**Meat Science Questionbank**

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1. Muscle fibers of meat animals with diameters of 50 microns contains —– no. of Myofibrils  
2. The unit of myofibril between two adjacent Z discs is called —–  
3.A typical mammalian muscle at rest has a sarcomere length of ——-  
4. Actin molecule has a ——— shape  
5. Myosin constitutes approx ——–% of myofibrillar proteins  
6. ——— is the most abundant protein in animal body  
7. ——— is the most abundant amino acid of collagen  
8. Glycine constitute about —–% of amino acids of collagen  
9. ———— is the structural unit of collagen fibril  
10. The cervical ligament of neck is made of ——–fibers  
11. ——— is the amino acid present in the greatest quantity in elastin  
12. ——– & ——— are two unique amino acids present in elastin  
13. The color of brown fat is due to high content of ——— in mitochondria  
14. A primary muscle contains approx —— number of muscle fibers  
15. Intramuscular fat is called ———- of meat  
16. Intermuscular fat is also called ——— fat  
17. The element which constitutes maximum % of animal body weight is——–  
18. ———– is the most abundant fatty acid in animal body  
19. The most abundant carbohydrate in muscles———–  
20. Average protein percentage of mammalian skeletal muscles—–  
21. A genetic condition of cattle causing unusually thick bulging muscles.  
22. Excessive fat infiltration in muscle fibers is called——–  
23. An action potential enters the interior of a muscle fibers along ———  
24.Only about ——–% of total blood volume can be removed via exsanguination.  
25. The range of ultimate pH of meat is ——–  
26. The period of time during which the muscle is extensible and elastic is called—phase of rigor mortis.  
27. ATP complexed with ——–is required for a muscle to maintain a relaxed state  
28. The decrease in tension with time is described as ——- of rigor mortis.  
29. Holding carcass at refrigeration temperature after initial chilling is called——–in US &—–in other countries  
30. In——- condition of meat, there is lowered processing yield, increased cooking loss and reduced juiciness.  
31. Cold shortening develops when muscle is chilled below ——–before onset of rigor mortis.  
32. Thaw rigor shortening is approx. ——- % of original length of muscles.  
33.Marked shortening and early onset of rigor induced by maintaining muscles at high temp is called——-  
34. Lipid oxidation in muscles is measured as —–values.  
35. Loss of weight during storage of meat is called ————  
36. Lack of space for water molecules within protein structures is known as ——-effects.  
37. In well bled muscles, Myoglobin constitutes ——% of the total pigments.  
38. The typical color of meat from pork is ——-  
39. The bright red color development of meat is due to oxymyoglobin is called  
40. Oxidized myoglobin is called——  
41. The bright pink color characteristic of cured meat is due to ———  
42. The amount of nitrite permitted in finished products by US meat inspection regulation is —-ppm  
43. The sodium salts of ——- or ——– acids are most widely used cure accelerators.  
44. The greening of cured meat pigment by excessive use of nitrites———–  
45. Large fat particles coalesce at the end of the sausages to form ——-  
46. —–flavor develops due to lipid oxidation in pre-cooked frozen meat.  
47. The heat resistance of microrganisms is usually expressed as ———  
48. To stabilize meat products, a radiation dosage of —– megarads is used.  
49, Loss of tenderness occuring in the first few hours postmortem is called——–toughning.  
50. Cooked testicle of lambs, calves and turkeys are commonly called ——

ANSWERS  
1. 1000-2000  
2. Sarcomere  
3. 2.5 microns  
4. Globular  
5. 45  
6. Collagen  
7. Glycine  
8. 33  
9. Tropocollagen  
10. Elastin  
11. Glycine  
12. Desmosine and Isodesmosine  
13. Cytochrome  
14. 20 to 40  
15. Marbling  
16. Seam  
17. Oxygen-65%  
18. Oleic acid  
19. Glycogen  
20. 18.5%  
21.Double Muscling  
22. Steatosis  
23. T-tubules  
24. 50%  
25. 5.3-5.7  
26. Delay  
27. Mg2+  
28. Resolution  
29. Aging , conditioning  
30. PSE  
31. 15-16 degrees  
32. 60%  
33. Heat Rigor  
34. Thiobarbituric Acid  
35. Shrinkage  
36.Steric  
37. 80-90%  
38. Grayish Pink  
39. Bloom  
40. Metmyoglobin  
41. Nitrosyl Haemochromogen  
42. 200  
43. Ascorbic or Erythorbic  
44. Nitrite Burn  
45. Fat Caps  
46. Warmed Over  
47.Thermal death time  
48. 4.5  
49. Actomyosin  
50. Mountain Oysters

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Define or explain in a sentence or two

1. Meat

2. Epimysium

3. Muscle fibre

4. Perimysium

5. Endomysium

6. Sarcolemma

7. Transverse tubules or T system

8. Motor end plate

9. Myoneural junction

10. Sarcoplasm

11. Sarcoplasmic reticulum

12. Myofibrils

13. Myofilaments

14. I Band

15. A band

16. Sarcomere

17. H zone

18. Pseudo H zone

19. Fenestrated collar

20. Terminal cisterne

21. Triad

22. MFPO

23. pH

24. pHu or Ultimate pH

25. WHC or Water Holding Capacity

26. PSE

28. Rigor mortis

29. Ageing.

30. Iodine value

31. Jerked Beef

32. Pemmican

33. Biltong

34. Charque

35. Lyophilization or Freeze Drying – Lyophilizatio n or Freeze Drying

36. Intermediate Moisture Meats

37. Salting

38. Curing

39. Dry curing

40. Pickling

41. Arterial brining

42. Stitch curing

43. Multiple needle injection

44. Smoking

45. Chiller shrinkage

46. Sweating

47. Bloom

48. Rancidity

49. Cold shortening

50. Electrical stimulation

51. Freezing

52. Cryogenic freezing

53. Eutectic formation

54. Weep or Drip

55. Freezer burn

56. Bone Darkening

57. Thaw rigor

58. Thawing

59. Canning

60. Aseptic canning

61. Retort processing

62. D value or the decimal reduction time

63. 12 D concept or Botulinum Cook

64. Z value

65. F value

66. Swell or blower

67. Flipper

68. Springer

69. Leaker

70. Flat souring

71. Hydrogen Swell

72. Sulphiding

73. Ionising radiation

74. Non- ionising radiation

75. Radappertisation.

76. Radicidation.

77. Mincing

78. Milling

79. Chopping

80. Flaking

81. Massaging

82. Tumbling

83. Mixing

84. Sausage

85. Salami

86. Packaging

87. Modified atmosphere packaging

88. Decomposition of meat

89. Sensory evaluation

90. Transgenic animals

Write short notes on

1. Proteins of muscle

2. Sarcoplasmic reticulum

3. Z line ultrastructure

4. Composition of muscle

5. Nutritive value of meat

6. Rigor mortis

7. Ageing

8. Classification of preservation of meat

9. Drying of meat

10. Salting of meat

11. Curing of meat

12. Pickling of meat

13. Smoking of meat

14. Chemistry of cured colour

15. Physical changes in chilled meat

16. Cold shortening

17. Electrical stimulation

18. Bone darkening

19. Effects of freezing on pathogens

20. Types of cans

21. Steps in canning

22. Defects or distortions in a can

23. Flat Sour

24. Preservation of meat by antibiotics

25. Irradiation of meat

26. Bone Taint

27. Phosphorescence

28. States of water or Compartments of water in mus

cle

29. PSE

30. DFD

31. Mincing

32. Milling

33. Flaking

34. Principles of processing meat

35. Preparation of sausages

36. Preparation of patties

37. Preparation of meat balls

38. Preparation of tandoor chicken

39. Preparation of kabab

40. Preparation of soup

41. Preparation of meat pickles

42. Preparation of surimi

43. Preparation of smoked fish

44. Uses of surimi

45. Packaging of meat

46. Packaging of eggs

47. Proteins of egg

48. Lipids in egg

49. Nutritive value of egg

50. Microbial standards for meat

51. MFPO

52. Distinguish between carcass of cattle and buffalo

53. Distinguish between carcass of sheep and goat

54. Characteristics of fats of food animals

55. Chemical methods of meat species identification

56. Sensory evaluation of meat

57. Sensory qualities of meat

58. ATryn

59. Aqua advantage atlantics salmon

60. Organic meat

**Write an essay on**

1. Structure of muscle

2. Composition of Muscle

3. Nutritive value of meat

4. Curing of meat

5. Chilling of meat

6. Freezing of meat

7. Canning of meat

8. Meat species identification

9. MFPO

10. Preservation of eggs

11. Modern principles of meat processing

12. Chemical composition and nutritive value of eggs.

13. Physico-chemical qualities of meat

14. Sausages

15. Patties

16. Meat balls

17. Surimi

18. Smoked fish

19. Animal food of genetically modified origin

20. Organic meat