

ST JOSEPH’S UNIVERSITY, BENGALURU -27

B. Sc (MICROBIOLOGY)– II SEMESTER

SEMESTER EXAMINATION: APRIL 2023

(Examination conducted in May 2023)

MBOE 4: MICROBES AND THE FOOD INDUSTRY

Time: 90 Min. Max Marks: 60

This paper contains 8 printed pages and 1 part

1. Answer All the questions: 1X60=60
2. Combinations of probiotics and prebiotics are known as

 a. Synbiotics b. Postbiotics

 c. Nutribiotics d. Pharmabiotics

1. Wine is a fermented alcoholic beverage prepared from
2. Fruit juice by fermentation process b. Plant extracts by fermentation process

 c. Microbial extracts by fermentation process d. Starch by fermentation process

1. Which of the following is not a microbe?
2. Archaea b. Virus

c. Amoeba d. Leech

4. Which of the following organism is called Bread mould?

 a. Penicillium b. Rhizopus

 c. Mucor d. None of these

1. Still wines are wines
2. With Carbon dioxide b. Without alcohol

 c. Without carbon dioxide d. With added alcohol

1. Which among the following is the smallest microbe?

 a. Mycoplasma b. *Thiomargarita magnifica*

 c. *Saccharomyces cerevisiae* d. *Escherichia coli*

 7. CDI stands for

a. Colon Difficile Interference b. Clostridium Difficile Interference

c. Clostridium Difficile Infection d. Collective Defence Induction

 8. Viticulture is

1. Cultivation and harvesting of grapes b. Production of wine

c. Lab scale preparation of wine d. Cultivation of Watermelons

 9. The process of conversion of sugar into alcohol is called

1. Pasteurization b. Salting

c. Appertization d. Fermentation

10. FMT stands for

a. Fecal Metabolite Transfer b. Fixed Microbiota Transplantation

c. Fecal Microbiota Transplantation d. Flexible Medical Treatment

 11. Beer is mainly produced from

1. Ragi b. Jowar c. Bajra d. Barley

 12. The first existence of sourdough bread is attributed to

 a. Greek b. Roman

 c. Egyptian d. Chinese

 13. Ropiness is caused by

a. *E. coli* b. *Bacillus*

c. *Penicillium* d. *Rhizopus*

 14. During beer production the cereals are soaked and germinated to

1. Increase amylase production b. Increase protease production

c. Increase both amylase and protease production d. Increase starch content

15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an enzyme found in the stomach of ruminant animals

 a. Rennet b. Pepsin

c. Bile d. Ramen

 16. *Bifidobacterium* is an example of

a. Prebiotics b. Probiotics

c. Synbiotics d. Postbiotics

 17. Dysbiosis means

a. Dysfunction of liver b. Imbalance of gut microbiota

c. Prevention of disease d. None of these

 18. During Ageing of beer following changes occur

1. Precipitation of protein, yeast, resin and of other undesirable substances.
2. Beer starts becoming clear
3. Beer produced unpleasant aroma
4. Both a and b are correct

 19. The word pickle means

 a. Salt b. Sugar

 c. Oil d. Vinegar

 20. pH of stomach is

 a. 2 b. 5

 c. 7 d. 9

1. The organism used in the preparation of yogurt is
2. *Streptococcus thermophilus and Lactobacillus lactis*
3. *Bacillus lactis and Streptococcus thermophilus*
4. *Staphylococcus lactis and Lactobacillus delbrueckii*
5. *Streptococcus thermophilus and Lactobacillus delbrueckii*
6. The first person to suggest the role of microbes in food spoilage was

 a. Schwann b. A. Kircher

 c. D. Papin d. L. Pasteur

 23. Which of the following is not a function of a healthy gut microbiota

a. Absorption of nutrients b. Development of immune system

c. Protection against pathogens d. Producing disease

 24. One of the following is not true about Yoghurt

1. It is a fermented dairy product
2. It has a good number of medicinal properties
3. It is not flavoured and fortified with fruits
4. Yoghurt is a result of biochemical changes in milk by desired bacteria

 25. The concept of canned food was given by

a. Nicolas Appert b. Louis Pasteur

c. Charles Darwin d. L. Spallanzani

 26. IBD associated with dysbiosis stands for

a. Inflammatory Bowel Disease b. Inhibitory Bowel Disease

c. Induced Bowel Dysbiosis d. Inflammatory Brain Disease

 27. Cheese is classified based on the

1. Texture or hardness b. Organism used

 c. Both a and b are correct d. Both a and b are incorrect

 28. The earliest life forms existed around

 a. 3.7 million years ago b. 1 million years ago

 c. 1 billion year ago d. 3.7 billion years ago

 29. Which of the following flavour defect is present in spoiled milk

 a. Acid flavour b. Burnt flavour

 c. Bitter flavour d. All of these

 30. In which of the following cheese, fungi are used during ripening of cheese?

1. Camembert b. Cottage

 c. Mozzarella d. Swiss

 31. Which of the following is evidence of the great oxidation event?

a. Rocks dating before the event have iron in them

b. Fossils in the seafloor of organisms that had lungs

c. Oxygen encapsulated in coral reefs

d. Terrestrial plants capable of producing oxygen

 32. Which of the following is a probiotic food

a. Yogurt b. Sauerkraut

c. Kimchi d. All of these

 33. One of the following statements is not true for Starter cultures used in dairy industry

1. They are Selected microorganisms, which are deliberately added to milk to initiate and carry out desired fermentation
2. Work best under controlled conditions
3. They are involved in the production of fermented milk products.
4. They are toxic to the host cells

 34. Which of the following is a common source of SCP?

a. Algae b. Virus

c. Animal Waste d. Decaying plants

35. Black mould rot is caused by

a. Aspergillus b. Bacillus

c. yeast d. None of these

 36. The protein in the bread is

1. Bovine serum albumin b. Lysozyme c. Maltose d. Gluten

 37. Consumption of single-cell protein regularly can result in

a. Gout and kidney stones b. Hair fall

c. Obesity d. Addiction

 38. Blue mould rot is caused by

a. Penicillium b. Aspergillus

c. Bacteria d. yeast

 39. Kneading is a process involved in

1. Wine preparation b. Dahi preparation

 c. Bread making d. Yogurt preparation

 40. GMF stands for

a. Gross manufactured food b. Genetically modified food

c. Genetically manipulated farms d. Government mass-produced food

 41. Which of the following factors influence microbial activity and spoilage of the food ?

a. Water activity b. pH

c. Nutrient content d. All the above

 42. Which of the following ingredients used for bread making gives Carbon dioxide

1. Flour b. Yeast c. Sugar d. Water

 43. Travellers’ diarrhoea is caused by

 a. *Clostridium* b. *E. coli*

 c. *Bacillus* c. *Streptococci*

 44. Which of the following is the most commonly used yeast for baking

1. Active dry b. Instant

c. Fresh d. None of the three are used in baking

 45. Which of the following is an example of GMF?

 a. Pomato b. Spirulina

 c. Babycorn d. Mushrooms

 46. Perfringens food poisoning is caused by

 a. *Clostridium perfringens* b. *Clostridium botulinum*

 c. *Clostridium difficle* d. *Clostridium tetani*

 47.Another name for food vaccine is

 a. Chocolate vaccine b. Fruit vaccine

 c. Plant vaccine d. Edible vaccine

 48. Pasteurisation is associated with

 a. fish b. Milk

 c. Water d. Alcohol

 49. Which of the following is not an advantage of edible vaccine?

 a. Edible means of administration

 b. No need of medical personnel and syringes

 c. Easy for administration and transportation

 d. Can substitute regular food

 50. The cause of food spoilage is

 a. Growth of microorganisms b. Autolysis

 c. Oxidation by air that causes colour change d. All of these

 51. Innovative foods can’t help in

 a. Sustainable b. Food shortage

 c. Food wastage d. Food accessibility

 52. Which is the common food preservation technique?

 a. Freezing b. Fermentation

 c. Heating d. Freeze drying

 53. Food fortification means

 a. Increasing mass of food b. Reducing cost of food

 c. Storing food d. Increasing the nutrient value

 54. What was the first food that was fortified?

 a. Potato b. Rice

 c. Salt d. Maize

 55. Through which of the following process, sugar is converted into alcohol?

 a. Pasteurization b. Oxidation

 c. Bleaching d. Fermentation

 56. Who is the father of canning?

 a. Louis Pasteur b. John Hall

 c. Nicolas Appert d. Flemming

 57. The undesirable change in a food that makes it unsafe for human consumption is called as,

 a. Food decay b. Food spoilage

 c. Food wastage d. Food trash

 58. Aflatoxin is produced by

 a. Aspergillus b. *Rhizopus*

 c. *Mucor* d. *Penicillium*

 59. Botulism is caused by

 a. *Clostridium botulinum* b. *Clostridium difficile*

 c. *Clostridium tetani* d. *Clostridium subtilis*

 60. Which of the following is a fermented cabbage?

 a. Sausage b. sauerkraut

 c. Olives d. Green Olives

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KEY

| Q. No. | Answer | Q. No. | Answer | Q. No. | Answer |
| --- | --- | --- | --- | --- | --- |
| 1 | a | 21 | d | 41 | d |
| 2 | a | 22 | b | 42 | c |
| 3 | d | 23 | d | 43 | b |
| 4 | b | 24 | c | 44 | b |
| 5 | c | 25 | a | 45 | a |
| 6 | a | 26 | a | 46 | a |
| 7 | c | 27 | c | 47 | d |
| 8 | a | 28 | d | 48 | b |
| 9 | d | 29 | d | 49 | d |
| 10 | c | 30 | a | 50 | d |
| 11 | d | 31 | a | 51 | c |
| 12 | c | 32 | d | 52 | c |
| 13 | b | 33 | d | 53 | d |
| 14 | c | 34 | a | 54 | c |
| 15 | a | 35 | a | 55 | d |
| 16 | b | 36 | d | 56 | c |
| 17 | b | 37 | a | 57 | b |
| 18 | d | 38 | a | 58 | a |
| 19 | a | 39 | c | 59 | a |
| 20 | a | 40 | b | 60 | b |