KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES UNIVERSITY, BIDAR

Post Graduate Entrance Examinations : 2021-22

PhD in Fish Processing Technology

Subject Code: P16

HALL TICKET NO……. **Date: 10th May 2022**

Max Marks : 100

Duration : 2 Hrs.

Choose the correct answer from the four options given under each question and fill the relevant circle with black ball point pen in the OMR Sheet.

Note: 1) Do not use pencil for marking on the OMR Sheet.
2) Marking on the OMR sheet for more than one option for a question will be rendered invalid.

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1 The enzyme responsible for gaping

A Pepsin
B Collagenase
C Trypsin
D Lipase

2 TMAO breaks into which of the following during frozen storage

A TMA and formaldehyde
B MA and formaldehyde
C DMA and formaldehyde
D Ammonia and formaldehyde

3 Anaerobic glycolysis produce _____molecules of ATP

A 2
B 4
C 8
D 36

4 Indole is formed from

A Lysine
B Trptophan
C Ornithine
D Arginine

5 Faecal Indicator of frozen fish

A Streptococci
B *E coli*
C *Staphylococcus*
D *Salmonella*

6 E. coli serotype O157: H7 produces

A serotoxin
B verotoxin
C brevitoxin
D saxitoxin

7 The FSSAI limit for PCBs (ppb) in marine fish and crustaceans is

A 0.1
B 0.2
C 0.3
D 0.5

8 Blackening in canned shrimps is due to the action of tin with

A Cysteine
B Lysine
C Ornithine
D Arginine

9 Health certificate is issued by

A EIA
B MPEDA
C State Health Department
D FSSAI

10 ISO 17025:2017 is

A Food Management System
B Laboratory Management System
C Quality Management system
D Good Laboratory Practices

11 To combat IUU fishing , the EU requirement is

A Health certificate
B Catch certificate
C Registration certificate
D Traceability

12 The Codex Contact point in India is attached with

A FSSAI
B EIA
C MPEDA
D ISO

13 AOZ is the metabolite of ----------

A Nitrofuran
B Sulphonamides
C Chloramphenicol
D Tetracyclin

14 Indian standards for water quality parameter testing

A IS-4780
B IS-4251
C IS-2237
D IS-2168

15 Which of the following is not true related to formalin added to the fish?

A loss of WHC
B Texture loss
C Binds to protein
D Lipid loss

16 The most abundant myofibrillar protein in fish

A Actin
B Troponin
C Tropomyosin
D Myosin

17 Lean fish store fat in -----

A Kidney
B Muscle
C Liver
D Bones

18 Authority in India presently prescribing standards for the fishery products

A ISI
B BIS
C EIA
D FSSAI

19 Regulatory proteins that control muscle contraction are

A Troponin and Tropomyosin
B Paramyosin and myosin
C Actin and myosin
D Connectin

20 Decrease in the extractability of myofibrillar proteins in frozen fish is due to formation of

A FFA
B TMA
C Formaldehyde
D TBA

21 The type of collagen present in the muscle and skin of marine fish is

A Type I collagen
B Type II collagen
C Type III collagen
D Type V collagen

22 A non essential fatty acid

A Arachidonic acid
B Linoleic acid
C Linolenic acid
D Oleic acid

23 Which element is rich in fish compared to other meat?

A Copper
B Selenium
C Iron
D Magnesium

24 A food borne virus having double stranded RNA

A Astrovirus
B Rotavirus
C Norovirus
D Sapovirus

25 According to USFDA, the most common contaminant of fish and fishery products is

A *Salmonella*
B *Listeria*
C *E.coli*
D *S. aureus*

26 The type of *Clostridium botulinum* commonly present in seafood is

A Type A
B Type E
C Type D
D Type B

27 Pathogenicity of *Staphylococcus aureus is* associated with the ----------

A Pore forming toxin
B Heat stable enterotoxin
C Heat labile enterotoxin
D Neurotoxin

28 Spoilage microflora associated with the vacuum packaged lightly preserved fish is --------

A Enterobacteriaceae
B Lactic acid bacteria
C Vibrio sp.
D Clostridium botulinum

29 Which one of the following is SSO in chilled marine fish?

A *Aeromonas* B *Shigella*

C *Staphylococcus aureus* D *Shewanella putrefaciens*

30 Sugar when heated, melts and turns brown due to

A Fermentation b. Browning

C Caramelization d Maillard reaction

31 Which is naturally occurring pathogenic bacteria in seafood?

A *Enterococcus faecalis* B *Vibrio parahaemolyticus*

C *Staphylococcus aureus* D *Proteus morganii*

32 Limit of *Staphylococcus aureus* in frozen shrimp is

A 100 cfu/g B 200 cfu/g

C 10 cfu/g D 20 cfu/g

33 Candling is the method employed for the detection of ------

A Bacteria B Virus

C Worms D Filth

34 Fish handlers disease occurs when cuts or scrapes in the skin become infected with

A *Moraxella* B *Erysipelothrix*

C *Sarcina* D *P.salinalia*

35 Heat resistance in bacterial spores is due to presence of

A cholic acid B Calcium Dipcolinic Acid

C Ascorbic Acid D Decanoic Acid

36 Ctx stands for

A Cholerae enterotoxin B Chaeno toxin

C Cytolysin D Coagulase Toxin

37 An indicator of shrimp spoilage is

A Indole
B Cadaveine
C Methylmercapton
D SO_2

38 The toxic shock syndrome (TSS) is caused by the action of

A *S.putrefaciens*
B *S.aureas*
C *Klebsiella*
D *C.sprogenes*

39 Sashmi grade tuna is classified based upon the content of

A Fat
B Moisture
C Protein
D Minerals

40 Patulin is a _____

A Neuro toxin
B Ichthyo toxin
C Shellfish toxin
D Mycotoxin

41 Which of the following grows in very low aw(as less as 0.61)

A Osmoplilic Moulds
B Halophilic Moulds
C S.aureus
D Spoilage moulds

42 Which of the following has triple helical structure

A Actin
B Troponin
C Collagen
D Myosin

43 Combustion of organic matter in presence of chlorine produces

A Dioxin
B DDT
C Benzopyrene
D Aldrin

44 The FFA (% oleic acid) limit in sardine oil according to FSSAI is

A 1
B 2
C 3
D 6

45 The acceptable level of histamine (ppm) in fish pickle according to FSSAI is

A 100
B 400
C 200
D 300

46 Katsuobushi is the Japanese term for

A Dried swim bladder
B Smoke cured tuna
C Dried bonito sticks
D Raw fish with rice

47 Myobanzuke process involves the production of

A Dehydrated jellyfish
B Dried octopus
C Frozen fish fingers
D Squid ink powder

48 Faulty canning practice leads to

A Post – process spoilage
B pre process spoilage
C under processing
D leaker spoilage

49 Flat sour spoilage in canned fish is brought out by

A *Bacillus stearothermophilus*
B *E. coli*
C *Pseudomonas*
D *Clostridium botulinum*

50 Greening in canned tuna is due to high content of

A FFA
B TMAO
C TMAN
D NH_3

51 Totax value is

A Ansidine value + Peroxide value
B Ansidine value + 2 Peroxide value
C Ansidine value + Peroxide value
D 2 Ansidine value + 2 Peroxide value

52 The pathogen of concern in ready to eat fishery products

A *Staphylococcus aureus*
B *Listeria monocytogenes*
C *Vibrio parahaemolyticus*
D *E coli*

53 The minimum temperature(^{0}C) recommended by WHO and FDA at thermal centre of product to prevent foodborne illness caused by *Listeria monocytogenes* is

A 50
B 60
C 70
D 80

54 Preservation of foods using ionizing radiation is called as

A Radicidation
B Radurisation
C Irradiation
D Radappertisation

55 Food safety and standards Authority of India has head quarters in

A Kolkatta
B Hyderabad
C Delhi
D Bhuvaneswar

56 Hot smoking temperature range is

A 60 – 80^{o}C
B 75-90^{o}C
C 40 – 60^{o}C
D 80-100^{o}C

57 Which one is not included in the biological hazard

A Virus
B Parasites
C Bacteria
D Ciguatoxin

58 Sodium tri poly phosphate treatment of frozen prawns

A Prevent rancidity
B Reduces thaw drip
C Kills pathogenic bacteria
D Prevent denaturation

59 The lethality of neurotoxin is (---/kg body weight)

A 1mg
B 1µg
C 1ng
D 1g

60 Paralytic shell fish poisoning is caused by

A *Alexandrium*
B *Nitzschia*
C *Karenia brevis*
D *Prorocentrum*

61 Eco labeling is done by

A EIA
B MPEDA
C State Government
D Marine Stewardship Council

62 The enzyme responsible for gelling in surimi

A Transglutaminase
B Collagenase
C Pepsin
D Trypsin

63 The MRPL for chloramphenicol in farmed shrimp is

A 0.1 ppb
B 0.3 ppb
C 1.0 ppb
D 0.5 ppb

64 Which of the following is not an allergen

A Shrimp
B Peanut
C Molluscs
D Seaweed

65 The limit of lead in crustaceans according to EU and FSSAI is

A 0.5 ppm
B 1.5 ppm
C 1 ppm
D 0.3 ppm

66 The ISO Standard applicable for food safety management system is

A ISO 17025
B ISO 22000
C ISO 9002
D ISO 9001

67 Hydrolysis of chitin with concentrated HCl gives

A Chitosan
B Acetyl choline
C Glucosamine hydrochloride
D Chitooligosaccharide

68 Bigelow & Esty method is also called

A Mathematical method
B Nomogram method
C Single tube method
D Multi tube method

69 Trepang is

A Processed sea cucumber
B Processed sea urchin
C Processed sea anemone
D Processed jelly fish

70 The major storage lipid of fish is

A Cholesterol
B Ganglioside
C Lecithin
D Triglyceride

71 No. of mg of KOH required to neutralize the free fatty acids in 1g of oil or fat is

A Saponification value
B Iodine number
C Acid number
D Reichrt – Meissl number (R/M Number)

72 Provitamin

A Leucopene
B Xanthophill
C β carotene
D Chlorophyll a

73 Cytochrome oxidase is a

A Metaloprotien
B Coenzyme
C Simple protein
D Flavoprotein

74 Synthesis of protein takes place in

A Mitochondria
B Ribosomes
C Cytoplasm
D Nucleus

75 ‘Mush’ condition of can is caused by

A *Chloromyxum*
B *Pseudomonas*
C *Halobacterium*
D Anisakis

76 IMVIC test related to the confirmation of

A *Salmonella*
B *Listeria*
C *E.coli*
D *Vibrio*

77 The HACCP was introduced based on the problem in

A Canned foods
B Frozen foods
C Smoked foods
D MAP foods

78 FSSAI limit for PSP in shellfish (saxitoxin microgram/100g)

A 80
B 60
C 20
D 40

79 ISO refers to

A International Organization for Standardization
B International Standard for Organization
C Indian Organization for Standardization
D International Safety Organization

80 BRC food safety standard refers to

A British Revenue Consortium
B British Royal Certificate
C British Retail Certificate
D British Retail Consortium

81 The active substance in chlorine disinfectant

A Hydrochloric acid
B Hypochloric acid
C Hypochlorous acid
D All the above

82 The CCP for farmed shrimp

A Mercury
B Nitrofuran metabolite
C DDT
D Benzopyrene

83 The heavy metal of concern in cephalopods

A Lead
B Chromium
C Cadmium
D Mercury

84 Gel strength test is related to quality test of

A Surimi
B Fish mince
C Fish paste
D Fish sol

85 Bitter off flavor of spoilage fish is due to

A Hypoxanthine
B IMP
C NH3
D AMP

86 Factors that limits storage life of frozen fish is

A Changes in Protein
B Discoloration
C Oxidative changes in fat
D All

87 The level of oxidative rancidity in fish during storage can be determined by estimating

A TBA value
B BV (Biological values)
C Total fatty acid values
D Free fatty acid value

88 Freezer used to freeze the irregular shaped products

A Spiral freezer
B Air blast freezer
C Horizontal freezer
D Liquid nitrogen freezer

89 Operating temperature of plate freezers is

A – 60°C
B –30°c
C – 40°C
D –50°C

90 The freezing point of seawater is

A – 2°C
B – 5°C
C – 8°C
D –10°C

91 Maximum permissible limit of So_2 in shrimp is

A 90 ppm
B 100 ppm
C 80 ppm
D 200 ppm

92 Fucoidan is a

A Conjugated protein
B Sulphated polysaccharide
C Metallic protein
D Oligosaccharide

93 Packaging material suitable for freeze dried products is

A Flexible pouches
B Multifilm bags
C Polythene bags
D Thermoformed trays

94 Alginic acid is obtained from which seaweed

A Red
B Brown
C Green
D Yellow

95 Carrageenan is a polymer of

A Galactose
B Glucose
C Fructose
D Arabinose

96 Electric properties of fish is used for freshness detection in which of the following

A Torrymeter
B Near infra red Spectroscopy
C Electronic nose
D None

97 The concentration of ATP and its breakdown products are measured as

A K value
B D value
C Z value
D Biogenic Amine

98 Free fatty acids are formed when fat undergoes

A Oxidation
B Decarboxylation
C Hydrolysis
D None

99 The Quality Index Method was originally developed in

A Australia
B Japan
C USA
D UK

100 The carcinogenic compound found in smoked fish is

A Benzopyrene
B Putrescine
C Cadaverine
D Spermidine

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