專業英文(G)

題號: 354

節次: 5

共 | 乙 頁之第 | \ 頁

statistic evidence quantifying the correlation between harmonics of the radial pulse wave and myocardial perfusion, and validating whether the harmonics of the pulse spectrum contains the information in identifying SMI. Hence, the objective of this study was to statistically validate the degree of confidence that the harmonics of radial pulse spectrum and myocardial perfusion were correlated, using receiver operating characteristic curve (ROC) and multivariable linear regression. This report chose type 2 diabetic patients because of their high-risk prevalence for SMI. We included the patients without any angina pectoris history, at high risk of SMI, and suitable for performing MPI. We further investigated the relationship between SMI and different risk factors. In the end, this report analyzed the different risk factor profiles to propose an effective and efficient method for early SMI diagnosis.

- 41. What is the clinical syndrome of SMI? (A) pain (B) chest discomfort (C) no specific feelings (D) vomiting
- 42. SMI would occur in which of the following organs? (A) liver (B) muscle (C) brain (D) heart
- 43. What would be the ratio for people to get SMI? (A) every 2 people (B) every 5 people (C) every 20 people (D) every 40 people
- 44. Which of the following disorders might not be caused by SMI (A) diabetes (B) acute myocardial infarction (C) adverse cardiac events (D) poor prognosis
- 45. According to this article, which device could not help to prevent diabetes patients from sudden cardiac death? (A) ECG (B) spectrophotometry (C) ABI (D) radial pulse spectrum
- 46. Why Holter devices are less efficient for screening subjects with high cardiovascular risk (A) time consuming (B) expensive (C) labor necessary (D) not sensitive
- 47. Which of the followings provides radial pulse spectrum analysis the ability to display the function of arterial -ventricular (A) speed change (B) time lapse (C) harmonics change (D) blood pressure
- 48. what does "cross-sectional study "mean? (A) to study the cross interaction between two factors (B) to investigate the surface of a specific material (C) a study refers to tissue section based diagnosis (D) to collect and analyze data from many different individuals at a single point in time.
- 49. _____as risk markers to improve the risk stratification of SMI in type 2 diabetes. According to the article, which of the followings is suitable to fill in the blank? (A) Clinical syndromes (B) Radial pulse spectrum analysis (C) type 2 diabetes (D) Myocardial perfusions

見背面

題號: 354

國立臺灣大學 110 學年度碩士班招生考試試題

科目:專業英文(G) 節次: 5

題號: 354

共 乙 頁之第 1 乙 頁

50. What is the purpose of this study (A) to conclude that SMI is a severe complication of type 2 diabetes (B) to provide an innovative early diagnosis for SMI (C) to reveal that we still can not control SMI (D) to argue the current therapy for SMI

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