

- C. are infectious particles
- D. are too small to be seen with the unaided eye
- E. can only be found growing in laboratories

27) Which activity is an example of biotechnology? *the use of microorganisms to make desired product*

- A. bacteria in the soil secreting an antibiotic to kill competitors
- B. a microbiologist using the microscope to study bacteria
- C. Egyptians using moldy bread on wounds
- D. **Escherichia coli producing human insulin**
- E. Public health officials monitoring diseases in a community

* 28) A microbiologist inoculates Staphylococcus epidermidis and Escherichia coli into a culture medium. Following incubation, only the E. coli grows in culture. What is the most likely explanation?

- A. the microbiologist used too much inoculum
- B. the culture is contaminated
- C. the incubation temperature was incorrect
- D. the culture medium must be selective**
- E. the culture medium must be differential

29) The Gram stain, acid-fast stain and endospore stain have the following in common:

- A. used on a wet mount of the specimen
- B. used heat to force the dye into cell structures
- C. outcome based on cell wall differences**
- D. use a negative stain technique
- E. are differential stains

30) The term sterile means free of all life forms.

- A. true
- B. false**

? 31) Which of the following is not a chemical component of a bacterial cell wall?

- a. cellulose**
- b. peptidoglycan
- c. teichoic acids
- d. peptide chains
- e. N-acetylmuramic acid

* 32) Which of the following best describes a plasmid?

- a. A gene within the chromosome
- b. Small circular piece of DNA outside the chromosome**
- c. The genetic material of a bacteriophage
- d. Part of bacterial ribosomes
- e. A single, linear strand of DNA

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33) Absence of all life forms:

- a. Clean
- b. Disinfected
- c. Sterile
- d. Aseptic
- e. Sanitized

34) If you were asked to sterilize a heat sensitive item, be most suitable?

- a. Steam autoclave
- b. Pasteurization
- c. Ethylene oxide
- d. Ethyl alcohol
- e. Hot air oven

35) A useful method or compound for sterilizing foods such as fresh vegetables:

- a. Ionizing radiation
- b. Ultraviolet light
- c. Steam autoclave
- d. Phenols
- e. Formaldehyde

36) Which of the following is commonly used to prepare incision sites for surgery and as a surgical scrub?

- a. Ethyl alcohol
- b. Hydrogen peroxide
- c. Iodophor
- d. Glutaraldehyde
- e. Lysol

37) Which of the following is not true of both natural penicillins and first generation cephalosporins?

- a. Contain a beta-lactam ring
- b. Come from molds
- c. Damage bacterial cytoplasmic membranes
- d. Easily modified
- e. Can be inactivated by beta-lactamases

38) Which of the following terms describes organisms that thrive in the cold?

- A. Mesophiles 20-40
- B. Thermophiles >60
- C. Psychrophiles <10
- D. Aerophiles
- E. Basophiles >7

39) A microorganism that requires very little free oxygen

- a. mesophile
- b. macroaerophilic
- c. ~~microaerophilic~~ → *Nisseria*.
- d. heteroaerophilic

40) A condition characterized by the multiplication of bacteria in blood.

- a. septicemia
- b. bacteremia
- c. bulimia
- d. anemia

41) Having the capacity to do something that is not compulsory, in particular -
having the ability to live or adapt to certain conditions.

- a. heterotrophic bacteria *break organic compounds.*
- b. autotrophic bacteria
- c. facultative bacteria
- d. normal flora

42) A microbe that can only live in the presence of oxygen

- a. Strict (obligate) anaerobe
- b. **Strict (obligate) aerobe**
- c. Strict (obligate) parasite
- d. Strict (obligate) saprophyte

43) The prevention of sepsis by preventing or inhibiting the growth of causative microorganism

- a. immunoglobulin
- b. disinfection
- c. **antisepsis**
- d. sterilization

44) A microbe that can only survive in an area without oxygen present.

- a. strict (obligate) aerobe
- b. **strict (obligate) anaerobe**
- c. strict (obligate) parasite
- d. strict (obligate) saprophyte

45) A visible group of bacteria growing on a solid medium, presumably arising from a single organism.

- a. commensalism
- b. coccal clusters
- c. **bacterial colony**
- d. bacterial culture

46) A chemical or physical agent that kills disease-causing microorganisms.
Generally used on inanimate objects

- a. disinfectant
- b. antiseptic
- c. alcohol
- d. sterilant

47) The process of completely removing or destroying all life forms or their products on or in a substance.

- a. disinfection
- b. antiseptis
- c. sterilization
- d. scrubbing

48) An agent that destroys bacteria but not necessarily their spores.

- a. James Bond y3
- b. bactericide
- c. autoclave.
- d. viricide

49) The destruction of infectious agents by chemical or physical means directly applied to an inanimate object.

- a. antiseptis
- b. disinfection
- c. incineration
- d. cold

50) A bacteria that prefers moderate temperature and develops best at temperatures between 25 C and 40 C.

- a. psychrophile
- b. mesophile
- c. thermophile
- d. elvis

1. prokaryotic cell str. may include all of the following except:

- a. Mesosomes
- b. Two chromosomes x
- c. Pili
- d. Sulfur granules.
- e. Metachromatic granules.

2) All of the following may be associated with B. except:

- a. Spheroplast
- b. outer memb.
- c. Teichoic acids
- d. Lipid A
- e. Monotrichous flagellum.

3) Calcium Dipicolinate is a major component found in association with:

- a. Gram +ve cell wall
- b. Endospores
- c. G +ve cell wall
- d. G -ve cell wall
- e. Acid fast cell wall

4. B that grow best at body Temp. is referred to as:

- a. Halophiles
- b. Microaerophiles
- c. Psychrophils.
- d. Mesophils
- e. none of the above

5) which of the following contributes mainly to the adherence of bacteria to teeth surface?

- a. Pili
- b. Flagella
- c. Glycocalyx
- d. Somatic antigens
- e. all of the above

6. distance among gram -ve D

- a. Transformation
- b. Conjugation
- c. Transduction
- d. Mutation
- e. Spheroplast Formation.

7. An F+ bacterial cell is able to:

- a. Form sex pili
- b. Transfer plasmids
- c. Transfer part of its DNA chromosomes
- d. both a&b
- e. all a, b, c

8. Scarlat fever is due to infection with:

- a. Staph. epidermidis
- b. Staph aureus.
- c. Group A streptococci
- d. Bordetella pertussis
- e. N. meningitidis

9) All of the following are common causes of meningitis in children except:

- a. E. coli
- b. Strept. pneumoniae
- c. N. meningitidis
- d. H. influenzae
- e. Campylobacter jejuni

10. Food poisoning caused by staph. aureus in normally associated with:

- a. Short incubation period (2-8 hrs)
- b. Vomiting & Diarrhea
- c. Septicemia x

11. Streptolysin O is produced by:
- ~~A~~ Group A hemolytic strep
 - Group B hemolytic strep
 - Strept. pneumoniae
 - Strept. viridans
 - All of the above
12. A+ve tuberculin test indicates mostly
- immunity against tuberculosis
 - Susceptibility to tuberculosis
 - previous contact with tubercle bacilli
 - both a, c
 - both b, c
13. which of the following bacteria are killed (.....) at room & - cold temp.
- N. gonorrhoea.
 - N. meningitidis.
 - H. influenzae.
 - both a,c
 - All a, b, c
14. The Gram-stain is most imp. in the diagnosis of:
- Tonsillitis
 - ~~Meningitis~~
 - Tuberculosis
 - Diarrhea.
 - Septicemia
15. which of the following B is often associated. presence of capsule.
- strept. viridans.
 - strept. pneumoniae.
 - clostridium tetani

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16. lysogenic B are characterized by the presence of
- Transposons.
 - Episomes.
 - ~~prophage~~
 - R-plasmids.
 - none of the above.
17. phenotypes of bacterial cs are characterised by
- structural properties.
 - physiological properties
 - genetic variations.
 - ~~both a & b~~
 - all a, b, c
18. which of the following bacteria can't be killed by pasteurization:
- Brucella sp.
 - hemolytic strept.
 - Mycobacterium sp.
 - staph. species.
 - none of the above
19. all of the following can be used for Disint of skin except.
- Povidon-iodine.
 - 70% ethyl alcohol
 - 70% isopropyl alcohol
 - ~~5% lysol~~ ^{Pheno I}
 - 3% T????? of iodine.
20. which of the following is considered a third generation of cephalosporine:
- cefataxime.
 - cefotaxidime
 - cephalothin
 - ~~both a, b~~
 - all a, b, c

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- d. *erythromycin*
- c. Gentamicin
- d. vancomycin
- e. ofloxacin

22. staph. species is normally sensitive to

- a. Vancomycin
- b. Ampicillin
- c. sulfonamides
- d. cotrimoxazole
- e. cephalothine.

23. which of the following is not aminoglycoside

- a. Tobramycin
- b. Amikacin
- c. Norfloxacin
- d. Netilmicin
- e. Neomycin

24. Resistance to penicillins may result from

- a. production of Beta-lactamases
- b. P lack of penicillin receptors (PBPs)
- c. Development of L- forms
- d. both a, b
- e. all a, b, c

25. the single most imp. test for Determining the virulence of staph. aureus:

- a. Mannitol fermentation
- b. Hemolysis (beta) of sheep RBC on bld ag
- c. Detection of coagulase
- d. The catalase test
- e. Detection of penicillinase.

26. a +ve Bile-esculin test & agrrowth in 6 Molar. Nacl are Diag-

- nostic for the identificatic
- a. group A B- hemolytic strep.
- b. group B strepto.

5

27. *N. meningitidis* differs from *N. gonorrh* in their

- a. oxidase cytochrome rxn
- b. catalase rxn.
- c. fermentation of sugars
- d. Growth requirements.
- e. Growth thayer-Martin medium.

28. Hemophilus influenzae is differentiated from related G-ve bacilli by its:

- a. Growth on brain-heart infusion medium.
- b. Growth on chocolate agar.
- c. Requirement for growth factors V & X medium
- d. formation of black colonies on potassium tellurite
- e. sensitivity to bacitracin

29. All of the following B may cause bloody Diarrhes except:

- a. shigella sp.
- b. campylobacter jejuni
- c. yersinia enterocolitis
- d. staph. aureus
- e. salmonella sp.

30. chronic carriers of salmonella typhi often carry the organism in their:

- a. urinary tract
- b. Respiratory tract
- c. Gall bladder
- d. intestinal tract.
- e. liver

31. Blocking antibodies are associated with serological test related to

- a. Brucellosis
- b. Tuberculosis
- c. Typhoid
- d. Shigellosis

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32. Moraxella catarrhalis is closely related to
- Micrococcus sp.
 - ~~Neisseria sp.~~
 - Harmophilus sp.
 - ???eromonas sp.
 - none of the above.
33. Active immunization against group A strep. is done with.
- streptolysin O
 - streptolysin S
 - streptokinase.
 - Attenuated strep.
 - none of the above
34. Anthrax is primarily a disease of:
- sheep
 - cattle
 - Human
 - both a, b
 - both b, c
35. which of the following suspected Dis. should be treated with antitoxin serum:
- ~~Tetanus~~
 - scarlet fever
 - Gas Gangrene
 - plague
 - Brucellosis
36. Blue green pus is often associated with infection caused by
- acinetobacter sp.
 - proteus.
 - ~~pseudomonas aeruginosa.~~
 - clostridium perfringis.
 - Bacillus cereus.
37. all of the following characteristics are related to vibrio cholerae

era

38. a naerobic bacteria are often associated with the following
- enterotoxin production
 - ~~brain abscess~~
 - Tonsillitis
 - pneumonia.
 - acute endocarditis
 - meningitis.
39. Bone marrow culture is recommended in ch. cases of:
- endocarditis
 - lyphoid fever
 - ~~Brucellosis~~
 - both a, b
 - both b, c
40. which of the following Dis. is considered most contagious via patient contact.
- tetanus
 - Gas gangrene
 - ~~Diphtheria.~~
 - non typhoidal salmonella.
 - Brucellosis
41. Group A strept. is known to cause
- Impetigo
 - Erysipelas
 - pearipural fever
 - both a, c
 - all a, b, c
42. Neonatal meningitis is commonly associated with
- citrobacter sp.
 - pseudomonas sp.
 - ~~E. coli~~
 - Diphtheria
 - Micrococcus sp.

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- ~~b. Staph aureus~~
 c. yeersinia pestis.
 d. compylobacter jejuni
 e. enterotoxigenic E coli.
44. all of the following about mycoplasma a true except:
 a. mycoplasma hominis & ureaplasma cause urogeni infection.
 b. Diseases caused by mycoplasma are host restic
 c. They are pleomorphic M.O & show Ag vic va
~~d. The cause intracellular infection by attaching themselves 1st to neuraminic acid~~
 e. Their lab diagnosis depends on isolation of M.O or demonstrating arising titer of Ab.
45. chlamydia is characterized by all of the follow except,
 a. the are of obligate intracellular parasite that have adefect in metabolic E.
 b. elementary body is the infections form
 c. can cause avariety of infecn depending on the type.
 d. chlamydia trachomatis differs from chlamydia psittaci in type of inclusion body its content & host & antibiotic susceptibility
~~e. both elementary & reticulate bodies are resistance to trypsin & toxic to the mouse.~~
46. which of the following about rickettsia is true
 a. Domestic animal are the main reservoir
~~b. typhas group mainly invade endothelial cells causing vasculitis characterised by acute selflimited fever & rash.~~
 c. Diagnosis depend on isolation of M.O using blood culture & demonstrating arising antibody titer.
 d. all of them can grow freely in the cytoplasm of infected cell
 e. Direct contact is usually the mode of transmission
47. which of the following is not true:
 a. nongonococcal urethritis commonly caused by mycoplasma trachomatis.

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Answer Key :-

1 - b	16 - c	31 - a
2 - c	17 - d	32 - b
3 - b	18 - e	33 - e
4 - d	19 - d	34 - d
5 - c	20 - d	35 - a
6 - b	21 - e	36 - c
7 - e	22 - a	37 - d
8 - c	23 - c	38 - a
9 - e	24 - e	39 - c
10 - d	25 - c	40 - c
11 - a	26 - d	41 - e
12 - c	27 - c	42 - c
13 - e	28 - c	43 - b
14 - b	29 - d	44 - d
15 - b	30 - c	45 - e
		46 - b

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