

**D. P. Bhosale College, Koregaon.**

**Department of Microbiology**

Question Bank Semester V

**Paper XI Food and Industrial Microbiology**

**Q1. Rewrite the following sentences by selecting correct alternative.**

1. Phenyl acetic acid is used as a precursor to produce penicillin .....  
a) G b) V c) X d) K
2. Alcohol is extracted from the fermented broth by using .....  
a) Flocculation b) solvent extraction c) distillation d) chromatography
3. Tables wines contain..... % alcohol by volume.  
a) 10- 15 b) 2-5 c) 5-7 d) 25
- 4 ..... acids, in addition to lowering the pH of food also actively inhibit Microorganisms.  
a) Organic b) mineral c) inorganic d) fatty
5. The kinds and .....of nutrients in food determines which Microorganisms will grow in it.  
a) Diversity b) complexity c) proportions d) consistencies
6. The incubation period in staphylococcal food poisoning is usually .... Hrs.  
a) 2-4 hrs b) 24 hrs c) 1 week d) 48 hrs
7. The oil commonly used for mineral oil over layer is .....oil.  
a) Olive b) groundnut c) castor d) paraffin
8. The aflatoxins are produced by .....  
a) Aspergillus flavus b) Aspergillus oryzae  
c) Penicillium crysogenum d) Aspergillus nidulans
9. Probiotics are .....microorganisms which when ingested exert positive influence on host health or physiology.  
a) Viable, non –pathogenic b) viable, pathogenic  
c) killed, non –pathogenic d) killed, pathogenic

10. Tournae disease of wine is caused by ..... .
- a) Aerobic rods b) anaerobic rods
  - c) Aerobic cocci d) anaerobic cocci
11. End point determination assays are used for.... substances.
- a) Stimulatory b) alkaline c) neutral d) inhibitory
12. The process involving determining and optimizing fermentation conditions on small scale and employing those conditions on large scale with slight variations is called..... .
- a) Strain improvement b) scale up
  - c) Microbial assay d) screening
13. LAL test is used for testing.....
- a) Pyrogen b) carcinogenicity c) Allergy d) toxicity
14. Cream filled bakery products such as cream rolls, custards etc. are good carriers of .....
- a) Staphylococcal enterotoxin b) botulin c) subtilisin d) perfringen
15. Egg white contains ..... which inhibits the growth of many bacteria.
- a) lactenin b) anticoliform factor c) lysozyme d)benzoic acid
16. Fusel oil produced in alcohol fermentation contains .....
- a) Higher alcohols b) esters c) ethyl alcohol d) methanol
17. .... assays are highly specific and carried out for quantitative detection of minute amount of product .
- a) metabolic response b) turbidometric
  - c) diffusion d) enzymatic
18. .... involves increasing efficiency of fermentation microorganism so that increase in the product yield will occur .
- a) assay b) scale c) strain improvement d) screening
19. For pyrogen testing ..... are used as experimental animals.
- a) Guinea pig b) Rabbits c) Mice d) Horses
20. .... Can cause carcinogenic effects on animals and human systems.
- a) Enterotonin b) Botulin c) subtilisin d) Aflatoxins

21. Most fresh plant and animal foods have a ..... Oxidation reduction potential .
- a) low and well poised b) high c) positive d) very high
22. The nontoxic wetting agent used for suspension of penicillium spores during inoculum preparation is .....
- a) Sodium chloride b) sodium thiosulphate c) sodium lauryl sulfonate d) acetic acid
23. Penicillin is extracted from the fermented broth by using .....
- a)Distillation b) solvent extraction c)flocculation d)chromatography
24. Ame's test is used for ..... testing.
- a) carcinogenicity b) pyrogen c) toxicity d) sterility
25. one mg of current international standard sodium penicillin G contains approximately.....units of activity.
- a) 1565 b)1665 c)1765 d)1865
26. S. aureus produces are ..... serologically distinct enterotoxins.
- a) 2 b) 4 c) 6 d) 8
27. The aW value of pure water is .....
- a) 1.0 b)2.0 c)3.0 d)4.0
28. Crystallization procedure is used for recovery of .....
- a) red wine b) Citric acid c) SCP d)white wine
29. .... pigment form grape skin is responsible for red colour of wine.
- a) Pyocyanin b) Anthocynin c) Lecitinin d) clytocin
30. Mycotoxin is produced by .....
- a) Bacteria b) actinomycetes c) fungi d) viruses
31. A set of ..... rabbits are used in general pyrogen testing.
- a) 2 b) 4 c) 3 d) 5
32. ....is the most efficient method used in preservation of industrially important Microorganism.
- a) Freezing b) Drying c) Lyophilization d) Sterilization
33. The titre of .....antibodies increases in allergy.

- a) IgG b) IgD c) IgE d) IgM
34. In Gram negative cell wall.....act as pyrogen.
- a) Lipoprotein b) Lipopolysaccharide c) Peptidoglycan d) Phospholipids
35. Soyabean Casein digest medium is used in the testing of .....
- a) sterility b) pyrogen c) toxicity d) allergen
36. In microbiological assay of antibiotic penicillin, the test organism used is .....
- a) E.Coli 113-3D strain b) Bacillus Subtilis
- c) Staphylococcus aureus 6538-P d) Sarcina spp
37. White casse defect in wine is caused by.....
- a) Fe-ions b) Mg-ions c)Mn-ions d)Na-ions
38. Staphylococcal food poisoning is caused by ingestion of heat stable .....
- .....produced by the organism.
- a) Exotoxin b) Enterotoxin c) Cytotoxin d) Neurotoxin
40. Fresh milk contains .....as naturally present inhibitory substances to prevent the growth of microorganism.
- a) lactenins & anticoliform factor b) lysozymes
- c) benzoic acid d) furfurals
41. The.....filters are used for continuous filtration.
- a) Plate –Frame b) Pressure leaf c) Stacked disc d) Rotary vaccum
42. Recovery & purification of penicillin from the fermented broth is done by using .....
- a) Flocculation b) Solvent extraction
- c) Distillation d) Chromatography
43. Symptoms of Staphylococcal food poisoning occur within .....hours of food ingestion.
- a) 2-4 hrs b) 24 hrs c) 1 week d) 48 hrs
44. .... are commonly used organisms in probiotics.
- a) Viruses b) Salmonella spp.
- c) Lactobacillus spp. D) Vibrio spp.

45. The pigment from grape skin which is responsible for colour of red wine is.....
- a) Pyocyanin b) Anthocyanin c) Lecithinin d) cytokine
46. The most efficient method used in preservation of industrially important microorganism is .....
- a) Lyophilization b) Sterilization  
c) Freezing d) Drying
47. .... are used as experimental animals for pyrogen testing.
- a) Guinea pig b) Rabbits c) Mice d) Horses
48. The.....filters are used for continuous filtration.
- a) Plate –Frame b) Pressure leaf  
c) Stacked disc d) Rotary vaccum
49. .... is the most common cause of food infection.
- a) Staphylococcus aureus b) Salmonella spp  
c) Lactobacillus spp. d) Vibrio spp.
50. For alcohol production from molasses, the optimum sugar concentration is adjusted between .....
- a) 1-5 b) 5-10 c) 10-18 d) 20-25

**Q.2 Attempt the following long answer questions.**

1. Explain the factors determining food as a substrate for microorganisms.
2. Discuss the concept and applications of probiotics.
3. Explain the use of solvent extraction and distillation for recovery of fermentation products.
4. Discuss various types of microbiological assays.
5. Describe alcohol fermentation with respect to organisms used, raw materials, fermentation conditions and recovery.
6. Discuss the principles and any 3 methods of food preservation.
7. Enlist various microbial assays and discuss diffusion assay technique in

detail.

8. Discuss various sources of microorganisms to food.
9. Describe the industrial production of red table wine.
10. Describe penicillin fermentation with respect to medium, methods and recovery.
11. What is food poisoning? Discuss in detail Staphylococcal food poisoning'
12. Discuss in detail strain improvement by using mutation with suitable examples.
13. Discuss in detail strain improvement by using recombination with suitable examples.
14. Explain the use of centrifugation and flocculation for recovery of fermentation products.
15. Describe pyrogen testing in detail.

**Q.3. Write short notes**

- 1) TDT and TDP
- 2) Applications of probiotics
- 3) Solvent extraction
- 4) Crystallization
- 5) Sterility testing
- 6) Diffusion assay
- 7) Staphylococcal food poisoning
- 8) Applications of probiotics
- 9) Aflatoxins
- 10) Toxicity testing
- 11) Spoilage of wine
- 12) Turbidometric assay
- 13) Salmonellosis
- 14) Probiotics
- 15) Redox potential of food

- 16) Spoilage of vinegar
- 17) Pyrogen testing
- 18) Chromatography
- 19) Recovery of Penicillin
- 20) Use of auxotrophs in strain improvement
- 21) Spoilage of Beer
- 22) Canning
- 23) Allergy testing
- 24) Carcinogenicity testing
- 25) Adsorption chromatography
- 26) Types of wine
- 27) Culture collection centers
- 28) Scale up of fermentation
- 29) Enzymatic assay
- 30) pH of Food