

SECTION 1 - SECTION 1

Question No.1

Superantigens true is

- Directly attached to variable region of MHC
- Not recalled
- Needs to processed and presented to cleft of MHC
- Rapidly stimulate Immune memory

Question No.2

Which of the following bacteria if found in throat swab of an infant needs antibiotics therapy

- S pneumoniae
- S aureus
- S pyogenes
- H influenzae

Question No.3

A successful hybridoma was produced by fusing

- Plasma cells and plasmids
- Plasma cells and myeloma cells
- Plasma cells and bacterial cells
- Myeloma cells and plasmids

Question No.4

Which of the following is NOT required by Chemolithotrophs for manufacturing their own food?

- Light
- Chemical substances
- Water
- All of these

Question No.5

The bacterial gene transfer can occur by –

- Transformation
- Transduction
- Conjugation

- All of these

Question No.6

A mutation that changes a codon from the code for one amino acid to the code for another amino acid is a

- Frameshift
 Nonsense mutation
 Missense mutation
 Samesense mutation

Question No.7

Schick test is used for the detection of -

- Diphtheria
 T.B.
 Cholera
 Typhoid

Question No.8

Endotoxin produced by gram negative bacteria is present in -

- Lipopolysaccharide
 Inner membrane
 Teichoic acid
 Peptidoglycan

Question No.9

Plant tissue culture technique is a redefined method of

- Asexual reproduction
 Vegetative propagation
 Hybridization
 Selection

Question No.10

Temperature-dependent sex determination is observed in

- Drosophila
 Amphibians
 Reptiles
 Sea urchins

Question No.11

The consensus sequence in eukaryotic Hogness box is

- TATATT
- TATAATG
- TATAAA
- TATATA

Question No.12

Which does NOT describe an R-plasmid?

- Has genes for multiple antibiotic resistance
- Found in many gram-negative bacteria
- Usually has genes coding for exotoxin
- Usually allows conjugation

Question No.13

Citrus canker is caused by -

- Lactobacillus
- Salmonella
- Xanthomonas
- Hay bacillus

Question No.14

Which of the statements about Candida is correct?

- Candidiasis is the mycotic disease
- C.albicans* is a normal microbiota of gastrointestinal tract, vaginal area & mouth
- Candida* sp. are important noscomial pathogens
- All of these

Question No.15

The cells having F plasmid in the chromosomes were termed as

- Hbr
- C+
- Hfr
- F-

Question No.16

The cell donating DNA during transformation is

- Endogenate
- Exogenate
- Merosite
- Mesozygote

Question No.17

Where does glycolysis occur in a cell?

- Mitochondrial matrix
- Cytoplasm
- Ribosome
- Nucleoplasm

Question No.18

The specific triplet of nitrogen bases on the transfer RNA is called

- Codon
- Anticodon
- Genetic code
- All of these

Question No.19

Role of magnesium in vaccine is

- Stabilizer
- Catalyst
- Conditioner
- Adjuvant

Question No.20

Which does NOT describe transcription?

- RNA polymerase
- mRNA synthesis occurs
- copying of a portion of one strand of DNA
- tRNA carries amino acids to the ribosomes

Question No.21

What will be the number of double stranded target molecules in the 7th cycle of PCR

- 16
- 32

- 64
- Infinity

Question No.22

Clostridium welchii is positive for -

- Elek's gel precipitation test
- Nagler's test
- Weil felix test
- Bacitracin test

Question No.23

Capacity of antigen to breakdown into small fragments each with a single epitopic region is known as -

- Solubility
- Foreignness
- Denaturation
- None of these

Question No.24

Physical removal of large and small particulates from the sewage through filtration and sedimentation is called:

- Tertiary treatment
- Primary treatment
- Secondary treatment
- Quaternary treatment

Question No.25

The suitable temperature to transport viral culture is –

- 25°C
- 5°C
- 45°C
- 30°C

Question No.26

Which of the following is a micro-organism without a rigid cell wall?

- Actinomycetes
- Mycoplasma
- Chlamydia

- E.coli*

Question No.27

A bacteria having the doubling time of 30 mins, assuming 100,000 bacterial cells fill the culture tube at 8 hrs. At which time half of the tube has achieved

- 4 hrs
- 7.5 hrs
- 2 hrs
- 6.5 hrs

Question No.28

Thermal death time is -

- Time required to kill all cells at a given temperature
- Temperature that kills all cells in a given time
- Time and temperature needed to kill all cells
- All of these

Question No.29

Pick out the vector used in human Genome project -

- Phage vector
- Cosmid vectors
- Yeast artificial chromosomes
- Yeast episomal plasmids

Question No.30

During specialized transduction

- Large amount of DNA is transferred
- A few no. of genes are transferred
- Whole DNA is transferred
- None of these

Question No.31

Electron microscope studies does not help in identifying which section of bacterial spore-

- Core
- Spore cortex
- Capsule
- All of these

Question No.32

Biological Oxygen Demand (BOD) is a measure of:

- Extent to which water is polluted with organic compounds
- Amount of carbon monoxide inseparably combined with haemoglobin
- Amount of oxygen needed by green plants during night
- Industrial wastes poured into water bodies

Question No.33

Alzheimer disease in humans is associated with the deficiency of

- Acetylcholine
- Gamma aminobutyric acid (GABA)
- Dopamine
- Glutamic acid

Question No.34

The first hormone artificially produced by bacteria is

- Adrenalin
- Insulin
- Thyroxin
- Testosterone

Question No.35

Most sensitive test for Treponema

- RPR
- VDRL
- Kahn
- FTA-ABS

Question No.36

Which of these organisms breaks down and releases nutrients from other dead organisms?

- Carnivores
- Producers
- Herbivores
- Decomposers

Question No.37

Hapten when combined with an antigen-

- Can initiate immune response
- Cannot initiate immune response
- Initiates immune response but without memory
- None of these

Question No.38

Semiconservative replication of DNA was first demonstrated in

- Escherichia coli
- Streptococcus pneumoniae
- Drosophila melanogaster
- Salmonella typhimurium

Question No.39

All are acid fast except-

- Mycoplasma
- Nocardia
- M leprae
- Bacterial Spores

Question No.40

DNA-replication is by the mechanism of

- Conservative
- Semiconservative
- Dispersive
- None of these

Question No.41

The most important energy-yielding reaction for an aerobic organism is

- EMP
- TCA cycle
- Krebs's cycle
- Glycolysis

Question No.42

The term antibiotic was coined by:

- Gerhard Domagk

- Howard Florey
- Selman Waksman
- John Tyndall

Question No.43

Which of the following disease is caused by virus and transmitted by mosquito

- Filariasis
- Plague
- Typhus
- Yellow fever

Question No.44

The diagrammatic representation of the total no. of genes in DNA is

- Gene map
- Genome
- Chromatin
- Gene-structure

Question No.45

Restriction-modification system of bacteria exists to

- Protect bacteria from invading foreign DNA
- Promote conjugation
- Encourage recombination of new genetic material
- Promote complementation

Question No.46

Production of RNA from DNA is called

- Transcription
- Transposition
- RNA splicing
- Translation

Question No.47

Which of the followings is also called sac fungi that live parasitically and in various habitats?

- Ascomycetes
- Sidiomycetes
- Zygomycetes

- Basidiomycetes

Question No.48

Which of the following is not involved in translation in eukaryotes?

- Aminoacyl tRNA
- Ribosome
- RNA polymerase
- Peptidyl transferase

Question No.49

Anticoagulant of choice for coagulation test?

- EDTA
- Heparin
- 3.5% sodium citrate
- Sodium oxalate

Question No.50

Salk vaccine is prepared from killed pathogenic

- Salmonella typhi*
- Influenza virus
- S. paratyphi*
- Poliovirus

Question No.51

Which of the following makes direct use of oxygen?

- Kreb's citric acid cycle
- Fermentation
- Glycolysis
- Electron transport

Question No.52

Agriculture by using only biofertilizers is called

- Composting
- Inorganic farming
- Manuring
- Organic farming

Question No.53

In an operon, which of the following codes for a repressor protein?

- Structural gene
- Operator
- Regulator gene
- Promoter

Question No.54

Viral DNA is resistant to DNA of the host cell because it contains

- 5'-HMC
- 5'-CHM
- 5'MHC
- 5'-HMA

Question No.55

Freeze-etch particles (used in preparing cell for electron microscopy) can be located in the

- Nucleus
- Cell membrane
- Cytoplasm
- Cell wall

Question No.56

Rickettsiae are stained with

- Machiavello and Gimenez stains
- Both Giemsa and Castaneda stains and Machiavello and Gimenez stains
- Giemsa and Castaneda stains
- Malachite green

Question No.57

The most common fungal partners of mycorrhiza are _____ species

- Azotobacter
- Azolla
- Glomus
- Frankia

Question No.58

Type IV Hypersensitivity is called as

- Anaphylactic
- Immune Complex Mediated
- Cytotoxic stimulating
- Delayed or Cell mediated

Question No.59

Clostridium welchii spore formation can be induced only on specified media such as

- Wilson-Blair medium
- Ellner medium
- Thayer-Martin medium
- Mc Conkey medium

Question No.60

Erythromycin is obtained from

- S.rimosus
- S.scabies
- S.erythraeus
- S.griseus

Question No.61

Choose the appropriate volume of MgCl₂ for 50 µl of 2.5 mM solution. (If MgCl₂ stock is 25 mM)

- 5 µl
- 10 µl
- 2.5 µl
- 1.25 µl

Question No.62

Which one of the following is polysaccharide?

- Glycogen
- Sucrose
- Maltose
- Lactose

Question No.63

Cyanobacteria are

- Chemoheterotrophs
-

Chemoautotrophs

- Photoautotrophs
- Photoheterotrophs

Question No.64

Vaccines are prepared from killed microbes, they are

- Inactivated vaccine
- Attenuated vaccines
- Auto-genous vaccine
- None of these

Question No.65

German measles is also known as

- Rubella / 2-day measles
- Rubella / 1-day measles
- Rubella / 4-day measles
- Rubella / 3day measles

Question No.66

Griffith (1928) reported the phenomenon of transformation first in -

- H influenzae
- Bacillus anthracis
- E.coli
- Streptococcus pneumoniae

Question No.67

Nitrate is converted into nitrite by the bacteria -

- S pyogenes
- M pneumoniae
- S aureus
- M tuberculosis

Question No.68

The basic units of nucleic acids are

- Sugars
- Nucleotides
- Nucleosides
- Nitrogenous bases

Question No.69

The process of RNA interference has been used in the development of plants resistant

- Nematodes
- Fungi
- Insects
- Virus

Question No.70

Which drug is given to prevent HIV transmission from mother to child

- Stavudine
- Lamivudine
- Nevirapine
- Abacavir

Question No.71

Cell cycle is regulated by

- Cyclins
- Cdks
- Cyclins and Cdks
- None of these

Question No.72

The enzyme responsible for removing the primer and filling the gap with DNA is

- RNA polymerase
- DNA polymerase
- RNA primase
- Helicase

Question No.73

Crossing-over most commonly occurs during

- Telophase II
- Prophase II
- Prophase I
- Anaphase I

Question No.74

Fulminant amoebic meningoencephalitis is caused by

- E. histolytic
- E. coli
- Acanthamoeba
- N. fowleri

Question No.75

Which of the following will begin fixing nitrogen only after they stop reproducing?

- Aspergillus
- All of these
- Rhizobium
- Penicillium

Question No.76

The enzymes which are commonly used in genetic engineering are

- Restriction endonuclease and polymerase
- Exonuclease and ligase
- Ligase and polymerase
- Restriction endonuclease and ligase

Question No.77

The light emitted by luminescent bacteria is mediated by the enzyme -

- Carboxylase reductase
- Lactose dehydrogenase
- Coenzyme Q
- Luciferase

Question No.78

In Streptococcus faecalis, the conjugation takes place by -

- Flagella
- Cell wall
- Pili
- Cell membrane

Question No.79

Which of the following vectors can carry the longest piece of foreign DNA?

- Plasmids
- Yeast Artificial Chromosomes (YAC)
- Bacteriophages
- Cosmids

Question No.80

What is the pH of resolving gel in SDS PAGE

- 7.2
- 6.8
- 8.8
- 7

Question No.81

Genetic information transfer from DNA to RNA is called –

- Transduction
- Transformation
- Recombination
- Transcription

Question No.82

Kinetosomes are observed in

- Fungi
- Algae
- Protozoa
- Viruses

Question No.83

A disease that can be transmitted by an infectious agent from one individual to another was called -

- Pandemic
- Communicable
- Epidemic
- Endemic

Question No.84

The following messenger RNA codons encode methionine

- AGU
- UGG

- AUG
- GUA

Question No.85

A symbiotic relationship/interaction in which “one species benefits and the other species is not affected” is called:

- Helotism
- Commensalism
- Ectomycorrhizae
- Endomycorrhizae

Question No.86

Koplick’s spots will develop in

- Mumps
- Rubella
- Measles
- HIV

Question No.87

The principal antibody in tears and saliva?

- IgM
- IgG
- IGA
- IgE

Question No.88

CD4+ is not important for which of the following

- Opsonisation
- Cytotoxicity of T cells
- Antibody production
- Memory B cells

Question No.89

When a bacterial cell and mitochondria are treated with cyanide and carbon monoxide what happens initially?

- Respiration inhibits
- Protein synthesis inhibits
- No effect occurs
- Photosynthesis inhibits

Question No.90

Biological false reaction in VDRL is related to -

- Mycobacterium leprae
- Corynebacterium diphtheriae
- Cl.welchi
- None of these

Question No.91

The predominant colon bacteria are

- Lactobacilli*
- Bacteroides*
- E coli*
- Staphylococci*

Question No.92

Exact weight of Tris in 25ml of 100 mM solution (FW – 121.14)

- 0.3028 gms
- 0.03028 gms
- 3.028 gms
- 30.28 gms

Question No.93

A metastatic cancerous tissue is termed 'sarcoma' if the disorder is in

- Fibroblasts
- Immune system
- Epithelial cells
- Circulatory system

Question No.94

Which algae is pathogenic to human?

- Ulothrix
- Cephaloeuros
- Macrocystis
- Prototheca

Question No.95

Growth curve does not include following phases of bacteria –

- Lag phase
- Decline phase
- Stationary phase
- Synchronous growth

Question No.96

The first transgenic crop was

- Pea
- Tobacco
- Cotton
- Soybean

Question No.97

In a microscope, the oil is used in oil immersion lenses for

- Lubricating the specimen on the slide for better view
- Changing the refractive index of the medium
- Improving the clarity of the lens
- Lubricating the lens

Question No.98

During mitosis ER and nucleolus begin to disappear at

- Late Metaphase
- Early Metaphase
- Late Prophase
- Early prophase

Question No.99

Number of doses of HDCV vaccine required for pre exposure prophylaxis of rabies-

- 1
- 5
- 3
- 7

Question No.100

Antigenic specificity is due to

- Chemical complexity
-

Solubility

- Steric configuration
- All of these