

# *microbiology Collected by*



### Archive microbiology –Wareed (midterm exam)

#### Content :

- 1- Introduction to microbiology lecture
- Bacterial structure lecture
- Bacterial physicology lecture
- Microbial genetics lecture
- Identification and classification of Bacteria lecture
- Sterilization and disinfection lecture
- Gram +ve bacteria lecture
- Gram –ve bacteria lecture
- Infection control lecture
- Antimicrobial lecture
- Virus structure and classification lecture

#### عير مطلوب:Q1 : Molds are multicellular organisms that referred to

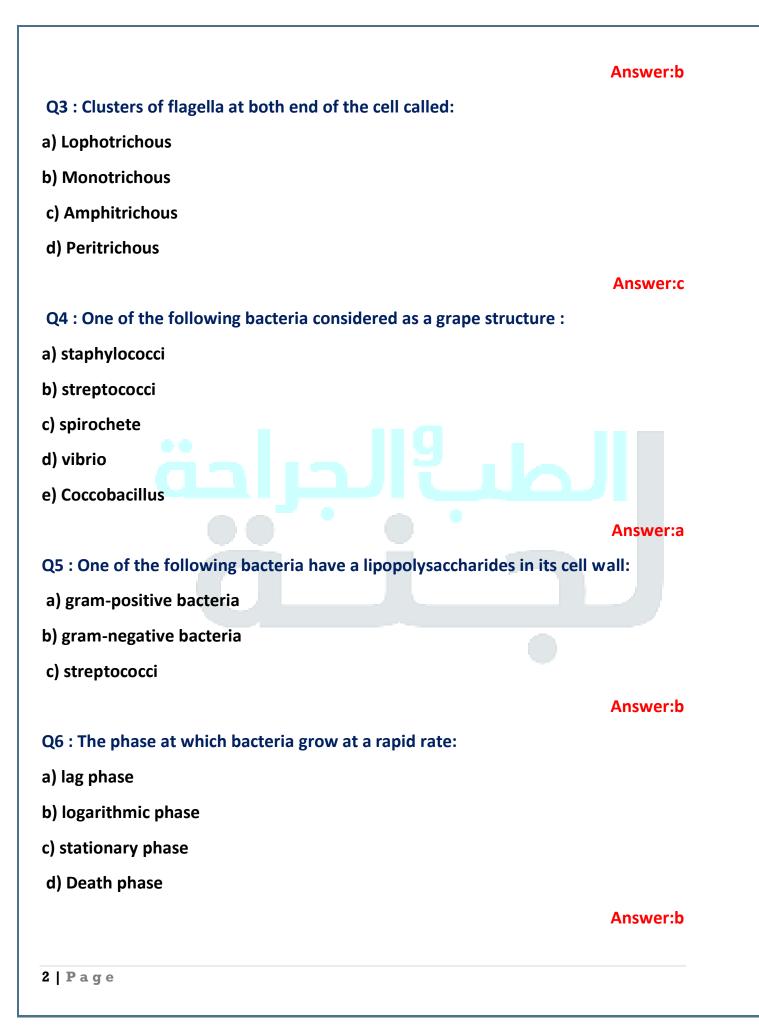
- a) viruses
- b) bacteria
- c) fungi
- d)protozoa

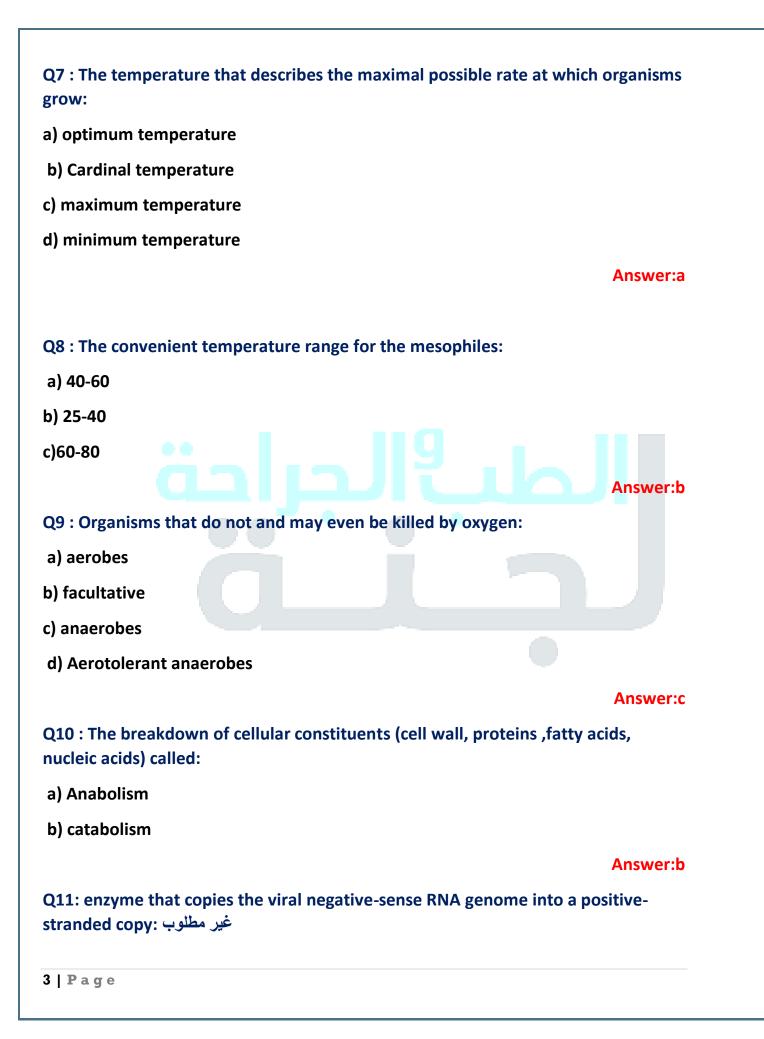
#### Answer:c

#### Q2 : Microorganisms that use photosynthesis to produce energy غير مطلوب

- a) Achaea
- b) algae
- c) fungi
- d) viruses

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a) RNA	polymerase	
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b) Reverse transcriptase

- c) RNA polymerase I
- d) RNA polymerase II

	Answer:a
Q12: The perfect percentage to be present in disinfectant and anticeptic alcohol is:	of
a) 100%	
b) 50%	
c) 70%	
d) 60%	
	Answer:c
Q13 : Q(13): One of the following is bacteriostatic : غير مطلوب	
a) Aminoglycosides	
b) Rifampicin	
c) Quinolones	
d) Erthromycin	
e) Voncamycin	
	Answer:d
Q14: One of the following use for inhibition of folate synthesis :	
a) Carbapenems	
b) Co-trimoxazol	
c) Rifampicin	
	Answer:b

#### Q15: For DNA hyperidization we use:غير مطلوب

#### a) Southern blot analysis

- b) Western blot analysis
- c) Eastern blot analysis
- d) Restriction endonuclease analysis

#### **Answer:a**

#### عير مطلوب : Q16: One of the following is true about viroids

- a) Contain host cell DNA instead of viral DNA within the capsid.
- b) Molecules of RNA with no capsid protein or envelope
- c) Infectious protein molecules that do not contain DNA or RNA

#### **Answer:b**

#### غير مطلوب: Q17: Amies medium is an example of

- a)Transport media b)Enriched media c)Selective media Q18: Items such as media, liquids, and instruments are usually autoclaved for 15 minutes at temperature :بغير مطلوب: a)100 C b)160 C c)121 C d)870 C C Q19: Blood agar is an example of: غير مطلوب: a)enriched media b)enrichment c)transport
- d)special
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## **Answer:a** غير مطلوب : Q20: Zoonotic transmission of pathogens means a) transmit pathogen from human to animal b) transmit pathogen from human to other human c) transmit pathogen from animal to human Answer:c Q21: A method which kills food pathogens without damaging the nutritional value or flavor: غير مطلوب a) Pasteurization b) Sterilization c) Incineration Answer:a Q22: For normal examination of microbes we use : a)High magnification 1000 diameter b)EM c)High magnification 400 diameter Answer:a غير مطلوب :Q23: The most common chemical sterilant is a)iodine b)Ethyl alcohol c)Chlorine d)Ethylene oxide Answer:d Q24: The first who use antisepetic techniqes is: غير مطلوب a) Robert Hooke 6 | Page

b) Leeuwenhoek's

c) Joseph Lister

d) Jenner

**Answer:c** 

#### Q25: What is the level of classification that strain refer to:

- a)Subspecies
- b)Species
- c)Genus
- d)Family

#### Answer:a

Q26: All of the following are Key Points for infection control and Personal Hygiene EXCEPT:

- a) Restrain hair hair falling forward may drop organisms.
- b) Keep nails long it's easier to pick stuff
- c)Minimum jewelry (see agency policy)
- d)Cover open wounds with an occlusive dressing
- e)Bare above elbow, no ties or coats

#### Answer:b

#### غير مطلوب : Q27: One of the following statements related to biovar

- a)Special biochemical or physiological properties
- b)Distinctive antigenic properties
- c) Pathogenic properties for certain hosts
- d) Ability to be lysed by certain bacteriophages
- e)Special morphologic features

**Answer:a** 

Q28: A boy with difficulty in breathing... Bacteria gram negative cocobacillus so the therapy will be for : a) Haemophilus influenza b) Bordetella pertussis Answer:b Q29: Most strains resists phagocytosis by: a)Capsule b) Cell membrane c)Cytoplasm Answer:a عير مطلوب :Q30: Virus contains lipid in it's virion a) Parvoviruses b) Picornaviruses c) hepadnaviruses d) Herpes virus Answer:d Q31: All of the following about C.difficile, EXCEPT? a) heavly attached to the colon b) antibiotic associated colitis c) Enterotoxin that damage intestine d) major cause of diarrrhea in hospital e) It's an opportunistic infection **Answer:a** 

Q32: Someone came to the clinical with wound infection, black skin and gas bubbles, what is the true statement?

- a) the causative agent is spore-forming, gram positive bacilli
- b) the causative agent is spore-forming, gram negative bacilli
- c) the causative agent is nonspore-forming, gram positive bacilli
- d) the causative agent is nonspore-forming , gram negative bacilli
- e) the causative agent is spore-forming, aerobic and gram positive bacilli

**Answer:a** 

Answer:a

#### Q33: The following bacteria are interfering with normal muscle contraction?

a)clostridium botulinum and clostridium tetani

- b)C.botulinum only
- c)C.tetani only
- d)C.difficile only
- e)C.botulinum and C.difficile

Q34: Someone came to the clinical with clinical manifestation, he said to the doctor that he ate a canned food, what is the bacteria that associated with this?

- a) C.perfeingens
- b) C.difficile
- c) B.anthracis
- d) C.botulinum
- e) Mycobacterium

Answer:d

#### Q35: One of the following is INCORRECT?

a)coagulase negative involved in nosochomial and opportunistic infection

b)S.epidermids can easly optain from skin and mucous membrane

c)S.saprophticus lives on skin, intestine and vagina

d)coagulase is a specific to identified staphylococcus

e)S.aureus can cause necrotizing infection	
Answer:c	
Q36: Infant meningitis Bacteria was gram negative diplococcoid :	
a)Neisseria meningitidis	
b) Neisseria gonorrhoeae	
c) Haemophilus influenza	
Answer:a	
Q37: Uncultured gram positive bacteria, which of the following analysis use to identify it غير مطلوب:	
a)Serologic	
b)special biochemical	
c)PCR	
d)rRNA analysis	
e)gel electrophoresis	
Answera:	
Q38: What's incorrect about rhinovirus and poliovirus? غير مطلوب	
a)contain RNA polymerase	
b) have multiple antigenic types	
c) is not integrated	
Answer:a	
Q39: Ethylene oxide used in gaseous form for sterilizing heat sensitive Objects as :	
a) catheters	
b) gloves before use	
c) Glasswares	
d) forceps	
e)Endoscopes	
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## **Answer:e** Q40: one of these equipments is not needed in case of tuberculosis: a) surgical mask b) Gown c) Gloves d) Goggles e) Respirator mask Answer:a Q41: The average size of cells during the exponential phase of growth is: a) lesser than the lag phase b) greater than the lag phase c) none of these d) equal to the lag phase Answer:a غير مطلوب:Q42: One of the following viruses can enter the cell purely a) Parvoviruses b) Picornaviruses c) hepadnaviruses d) Herpes virus Answer:b Q43 Which of the following groups are given in precaution? A. History of hypersensitivity **B.** Impaired liver and kidney functions C. Pregnancy and breastfeeding D. children 11 | Page

# E. All of the above Answer:e Q44: All of the following mechanisms will cause antimicrobial resistance except? A. Inactivation of the antibacterial agent **B.** Target hyperproduction C. Target bypass **D.** Sequence mutation E. Multiple mutations of the genes found in the mitochondria Answer:e Q45) Incorrect about chlamidya: Answer: present free in cytoplasm Q46)Something related to Tugument: Answer: between plasmid and envelope Q47)True about capsid : Answer: protect genome and determine shape Q48)Miss match: answer: S.typhi === infecting proximal small bowel Q49) Eccentric spores : answer: Clostridium tetani Nabed (midterm exam)

#### 1) Which of the followings is INCORRECT? Select one:

2) Ribosomes are the factory of synthesis? Select one:

a.Coagulase negative staphylococci frequently involved in opportunistic infections. b.S.epidermidis can be easily isolated from skin

c.Coagulase positive S. saprophyticus frequently lives on skin, intestine, and vagina

d.S. aureus can cause serious infections

. e.Catalase test is used to distinguish between Staphylococci and Streptococci

Answer:c

a.Protein
b.Plasmid
c.Sugar
e.DNA Answer:a
3)An RNA virus that has a nuclear phase in its replication process is? غير مطلوب Select one:
a.Coronavirus
b.Rhabdovirus.
c.Retrovirus
d.Togavirus
e.Caliciviruses
Answer:c
5)bacterial flagella surrounding all the body is called?
a.Penitrichous
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**b.Amphitrichous** 

c.Lophotrichous

d.Monotrichous

e.Ditrichous

**Answer:a** 

Answer:d

#### 6) Which of the followings is mismatched? Select one:

a.E.coli: Diarrhea affects the proximal small bowel

b.S.enteritidis Dysentery affects the colon

c.V.cholera non - nfiammatory Diarrhea

- d.S typhi Invasive infection affects the proximal small bowel
- e.Shigella Invasive Inflammatory infection affects the colon

7) Genotypic methods of microbe identification include all the following غير مطلوب EXCEPT? Select one:

a.Nucleic acid sequence analysis.

b.rRNA analysis.

c.Direct whole pathogen agglutination assays.

d.Restriction fragment length polymorphism.

e. Plasmid fingerprinting.

Answer:c

#### 8) Infection control measures include all of the followings EXCEPT? Select one:

- a. Bare above elbow.
- b. Share thermometers between patients
- C. No coats.

d. Cover open wounds with occlusive adhesive

e. Hand washing

#### 9) Which of the followings has a spiral shape? Select one:

- a.Neisseria
- b.Treponema
- c.Chlamydia
- d.E.coli
- e.Yersinia

#### Answer:b

Answer:b

11)Which of the following pathogens might be associated with this case ? Select one :

a.Clostridium perfringens b. Bordetella pertussis C.Bacilius cereus d.Clostridium tetani e.Clostridium botulinum

12) Phagovar is an intra-subspecific designation depends on? Select one: غير مطلوب

- a.Special biochemical or physiological properties
- **b.**Distinctive antigenic properties
- C.Pathogenic properties for certain hosts
- d.Ability to be lysed by certain bacterial vinuses.
- e.Special morphologic features.

Answer:d

13) patient suffering from a difficulty in breathing, a Gram staining form the infected area showed Gram-negative cocco-bacilli, for which of the followings an empirical therapy should be given? Select one:

a.Proteus

**b.Bordetella pertussis** 

**C.Neisseria meningitides** 

d.Clostridium tetani.

e .E. coli

#### Answer:b

14) A patient with tuberculosis, isolated in a single room, the following personal protective equipments are needed for complete protection except? Select one:



#### غير مطلوب : Viropexis is? Select one

a.the separation of the capsid from the viral genome

b.a receptor-mediated endocytosis.

c.a process by which enveloped viruses obtain their envelope

d.the interaction of viral attachment proteins and specific host-cell receptor sites

e.regutated by host-cell DNA-dependent RNA polymerases .

Answer:b

17) After using a syringe to take a blood sample, one of the followinig is TRUE? Select one:

a.Recap the needle immediately

b.Leave the syringe on the patient's bed, wait an hour then recap the needle.

C.Swap the needle with alcohol then recap the needle.

d.Never recap the needle and discard the syringe in the yellow shap pin

e.Throw the syringe in the black plastic bag .

#### Answer:d

# 18) Which of the followings can be isolated from food and can cause flaccid paralysis? Select one:

- a.Clostridium botulinum b.Bordetella pertussis. c.Bacilus anthracis d.Neisseria meningitides e.Haemophilus influenza Answer:a 19) The order of wearing the personal protective equipment (PPE) Is? Select one: a.Gown, mask, gloves b.Mask, gloves, gown c.Gloves, gown, mask d.Mask, gown, gloves e.Gown, gloves, masks. Answer:a 20) Which of the followings is INCORRECT? Select one: a.S. aureus is catalase and coagulase positive.
- **b.Group B streptococcus is beta hemolytic**

c.The non-spore forming Bacillus cereus causes food poisoning

d.Clostridium tetani produces spores

e.Clostridium botulinum interferes with release of acetylcholine

#### Answer:c

Answer:a

Answer:e

21) Most of pathogenic bacteria can live in the following temperature rate? Select one:

- a. Mesophile
- b.Pshycrophile.
- c.Thermophile.
- d.Capnophils.
- e.Hyperthermophile.

22) Extreme halophlies are characterzed by? Select one:
a.Requiring high leveis of carbon for growth
b.Requiting high evels of Nitrogen for growth
C.Requiring high leve of Copper tor growth
d. Requiring high evels of Zinc for growth
e.Requiing high leveis of Salts tor growth

#### 23) Aerobic bacteria are? Select one :

a.Only grow anaerobically

- b.Only grow in the presence of Co2
- c.Crainarly anaerabe but can grow with CO2.
- d.Ordinarily aerobe but can grow in absence of O2 .
- e.Only grow aerobicaly.

**Answer:e** 

24) )Which of the following structures can pass from one bacterium another? Select one:

- a.Plasmid
- **b**.Pilus
- C.Capsule
- d.Plasma Membrane
- e.Cell wall

Answer:a

Answer:c

25) One of the following antibiotic familes is bactericidal and preferred	فير مطلوب
in cases of meningtis? Select one:	

- a.Tetracycines
- **b.Chioramphenicol**
- c.Cephalosponns.
- d.Macrolides
- e.Cindamycin.

26) Chain of infection, which of the followings is WRONG? Select one:

a.Bacteria is an example on the infectious agent.

**b.**Portal of entry and exit and can be the blood.

C.Method of transmission such respiratory droplets

d.Susceptible host includes oruy the immunocompromised weak immunity) people.

e. Soil can be the reservoir.

Answer:b

27) Which of the followings is Gram negative diplococo? Select one:

- a.N. gonorrhoeae
- b.Staphylococci aureus
- c.H pylori
- d. S.pneumoniae
- e.Proteus

#### Answer:a

28) A3 years child was seen by the pediatrician On examination, suspected of having meningitis The CSF Gram staining showed a Gram negative coccobacilli Which of the following you expect the causative agent? Select one :



29) Sterilizing an endoscope in gastrointestinal units is best achieved by? غير مطلوب Setect one :

a.lodine.

b.Tyndallisation.

c.Inspissations.

d.Ethylene oxide.

e.Filtration .

Answer:d

**30)** Which of the following structures is never present in a Prokaryotic cell? Select one :

a.Cell wall.

b.Plasmid.

C.Ribosome.

d.Membrane-bound nucleus.

e.Cell membrane.

Answer:d

31) Items such as media, liquids, and instruments are usually autoclaved غير مطلوب at? Select one:
a.121°C For 15 minutes
b.63°C for 30 minutes
. c.72°C for 15 seconds.
d.100°C for 15 minutes.
32) The inhibition of acetylcholine release into the neuromuscular junction is mediated by? Select one:
a.Corynbacterium diptheriae.
b.Bordetella pertussis.
C.Bacilius anthracis.
d.Clostridium tetani
Answer:c
33) The cell wall of gram-negative bacteria may contribute to the development of septic shock. Identity the component which is most associated with the induction of septic shock? Select one:

a.Capsular protein

b.Lipopolysaccharide

**C.Peptidoglycan** 

d.Phospholipid

e.Teichoic acid

**Answer:b** 

Answer:b

34) Which of the followings is an example on transmission by droplet nuclei (airbome)? Select one:

- a. E. coli.
- **b.** measles
- c. hepatitis C.
- d. Cholera
- e. Hepatitis A

35) Which pair of microorganisms would you expect to be MOST closely related? Select one :

a.Yeasts and actinomycetes

b.Staphylococcus and Escherichia

C.Enterobacter aerogenes and Enterobacter cloacae.

d.Streptococcus pyogenes type a and Streptococcus pyogenes type b.

e.Micrococcus and Staphylococcus.

Answer:d

36) When a bacteriophage is integrated into a cellular genome it is called a? Select one:

a.virulent virus.

**b.lytic virus.** 

C.prophage

d.transducing virus
e.microphage
Answer:c
37) Two bacteria are start growing in ideal growth environment, How many organisms after three growth cycles you will count? Select one :
a.2
b.4
c.8
d.16
e.32
Answer:d
عير مطلوب   Select one: غير مطلوب   38) Cell walls of Fungi are made of a polymer called? Select one
a.Cellulose.
b.Chitin.
C.Peptidoglycan
d.The S-layer.
e.Fungi do not have cell walls
Answer:b
غیر مطلوب : Zoonotic infection, which of the followings is TRUE? Select one

a.Refers to infections coming to humans from animals and they represent a major health challenge

b.Refers to infections from human to animals leading to decrease available livestock

C.Is mainly a hospital acquired infections

d. They are not subjected to the chain of infection stages

e.It refers to infections between animals in the zoo



#### 44) MacConkey agar is considered a? Select one : غير مطلوب

a.Basal media

b.Transport media.

C.Storage media.

d.Enriched media.

e.Differential media.

#### **Answer:e**

#### 45) Antisepsis is best described as? Select one: غير مطلوب

a.Using alcohol or iodine to reduce the pathogenic organisms on skin so they no longer represent a pathogenic risk.

b.100% killing of all forms of microbial life on living tissue such as skin.

C.Subjecting living healthy tissue to ethylene oxide to kill spores.

d.Killing viruses on living tissue by temperature.

e.Using sodium hypochlorite to disinfect skin.

#### Answer:a

46) In treating infections, antibiotics should be used with precaution in which of the followings? Select one :

a. Those with history of antibiotic hypersensitivity (allergy).

b.Pregnants.

C.Children

d.Patients with impaired kidney functions.

e.All mentioned choices

#### Answer:e

#### غير مطلوب :Viral envelope consists of? Select one

a.Viral glycoproteins and host lipids.

b.Viral lipids and Host glycoproteins.

c.Carbohydrates and host lipids.

d.Only host-cell-derived lipids

e.Only Viral glycoproteins.

#### **Answer:a**

Answer:e

#### 48) Which of the following is CORRECT? Select one:

a.Neisseria meningitidis has no capsule

- b.Helicobacter pylon has no flagella.
- C.Rickettsia are obligate extracellular parasites with regular shapes.
- d.Shigella is a gram positive
- e. Neisseria meningitidis can reach the CNS

49) In which phase of bacterial growth are the number of growing equal the number of dying bacteria? Select one : a.Lag

b.Log

C.Stationary.

d.Death.

e.Eclipse.

Answer:c

50) One of the following antibiotics acts by net inhibiting purines synthesis? Select one:

a.Oxolinic acid.

b.Trimethoprim.

c.Chloramphenicol

. d.Tetracycline.

e.Cephalosporin.

# Answer:b غير مطلوب :Hepatitis D virus is? Select one **b.A defective virus** e.Molecule of RNA with no capsid protein or envelope Answer:b غير مطلوب : Single-stranded DNA is the genetic material of? Select one: غير مطلوب C.Papillomaviruses. e.Herpesviruses. Answer:d 53) Which of the following is characteristic of the lytic cycle? Select one: a.Many bacterial cells containing viral DNA are produced.

b.Viral DNA is incorporated into the host genome.

C.The viral genome replicates without destroying the host.

d.A large number of phages is released at a time

e.The virus-host relationship usually lasts for generations.

Answer:d

54) Which of the followings is an example on transmission by respiratory droplet? Select one :

a.Enterococcus faecalis.

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a.A prion

d.Viroid

**C.Pseudovirion** 

a.Caliciviruses

**b.**Flaviviruses.

d.Parvoviruses.

b.Diphtheria

**C.Hepatitis** 

d.Cholera.

e.Hepatitis

**Answer:b** 

Answer:a

55) Which of the followings can be isolated from a rusty nail and can interfere with the normal muscle contraction? Select one :

a.Clostridium tetani

b.Bordetella pertussis.

**C.Bacillius anthracis.** 

d.Neisseria meningitides

. e.Haemophilus influenza

56) Which of the followings is INCORRECT regarding Clostridium difficile? Select one :

a.Normal flora of the colon with high numbers in the stool.

**b.Opportunistic bacteria.** 

C.Causes antibiotic associated colitis.

d.Enterotoxins that damage intestine

e.Major cause of diarrhea in hospitals

**Answer:a** 

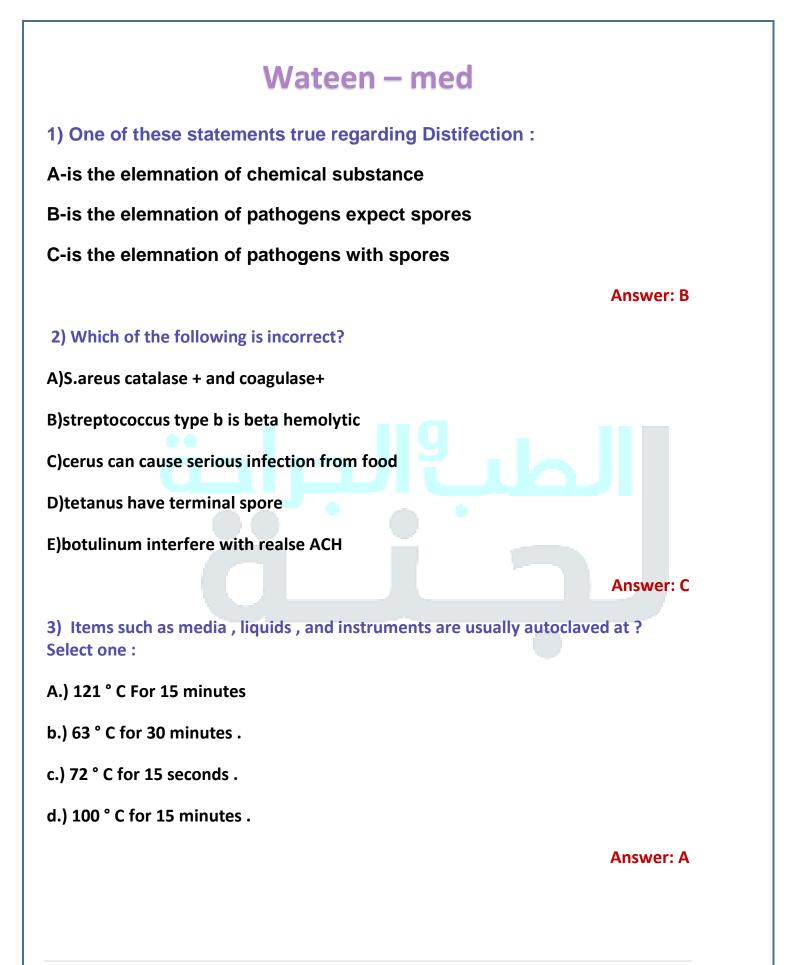
57) The cell wall of gram-negative bacteria may contribute to the development of septic shock. Identity the component which is most associated with the induction of septic shock? Select one:

a.Capsular protein

- b.Lipopolysaccharide
- C.Peptidoglycan
- d.Phospholipid
- e.Teichoic acid

Answer:b



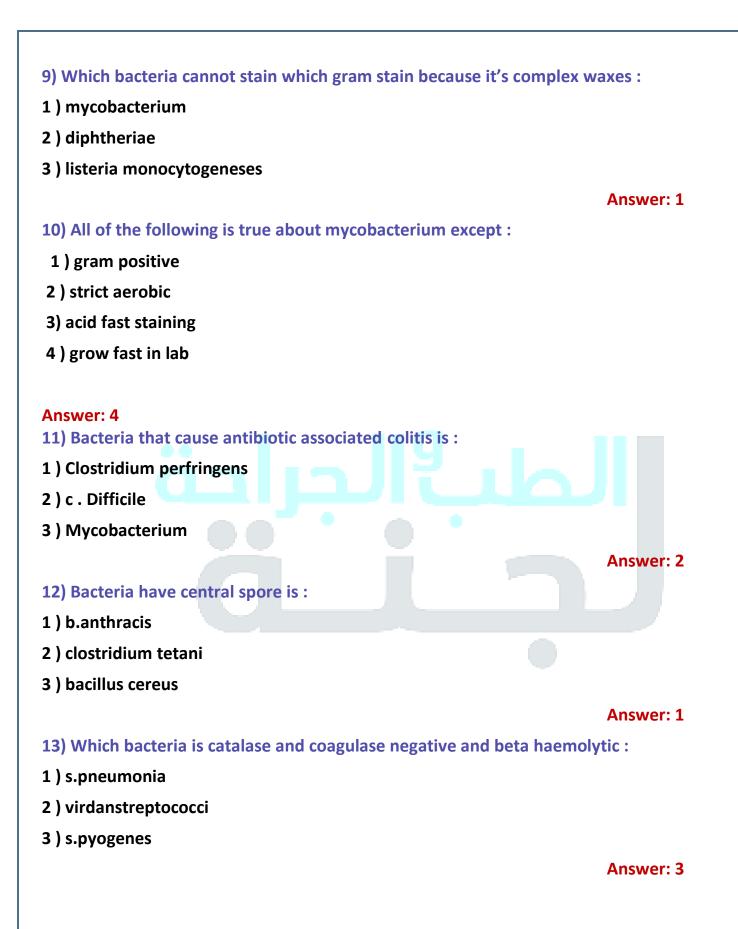


4) After using a syringe to take a blood sample , one of the followinig is TRUE ? Select one :

A.Recap the needle immediately

- b.Leave the syringe on the patient's bed , wait an hour then recap the needle .
- C. Swap the needle with alcohol then recap the needle .
- d. Never recap the needle and discard the syringe in the yellow shap pin
- e. Throw the syringe in the black plastic bag .

### **Answer: D** 5) All of the following is PPE except : 1) grow 2) respirator is properly fitted 3) goggles 4) washing hand Answer: 4 6) Zoonotic term is : 1) brucella in human from animal (example) 2) pathogen in human transmitted to animal Answer: 1 7) Highly motile bacteria in stomach is : 1) H pylori 2) V.cholera 3) brucella Answer:1 8) pseudomembrane which can cause asphyxiation, in which bacteria: 1) listeria 2) clostridium tetani 3) corynebacterium diphtheriae Answer: 3 31 | Page



14) Which of the following bacteria inhibit muscle contraction :

- 1) clostridium botulinum
- 2) clostridium Tetani
- 3) bacillus cereus

#### Answer: 1

#### 15) The best describe of lag phase is :

- 1) maximum growth
- 2) rate of cell growth equal rate of cell death
- 3 ) initiation adjustment

#### Answer: 3

Answer: 4

16)When you culture bacteria without known requirement for oxygen , at the second day you found bacteria at the bottom and surface ( at the surface more than bottom ) the true concept of this bacteria is :

#### 1) microaerophile

- 2) obligate anaerobe
- 3) obligate aerob
- 4) facultative anaerob

#### 17) Comma bacteria is :

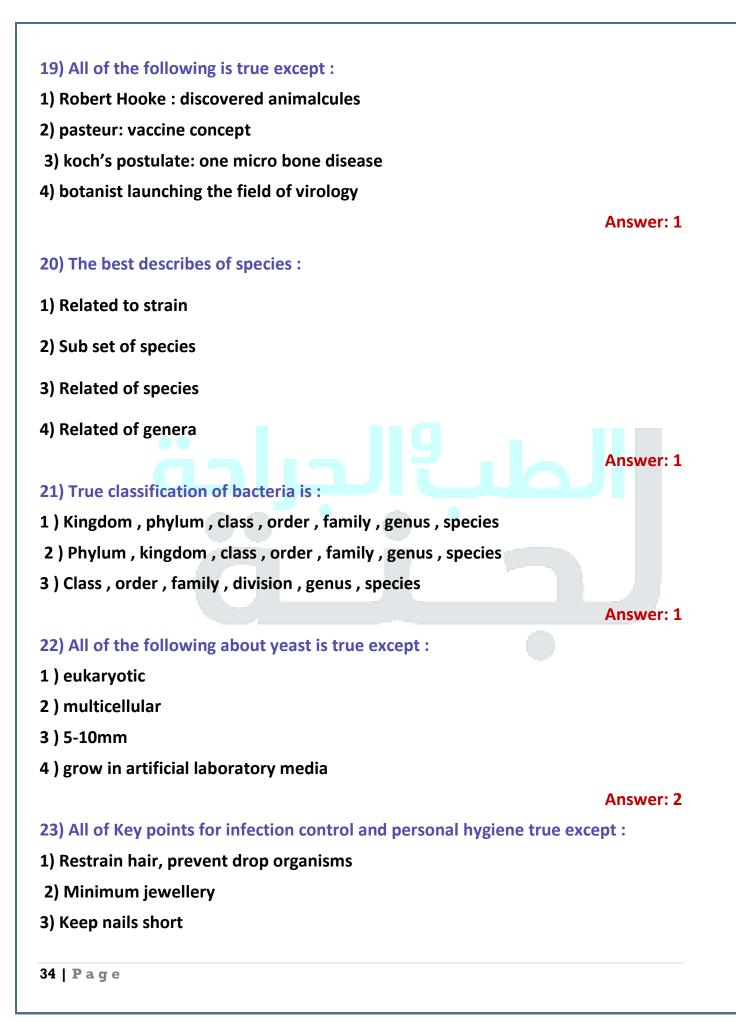
- 1) neutrophiles
- 2) alkaliphiles
- 3) psychrophiles

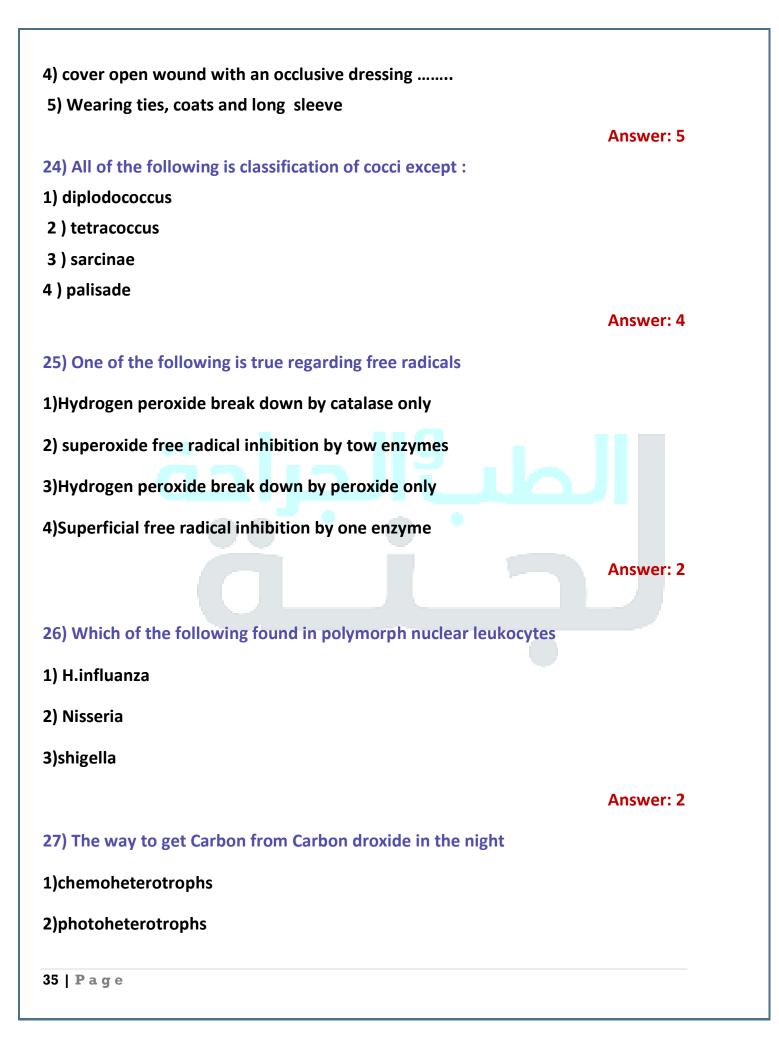
#### 18) Which of the following is false :

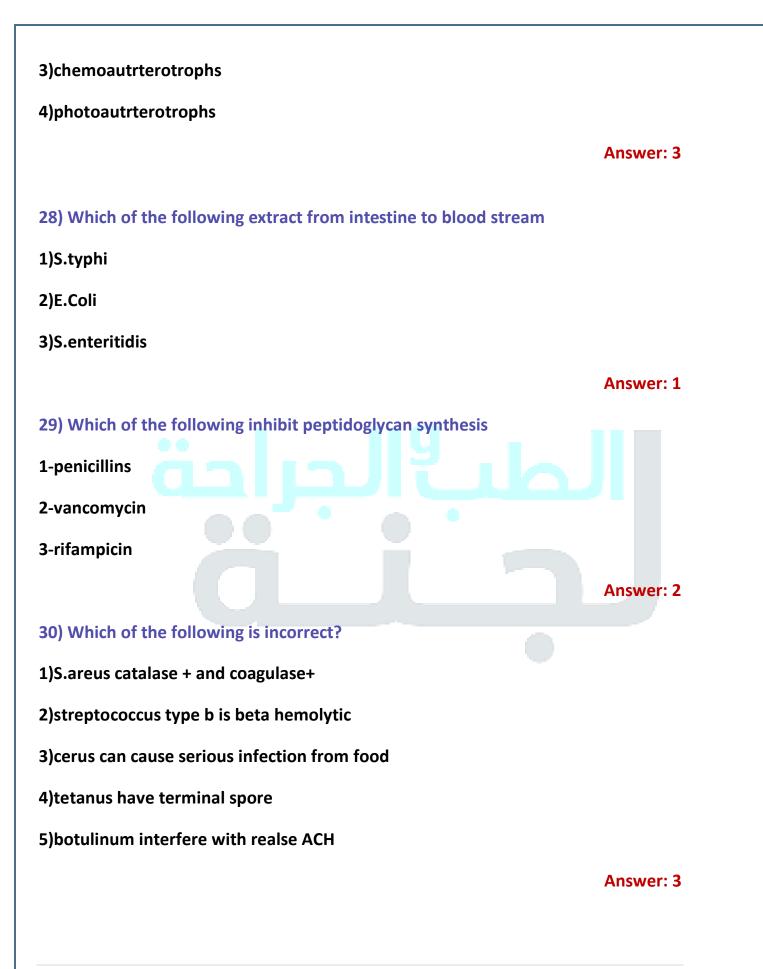
- A. O antigen can act as endotoxins
- B. Lipid A stableite outer membrane structure
- C. Lipid A may cause septic shock

#### Answer: A

Answer: 2







31) One of these statements true regarding Distifection
A-is the elemnation of chemical substance
B-is the elemnation of pathogens expect spores
C-is the elemnation of pathogens with spores
Answer: B
32) Group a streptococcus are :
A) B hemolytic
B) S. epidermidis
C) Coagulase negative
Answer: A
33) Which of the following can cause pseudomembranous and asphyxiation:
A) Diphtheria
34) All of the following is true about mycobacterium except:
A) Gram positive irregular bacilli
B) Acid fast staining
C) Grow very fast
Answer: C
35) Cerebra spinal fluid test for meningitis has shown gram negative diplococcus
bacteria:
A) Neisseria meningitides
B) Hemophilic influenza
Answer: A

