

Food Science B - Food Science - December 19 SO Practice - 12-19-2020

1. (1.00 pts) Which of the following is not produced during lactic acid fermentation?

(Mark ALL correct answers)

- A) NAD+
- B) CO₂
- C) Both NAD+ and Co₂
- D) Neither NAD+ and Co₂

2. (1.00 pts) If ADP is phosphorylated, then what is this indicating in the reaction

- A) ADP is being used to power the reaction
- B) ADP is becoming AMP
- C) ADP is converted to ATP
- D) ADP is being created in the reaction

3. (1.00 pts) What happens to a food when it undergoes a Maillard reaction?

- A) It solidifies
- B) It freezes
- C) It spoils
- D) It turns brown

4. (1.00 pts) What is the difference between pickling and fermenting?

- A) Brine
- B) Lactobacilli bacteria
- C) Time
- D) pH

5. (1.00 pts) What is another name for the fifth basic taste, sometimes referred to as "savory?"

- A) Sour
- B) Sweet
- C) Salty
- D) Umami

6. (2.00 pts) Which of the following is not true about generations of chemical feedstock?

- A) First generation is prepared from crops like sugarcane
- B) Second generation is produced from non-edible plants
- C) Third Generation is made from non-food resources like algae
- D) All the above are true

7. (1.00 pts) Glycolysis happens in what part of the cell?

- A) Mitochondria
- B) Inner Membrane
- C) Cytoplasm
- D) All parts

8. (1.00 pts) Which enzyme(s) are responsible for break-down of pyruvate in lactic acid fermentation in mammals?

(Mark **ALL** correct answers)

- A) Lactate dehydrogenase
- B) Pyruvate dehydrogenase
- C) Pyruvate decarboxylase
- D) Alcohol dehydrogenase

9. (2.00 pts) Which enzyme(s) are responsible for break-down of pyruvate with yeast

(Mark **ALL** correct answers)

- A) Lactate dehydrogenase
- B) Pyruvate dehydrogenase
- C) Pyruvate decarboxylase
- D) Alcohol dehydrogenase

10. (1.00 pts) Which is most true?

- A) Glycolysis consumes 2 ATP
- B) Glycolysis produces 2 ATP
- C) Glycolysis consumes 2 ATP and produces 4 ATP
- D) Glycolysis does not have anything to do with ATP

11. (1.00 pts) The molecule that goes into Kreb's cycle after pyruvate dehydrogenase complex has how many carbons?

- A) 1
- B) 2
- C) 3
- D) 4

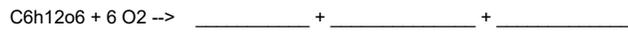
12. (1.00 pts) Prebiotics are:

(Mark ALL correct answers)

- A) Yeasts and bacteria in the gut that aid in digestion and health
- B) Specific foods that support growth of specific yeasts and bacteria
- C) Excessive levels of bacteria in the stomach
- D) None of the above

13. (1.00 pts) Krebs cycle happens in the _____ part of the mitochondria?

14. (3.00 pts) Complete this chemical equation for Aerobic Respiration.



15. (3.00 pts) ATP does not consist of what?

(Mark ALL correct answers)

- A) 1 Adenine
- B) 1 Ribose
- C) 1 Hydroxy
- D) 3 Phosphate

16. (2.00 pts) What process(es) are used to release energy from ATP?

(Mark ALL correct answers)

- A) Dephosphorylation
- B) Catalysis
- C) Ribolysis
- D) Hydrolysis

17. (2.00 pts) Which of the following are true about Hans Krebs:

(Mark ALL correct answers)

- A) He migrated from Germany
- B) He was an ENT Surgeon
- C) He won a noble Prize
- D) He taught biochemistry at MIT

18. (2.00 pts) How many NADH are produced across Glycolysis, Link Reaction and Krebs Cycle for 1 molecule of Glucose?

- A) 2
- B) 4
- C) 6
- D) 10

19. (1.00 pts) Electron Transport Chain is fully understood area in field of biochemistry.

- True False

20. (2.00 pts) which of the following are source(s) of energy?

(Mark **ALL** correct answers)

- A) NADH
- B) FADH₂
- C) ATP
- D) ADP

21. (2.00 pts) Redox potential is:

(Mark **ALL** correct answers)

- A) Measure of how energetic a given electron is
- B) Measure of how much hydrogen a molecule can attract
- C) Measure of how much Oxygen a molecule can attract
- D) Measure of how much reduction can be done on Redosikinase

22. (2.00 pts) Enzyme(s) used to coagulate casein during cheese making process

(Mark **ALL** correct answers)

- A) Chymosin
- B) Amylase
- C) Invertase
- D) Lactase

23. (1.00 pts) Any substance that is acted upon by an enzyme is called a/an

- A) Coenzyme
- B) Substrate
- C) Vitamin
- D) Polypeptide

24. (1.00 pts) Which government regulation prohibited interstate commerce of misbranded and adulterated food, drugs and drinks

- A) Delaney clause
- B) Meat inspection act of 1906

- C) Pure food and Drug Act of 1906
- D) All the above

25. (1.00 pts) Which statement best summarizes the reaction with Enzymes

- A) Enzymes increase the energy of the reactants
- B) Enzymes decrease the energy level of the products
- C) Enzymes decrease the activation energy of the reactions
- D) Enzymes reverse the direction of the reaction

26. (1.00 pts) Babies do not have well developed digestive system for breaking down proteins, therefore baby food is prepared after treatment with what enzyme

- A) Protease
- B) Synthase
- C) Lipase
- D) Invertase

27. (2.00 pts) Which is the FDA not responsible for

(Mark ALL correct answers)

- A) Setting food labelling guidelines
- B) Approving food additives
- C) Overseeing meat, poultry and egg products
- D) Creating food safety and wholesomeness standards

28. (1.00 pts) Which process is largest contributor of CO₂

- A) Glycolysis
- B) Krebs cycle
- C) Electron transport chain
- D) All of the above

29. (1.00 pts) Which process is largest contributor of H₂O

- A) Glycolysis
- B) Krebs cycle
- C) oxidative phosphorylation
- D) None of the above

30. (1.00 pts) Pyruvate oxidation creates a specific numbered carbon molecule at the end of its process. What is the number of carbon for this molecule?

- A) 3

- B) 2
- C) 1
- D) 6

31. (2.00 pts) Oxygen is a great:

(Mark **ALL** correct answers)

- A) Reducer
- B) Oxidizer
- C) Redoxer
- D) Prodoxer

32. (2.00 pts) If ADP is phosphorylated, then what is this indicating in the reaction

(Mark **ALL** correct answers)

- A) ADP is being used to power the reaction
- B) ADP is becoming AMP
- C) ADP is converted to ATP
- D) ADP is being created in the reaction

33. (1.00 pts) How are lactic acid and alcoholic fermentation similar

- A) They have same product
- B) They have same reactant
- C) They occur in the same organism
- D) None of the above

34. (1.00 pts) Yeast is a (an)

- A) Autotroph
- B) Heterotroph
- C) Prokaryote
- D) Producer

35. (1.00 pts) What approximate % of food in the world is lost or wasted?

- A) 10%
- B) 20%
- C) 30%
- D) 40%

36. (1.00 pts) Honey can sometimes survive over a 200 years without getting spoiled?

True False

37. (2.00 pts) Dihydrogen monoxide is used

(Mark **ALL** correct answers)

- A) For Hydration
- B) As Solvent
- C) As Slow Poison
- D) As Output in Electron Transport Chain

38. (2.00 pts) Foods are fermented to

(Mark **ALL** correct answers)

- A) Add flavor
- B) Increase storage life
- C) Hide unpleasant flavors
- D) None of the Above

39. (1.00 pts) Can Anaerobic Respiration use Krebs Cycle?

True False

40. (1.00 pts) Tempeh is formed by fermentation?

True False

41. (1.00 pts) The production of gases in dough that contribute to the volume during baking and final aerated texture is called

- A) Emulsifying
- B) Leavening
- C) Pasteurization
- D) Bubbling

42. (1.00 pts) Which of the following is another name for pickles?

- A) Weiners
- B) Gherkins
- C) Munchkins
- D) Cucumbers

43. (1.00 pts) Cellular respiration is called an aerobic process because it requires

- A) Oxygen

- B) Exercise
- C) Glucose
- D) Light

44. (1.00 pts) Each enzyme has only 1 substrate that will fit its active site. What is this called?

- A) Reusability
- B) Specificity
- C) Denaturation
- D) Fragility

45. (1.00 pts) Foods to which acids are added so the pH is 4.6 or less and aw is 0.85 or more are called

- A) Low acid foods
- B) Fermented foods
- C) Acidified foods
- D) High acid foods

46. (1.00 pts) Modified atmosphere packaging of cantaloupes requires the addition of E. Coli to convert glucose into lactic acid and lower pH below 4.6.

- True
- False

47. (1.00 pts) There are no natural protein sources other than meat

- True
- False

48. (1.00 pts) Probiotics are

- A) Yeasts and bacteria in the gut that aid in digestion and health
- B) Specific foods that help specific yeasts and bacteria to grow
- C) Excessive levels of bacteria in the stomach
- D) None of the above

49. (1.00 pts) What cells may undergo lactic acid fermentation?

- A) Liver
- B) Muscle
- C) Skin
- D) Fat

50. (1.00 pts) Your body has ability to convert the lactate from Lactic acid fermentation in your cells back to glucose?

- True
- False

51. (2.00 pts) Which of the following is always utilized by metabolic cycles of fats, proteins, and carbohydrates in an aerobic environment in a human body?

(Mark ALL correct answers)

- A) Glycolysis
- B) Krebs Cycle
- C) Heterolactic Fermentation
- D) Homolactic Fermentation

52. (3.00 pts) Which of the following are fermented foods:

(Mark ALL correct answers)

- A) Tempeh
- B) Natto
- C) Dosa
- D) balao-balao
- E) Beer
- F) Creme Fraiche

53. (1.00 pts) When NADH is reduced or oxidized, which response best describes what is lost or gained

- A) 2 ATP
- B) Only electrons
- C) 2 stable hydrogen atoms
- D) Pair of electrons

Nutrition Facts
3 servings per container
Serving size 5 pieces (123g)

Amount per serving	% Daily Value*
Calories	
Total Fat 3.5g	4%
Saturated Fat 0g	2%
Trans Fat 0g	
Cholesterol less than 5mg	1%
Sodium 210mg	9%
Total Carbohydrate 23g	8%
Dietary Fiber 1g	4%
Total Sugars 6g	
Includes 3g Added Sugars	6%
Protein 4g	
Vit. D 1mcg 6%	Calcium 50mg 4%
Iron 1mg 6%	Potass. 150mg 4%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

California Roll

Preparation Instructions:
DO NOT THAW OR REHEAT

Microwave Method:
Remove 4 to 6 pieces from the tray and place on a plate. Microwave on high power for 20 seconds. Turn pieces over and microwave on high for an additional 20 seconds. If pieces are still partially frozen, continue microwaving on high in 10-second increments. Let pieces rest for 2 minutes. Rice should be slightly warm and the center should be tender to the touch.

Room Temperature Method:
Take desired number of pieces out of the tray. Place on a plate, cover and thaw for 2 hours.

Water Bath Method:
Submerge sealed tray in cold water for 30 minutes.
For best results, consume immediately after thawing. Refrigerate leftovers for up to 24 hours.

DO NOT REFREEZE.

Net Wt. (369g)

Keep Frozen, Fully Cooked

FUSIA
Asian Inspiration

twice choice
never reheated
never refrozen

WILD CAUGHT
CATCH AREA: FRO 07, Northeast Pacific
CATCH METHOD: Troll

PRODUCT OF USA

01944

BEST BY 10/20/2021

4099100134873

MSC-C-55179
www.msc.org

Please answer the following questions based on food label above:

54. (2.00 pts) How many calories per serving? Only provide the number, no units.

55. (1.00 pts) Based on the product label, Is the product safe to eat without cooking?

- True False

56. (2.00 pts) What are the top three Ingredients?

(Mark ALL correct answers)

- A) Water
 B) Surimi
 C) Wheat Starch
 D) Rice
 E) Corn Starch

57. (2.00 pts) Name all the allergens as per the product label.

(Mark ALL correct answers)

- A) Wasabi
 B) Seaweed
 C) Fish
 D) Wheat
 E) Eggs

58. (2.00 pts) What is the net weight of this product based on the label? (please provide units without space after the number)

59. (2.00 pts) The Net Weight of the food along with the packaging is provided on the packaging label

- True False

60. (1.00 pts) Country of Origin for food Dhokla is?

- A) India
 B) China
 C) Japan
 D) Germany

61. (1.00 pts) The country of origin of food Ganjang is

- A) China
 B) India
 C) Korea

D) Russia

62. (1.00 pts) The country of origin of food Gochujang is

- A) India
- B) China
- C) Japan
- D) Korea

63. (1.00 pts) The country of origin of food Pon ye gyi is

- A) India
- B) China
- C) Portugal
- D) Myanmar

64. (1.00 pts) The country of origin of food Salami is

- A) Austria
- B) Germany
- C) Italy
- D) Turkey

65. (2.00 pts) The bacterias used in making of Sauerkraut are

(Mark **ALL** correct answers)

- A) Leuconostoc
- B) Lactobacillus
- C) Pediococcus
- D) SCOBY