

科目：語文能力-專業英文 50%

系所組：食品科學系

26. Which of the life form is not a microorganisms
- A. Algae,
 - B. virus,
 - C. bacterium,
 - D. Nematode.
27. Oil refining process contains many steps except:
- A. Boiling,
 - B. Deodorizing,
 - C. Neutralizing,
 - D. Winterizing.
28. One of the following pathogenic bacteria does not produce toxin:
- A. Bacillus cereus,
 - B. Listeria monocytogenes,
 - C. Clostridium botulism,
 - D. Staphylococcus aureus.
29. Maillard reaction is the interactions between reducing sugar and
- A. Phosphoric acid,
 - B. Acetic acid,
 - C. Amino acid,
 - D. Lactic acid.
30. Which of the following carbohydrates is not a polysaccharides:
- A. Cellulose,
 - B. Xylose
 - C. Amylose,
 - D. Glucose.
31. CGMP stands for current Good Manufacturing _____.
- A. Plays
 - B. Prays
 - C. Proves
 - D. Practices
32. GRAS stands for Generally Recognized As _____.
- A. Safe
 - B. Standard
 - C. Selection
 - D. System

※ 注意：1.考生須在「彌封答案卷」上作答。

2.本試題紙空白部份可當稿紙使用。

3.考生於作答時可否使用計算機、法典、字典或其他資料或工具，以簡章之規定為準。

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33. GI tract stands for _____ track.
- A. Gas
 - B. Genital
 - C. Gesture
 - D. Gastrointestinal
34. PCR stands for _____ Chain Reaction.
- A. Prolong
 - B. Polymerase
 - C. Polysaccharide
 - D. Poly
35. HPLC stands for High Performance _____ chromatography.
- A. Light
 - B. Liquor
 - C. Linear
 - D. Liquid
36. Oxidation of fats, generally known as _____, is caused by a biochemical reaction between fats and oxygen.
- A. Decay
 - B. Rancidity
 - C. Putrefaction
 - D. Acidity
37. The six essential nutrients are:
- A. Carbohydrates, lipids, enzymes, vitamins, minerals, and water
 - B. Carbohydrates, proteins, antioxidants, vitamins, minerals, and water
 - C. Carbohydrates, proteins, fats, vitamins, minerals, and water
 - D. Carbohydrates, sugar, proteins, fats, vitamins, water
38. Which of the following is true about bacteria;
- A. Bacteria is the smallest microorganisms.
 - B. Bacteria needs air to survive.
 - C. Every type of bacteria can give people food poisoning.
 - D. Freezing cannot be used to kill bacteria in food.
39. What condition does a ground beef pattie has to be cooked in order to be safe to eat?
- A. The inside of pattie is pink.
 - B. The inside is reach 70°C.
 - C. The outside has been burnt.
 - D. The outside of pattie is brown and the inside is pink.

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40. During digestion, which chemical reaction that takes place involving breakdown with water is?
- A. Hydrolysis,
 - B. Hydration,
 - C. Hydro-oxidation,
 - D. Expression.
41. Which part of the bacteria gives the mobility of the cells?
- A. The cell wall,
 - B. The cell membrane,
 - C. The flagella,
 - D. The cytoplasm.
42. The following are used in food as preservatives against microorganisms, except?
- A. Sulphur dioxide,
 - B. Nisin,
 - C. Salt,
 - D. BHA.
43. Regulations state that cooked food prior to service must be kept above certain temperatures?
- A. 25°C
 - B. 37°C
 - C. 50°C
 - D. 60°C
44. The temperature of frozen storage needs to be kept at?
- A. -10
 - B. -18
 - C. -20
 - D. -35
45. On a commercial food product, information is printed on the packaging required by law except?
- A. Sell by date,
 - B. Expiration date,
 - C. Nutrition label,
 - D. Ingredient label.

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46. The difference of pasteurization and commercial sterilization is?
- A. The commercial sterilization using 110°C heating.
 - B. The commercial sterilization destroys virus.
 - C. The commercial sterilization inactivates enzymes.
 - D. The commercial sterilization destroys bacterial spores.
47. How many functions are defined in the regulation for “healthy food” in Taiwan,
- A. 11
 - B. 12
 - C. 13
 - D. 14
48. Proteins are made up of the following compounds except:
- A. Amino acids,
 - B. Glycine
 - C. Valine
 - D. Vancomycin.
49. Sensory evaluation is a scientific discipline that applies principles of experimental design and statistical analysis to the use of human senses except?
- A. Sight,
 - B. Smell,
 - C. Taste,
 - D. Think.
50. The atmosphere in the modified atmosphere package is frequently modified to reduce the oxygen content and increase inert gas content. Which of the following gas is inert gas.
- A. Oxygen
 - B. Carbon Dioxide
 - C. Nitrogen
 - D. Hydrogen Peroxide

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科目：食品加工

系所組：食品科學

1. 請解釋具相同聚合程度 (degree of polymerization) 的直鏈與高支鏈含量的多醣聚合物之水溶液，兩者的黏滯性質 (viscosity) 為何有差異(10%)。
2. 那些作用力會影響蛋白質的折疊 (protein folding) (10%)?
3. 一些化學物質會促使油脂氧化反應行程或加速，作用機制有哪兩大類(5%)，各包含哪些化學物質(5%)?
4. 請說明何謂無菌加工(aseptic processing)及其優缺點分析(10%)。
5. 請說明殺菁(blanching)的方法並舉例2種殺菁指標酵素(10%)。
6. 請詳細說明冷凍乾燥(freeze drying)的步驟，包含冷凍、初級乾燥(primary drying)和二級乾燥(secondary drying) (10%)。
7. 請解釋以下名詞
 - (1) D value (decimal reduction time對數減菌時間) (3%)
 - (2) flat sour spoilage (平酸腐敗) (3%)
 - (3) retort pouch (殺菌軟袋) (3%)
 - (4) high pressure processing (高壓加工) (3%)
 - (5) double seam (雙重捲封) (3%)
8. 採用「慢速冷凍」或是「快速冷凍」可以獲得較良好的冷凍食品品質？原因為何？(9%)
9. 請舉出2種可以包裝蕃茄醬的包材，並說明其製作方法、特性、優缺點 (16%)。

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