308 PU M Sc Microbiology

1 of 100
144 PU_2016_308_E
Syphillis is caused by:-

- Treponema pallidum
- Streptococcus syphilitic
- Yersinia psdtis
- Staphylococcus aureuss

2 of 100
125 PU_2016_308_E
Which of the following diseases is communicable?

- Cancer
- Rickets
- Diabetes
- Amoebiasis

3 of 100
108 PU_2016_308_E
Which of the following is currently considered as the leading cause of extinction?

- Competition from introduced species
- Habitat loss
- Over exploitation of spaces
- Pollution

4 of 100
183 PU_2016_308_E
The virus which does cause hemagglutination of human erythrocytes is:-

- Rubella
- Reovirus
- Enterovirus
- Myxovirus

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165 PU_2016_308_E
The class of immunoglobulin present in highest concentration in the blood of a human newborn is:-

- IgA
- IgD
- IgM

- IgG

6 of 100

146 PU_2016_308_E

First genetically engineered and biotechnologically produced vaccine was against:-

- Herpes simplex
- AIDS
- Small pox
- Hepatitis B

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122 PU_2016_308_E

'F' plasmids:-

- carry some chromosomal genes
- are those plasmids that have never been incorporated into a bacterial chromosome
- are responsible for high frequency recombination
- Antibiotic resistance

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164 PU_2016_308_E

Idiotypic determinants are located within:-

- constant regions of light chains
- the hinge region
- hypervariable regions of heavy and light chains
- constant regions of heavy chains

9 of 100

184 PU_2016_308_E

An example of an artificial virus is:-

- Reovirus
- Mumps virus
- Rabies virus
- Vaccinia virus

10 of 100

210 PU_2016_308_E

A mycorrhizal association is found to occur between:-

- fungi and plant roots
- Mycoplasma and roots
- bacteria and plant roots

- viruses and plant roots

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148 PU_2016_308_E
The raw material for citric acid production is:-

- Vinegar
- Corn
- Molasses
- Starch

12 of 100
110 PU_2016_308_E
A linkage map:-

- orders genes on a chromosome based on their location with respect to a stained band
- shows the actual ordering and spacing of genes on a chromosome
- orders genes on a chromosome based on recombination frequencies
- can only be constructed for sex chromosomes

13 of 100
149 PU_2016_308_E
Father of microbiology is:-

- Louis Pasteur
- A.V. Leeuwenhock
- Lister
- Robert Koch

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189 PU_2016_308_E
If the position one of the functional group is changed from one carbon to the other in the same molecule by an enzyme, the enzyme is called:-

- Epimerase
- Mutase
- Transferase
- Isomerase

15 of 100
143 PU_2016_308_E
Nitrites are oxidized to nitrates by a microorganism:-

- Nitrobacter
- Azatobacter

- Nitrosomonas
- Nitrosococcus

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109 PU_2016_308_E
On molar basis if DNA has 20% cytosine, then % of adenine would be:-

- 40%
- 30%
- 20%
- 60%

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126 PU_2016_308_E
TAB vaccine is useful against:-

- Diptheria
- Typhoid
- Pertussis
- Polio

18 of 100
208 PU_2016_308_E
Bacteria differ from Fungi in that the former:-

- are eukaryotic
- contain both DNA and RNA
- contain cell walls
- can reproduce sexually

19 of 100
169 PU_2016_308_E
How many microliters of 20% SDS are required to bring 1.5 mL of solution to 0.5%?

- 3.8 µL
- 385 µL
- 38.5 µL
- 380 µL

20 of 100
162 PU_2016_308_E
The condition in which there is one too many or one too few chromosomes is called:-

- Polyploidy
- Monoploidy

- Polytene
- Aneuploidy

21 of 100
150 PU_2016_308_E
Light gathering capacity of Microscope is called:-

- Numerical aperture
- Angular aperture
- Both of the above
- Objective distance

22 of 100
124 PU_2016_308_E
The maximum biodiversity in India occur at:-

- Eastern Himalayas
- Western Himalayas
- Western Ghats
- North-east Himalayas

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206 PU_2016_308_E
Bacteria spores:-

- allow the bacteria to multiple in adverse condition
- can be identified with Gram stains
- are killed by temperature of 120° for 20 minutes
- are usually formed by Gram-negative bacteria

24 of 100
142 PU_2016_308_E
Which of the following is a neutral stain?

- Malachite green
- Picric acid
- Neutral red
- Gmiemsa

25 of 100
141 PU_2016_308_E
The dengue fever virus is:-

- Orthomyxo virus
- Entero virus

- Arbo virus
- Echo virus

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105 PU_2016_308_E

Rhizofiltration is used to:-

- Reduce pesticide accumulation
- Reduce contamination of natural wetland
- Reduce mobility of contaminated soil
- Prevent leaching contaminants from the disposal site

27 of 100

207 PU_2016_308_E

The following substances are not used in Gram staining:-

- congo red
- iodine
- alcohol
- crystal violet

28 of 100

104 PU_2016_308_E

Bioaugmemtation involves:-

- Use insects for bioremediation
- Use of genetically modified DNA for bioremediation
- Use of compost for bioremediation
- Use of microbes for bioremediation

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202 PU_2016_308_E

Some bacteria can use CO_2 as the sole carbon source and obtaining energy by oxidation & reduction of inorganic substances. These bacteria are classified as:-

- Photoautotrophs
- Chemolithotrophs
- Photoheterotrophs
- Chemoheterotrophs

30 of 100

185 PU_2016_308_E

A 0.1g % solution is ___ µg/µl.

- 10
- 0.01
- 1.0
- 0.1

31 of 100

188 PU_2016_308_E

Which of the following does *not* participate in the formation of antigen-antibody complexes?

- Van der Waals forces
- Hydrophobic bonds
- Hydrogen bonds
- Covalent bonds

32 of 100

168 PU_2016_308_E

If the genetic code consisted of four bases per codon rather than three, the maximum number of unique amino acids that could be encoded would be:-

- 16
- 256
- 64
- 128

33 of 100

201 PU_2016_308_E

Which of the following is a form of sexual reproduction?

- Hermaphroditism
- Budding
- Regeneration
- Fission

34 of 100

130 PU_2016_308_E

Who provide the evidence that bacteriophage nucleic acid but not protein enters the host cell during infection?

- Hershey & Chase in 1952.
- Hershey & Macleod in 1952
- Hershey & Lederberg in 1951.
- Hershey &Tatum in 1951.

35 of 100

102 PU_2016_308_E
Which is the chief nitrogenous waste in humans?

- Urea
- Ammonia
- Ammonium nitrate
- Uric acid

36 of 100

103 PU_2016_308_E
Hologenome theory states:-

- Host independent evolution
- Host-symbiont co-evolution
- Evolution of bacteria
- Symbiont independent evolution

37 of 100

163 PU_2016_308_E
Hepatitis B is not transmitted by:-

- Blood transfusion
- Sexual contact
- Feco-oral route
- Congenital transmission

38 of 100

204 PU_2016_308_E
Hepatitis B:-

- is a RNA virus
- is a bacterium
- is a DNA virus
- is a viroid

39 of 100

106 PU_2016_308_E
Which of the following is not a vector used in gene therapy?

- HIV
- AAV
- Herpes
- Retro virus

40 of 100

187 PU_2016_308_E
Which of the following enzyme of TCA cycle is also a part of Electron Transport chain?

- Succinate Dehydrogenase
- Pyruvate Dehydrogenase
- Glutamate Dehhydrogenase
- Malate Dehydrogenase

41 of 100

170 PU_2016_308_E
In which of the following systems is the entropy the greatest?

- Water vapour
- Ice
- Liquid water at pH 7.0, 37°C
- Water with sufficient acid added to lower the pH to 2.0

42 of 100

167 PU_2016_308_E
Hemolytic disease of the newborn caused by Rh blood group incompatibility requires maternal antibody to enter the fetal bloodstream. Therefore, the mediator of this disease is:-

- IgM antibody
- IgE antibody
- IgA antibody
- IgG antibody

43 of 100

186 PU_2016_308_E
To which of the following organelles co-translational transport of proteins takes place?

- Mitochondria
- Endoplasimc Reticulum
- Nucleus
- Lysosome

44 of 100

166 PU_2016_308_E
The main advantage of passive immunization over active immunization is that:-

- antibody persists for a longer period
- it provides antibody more rapidly
- it contains primarily IgM
- it can be administered orally

45 of 100
181 PU_2016_308_E
Hemophilus needs:-

- LPS
- X and V factor
- V factor
- X factor

46 of 100
147 PU_2016_308_E
Penicilin is commercially produced by:-

- P.notatum
- P.citrinum
- P.chrysogenum
- P.roquefortii

47 of 100
203 PU_2016_308_E
To digest cellulose in its environment, a microorganism produces a/an _____.

- Endoenzyme
- Catalase
- Exoenzyme
- Polymerase

48 of 100
145 PU_2016_308_E
Shick test is used for the detection of:-

- Cholera
- Typhoid
- T.B.
- Diphtheria

49 of 100
100 PU_2016_308_E
Mangroves are highly productive eco system but they are poor in bird diversity because:-

- Lack of breeding place
- Lack of food diversity
- More number of predators that feed on birds
- Lack of structural diversity

50 of 100
107 PU_2016_308_E
An Hfr strain of *E. col* contains:-

- A bacterial chromosomes with a human gene inserted
- A vector of yeast or bacterial origin which is used to make many copies of particular DNA sequence
- Human chromosome with a transposable element inserted
- Bacterial chromosomes with a F factor inserted

51 of 100
129 PU_2016_308_E
The mitochondria of eukaryotic cells most likely arose as a result of endosymbiosis between a eukaryotic cell and a:-

- Red algae
- Non- sulphur purple bacterium
- Cyanobacterium
- Blue- green alga

52 of 100
161 PU_2016_308_E
The reaction of soluble antigen with antibody is known as:-

- Flocculation
- Precipitation
- Complement fixation
- Agglutination

53 of 100
121 PU_2016_308_E
RNA viruses are more complex to treat because:-

- Lack of restriction endonucleases
- Lack of ATP-dependent activity of RecA
- Lack of proof reading activity
- Environmental niche

54 of 100
205 PU_2016_308_E
Which of the following is false about *Pseudomonas aeruginosa*?

- It is sensitive to chloramphenicol
- It can cause osteomyelitis
- It is the most common cause of contact lens acquired infection
- It is a Gram negative bacterium

55 of 100
182 PU_2016_308_E
Which of the following is not pathogenic mycobacterium?

- M cheoleni
- M scrofulaceum
- M kansasii
- M smegmatis

56 of 100
128 PU_2016_308_E
A taxon is:-

- Herbal taxonomist
- A group of related families
- New taxonomist
- Modern taxonomist

57 of 100
123 PU_2016_308_E
A microbiologist analysed the DNA of *E. coli* before and after conjugation. She found that:-

- Both cells gained genes but lost none of their original genes
- One cell lost genes and the other gained genes
- Both cells lost some genes and gained others
- One cell gain genes and the genes of the other were unchanged

58 of 100
101 PU_2016_308_E
"Inclusive fitness" theory was originally put forward by:-

- Hamilton
- Darwin
- JBS Haldane
- RA Fisher

59 of 100
127 PU_2016_308_E
Taeniasis by *Taeniasaginata* is caused by consumption of:-

- Wild boars
- Beef
- Pork
- Salmon

60 of 100
209 PU_2016_308_E
Stains useful for identifying fungus include:-

- Gram stain
- Giemsa
- Methylene blue
- Cotton blue

61 of 100
243 PU_2016_308_M
Nitrogen is required by microorganisms for the production of which type of compounds?

- Phospholipids
- Cellulose
- Nucleotides
- Fatty acids

62 of 100
229 PU_2016_308_M
One principal function of complement is to:-

- cross link allergens
- bind antibodies attached to cell surfaces and to lyse these cells
- inactivate perforins
- phagocytize antigens

63 of 100
227 PU_2016_308_M
A culture of an E.coli strain that is lysogenic for phage lambda is grown at 32°C. Induction of the prophage from the host chromosome will occur when the culture is exposed to:-

- Wild type E.coli culture
- 40°C
- Infra-red radiation
- Ultra-violet radiation

64 of 100
223 PU_2016_308_M
The nature of bacterial capsules:-

- Causes widespread blood clotting
- Has no effect on the virulence of the bacteria
- Allows phagocytes to readily engulf these bacteria

- Affects the virulence of these bacteria

65 of 100

247 PU_2016_308_M

The experiments using *Diplococcus* to study bacterial transformation were performed by:-

- Joshua Lederberg
- Beadle and Tatum
- Griffith
- Iwanowsky

66 of 100

224 PU_2016_308_M

Bacterial cell wall is made-up of:-

- A. N-Acetyl glucosamine
- B. N-Acetyl muramic acid
- C. N-Acetyl glucosamine, N-Acetyl muramic acid and amino acids
- D. Both A and B

67 of 100

244 PU_2016_308_M

What is not a role of hydrogen within cells?

- It is a major element in all organic compounds
- It determines the shape and stability of proteins by forming disulfide bonds.
- It maintains pH within the cell.
- It forms hydrogen bonds between molecules.

68 of 100

242 PU_2016_308_M

Fungi are identified by which of the following characteristics?

- rRNA sequences
- Biochemical analysis
- Serological analysis
- Asexual spore forming structures and spores

69 of 100

228 PU_2016_308_M

What is "ALZHEIMER'S" disease?

- It is a disorder of the brain
- It affects liver
- It affects human immune system

- It affects Kidney

70 of 100

230 PU_2016_308_M

Is not an AB type toxin:-

- shiga toxin
- S.aureus α toxin
- cholera toxin
- botulinum toxin

71 of 100

245 PU_2016_308_M

What nutritional category of microorganisms plays an important part in recycling inorganic nutrients?

- Chemoheterotrophs
- Chemoautotrophs
- Photoautotrophs
- Saprobes

72 of 100

225 PU_2016_308_M

Which of the following bacteria cannot fix atmospheric nitrogen non-symbiotically?

- Rhizobium
- Klebsiella
- Azotobacter
- Pseudomonas

73 of 100

221 PU_2016_308_M

In a flowering plants megaspore undergoes mitosis and develops into a:-

- Anther
- Seed
- Embryo sac
- Petal

74 of 100

220 PU_2016_308_M

Which is the only colourless animal parasite among dinoflagellates?

- Notiluca
- Blastodium
- Gonyaulux

- Ceraium

75 of 100

222 PU_2016_308_M

When pathogenic bacterial cells lose the ability to make adhesion, they:-

- Absorb endotoxin
- Increase in virulence
- Produce endotoxin
- Become avirulent

76 of 100

241 PU_2016_308_M

Why are encapsulated bacteria generally more pathogenic than non-encapsulated strains?

- Because the capsule helps prevent phagocyte attachment to the organism
- Because the capsule stimulates a potent immune response in the host
- Because phagocytes do not recognize a capsule as foreign
- Because the capsule causes the phagocyte to mutate

77 of 100

226 PU_2016_308_M

Which of the following coenzymes act as an "electronic sink"?

- TPP
- FAD
- NAD^+
- PLP

78 of 100

246 PU_2016_308_M

What form of Oxygen is not toxic to microorganisms?

- O_2
- $^1O_2$
- OH^-
- O_2^-

79 of 100

248 PU_2016_308_M

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

- Coma
- Epidemic
- Pandemic

- Communicable

80 of 100

249 PU_2016_308_M

The proteinaceous compounds are converted to ammonia by:-

- Ammonification bacteria
- Denitrification bacteria
- Nitrification bacteria
- Putrifying bacteria

81 of 100

296 PU_2016_308_D

Among the following which would lead into new species formation?

- Niche specialization
- Increased resources
- Niche overlapping tolerance
- Lack of competition

82 of 100

294 PU_2016_308_D

Choose the correct sequence of evolutionary events in one form of allopatric speciation, using the codes given below:-

I. Geographical isolation
II. Ecological isolation
III. Increased pre- mating reproductive isolation
IV. Increased genetic divergence
V. Selection completed.

Codes

- III II IV V
- III IV II V
- I IV III V
- I II III V

83 of 100

295 PU_2016_308_D

Plants die in winter by frost because:-

- Of desiccation and mechanical damage to tissues
- No photosynthesis takes place at such low temperatures
- There is no transpiration
- Respiration ceases at such low temperatures

84 of 100
276 PU_2016_308_D
Whose invention permitted microbiologists to visually identify microbes?

- Louis Pasteur
- John Snow
- John Tyndall
- Anton van Leeuwenhoek

85 of 100
291 PU_2016_308_D
Member of the same species which are capable of interbreeding is best describe as:-

- Eco system
- Biosphere
- Community
- Population

86 of 100
273 PU_2016_308_D
A strong reducing agent readily _____ electron and undergoes _____.

- Accepts, oxidation
- Accepts, reduction
- Donates, oxidation
- Donates, reduction

87 of 100
299 PU_2016_308_D
Consider the following statement.

I. Reciprocal altruism health or sacrifice repaid later
II. Kin selection present when self-sacrifice relatives lead to altruism
III. Courtship ritual minimizes agonistic behaviour before mating
IV. Cognition is the ability to store, process and use sensory information

Which of the above statement are correct regarding animal behaviour?

Codes

- II, III, and IV
- I, II, and III
- I, II, III, and IV
- I, III, and IV

88 of 100
278 PU_2016_308_D

Acellular, non-living agents consisting of a protein coat that surrounds a nucleic acid core are called:-

- Viruses
- Bacteria
- Viroids
- Amoebae

89 of 100

275 PU_2016_308_D

All of the following are true with regard to fungi EXCEPT:-

- Yeasts, moulds and mushrooms are examples of fungi
- They are eukaryotes
- Some are single-celled and others are multicellular
- Most are photosynthetic and derive their energy from sunlight

90 of 100

298 PU_2016_308_D

Altruistic behaviour is not seen in:-

- Termite
- Silk Worm
- Ant
- Bee

91 of 100

292 PU_2016_308_D

Which of the following would cause deviation from the Hardy - Weinberg equilibrium?

- Lack of selection pressure
- Small population
- Random mating
- Isolation

92 of 100

271 PU_2016_308_D

In ion exchange chromatography with anion exchanger, the protein with negative charge:-

- will be eluted only after applying gradient elution
- will be eluted first
- will be eluted in washing step
- will not bind to the ion exchange resin

93 of 100

293 PU_2016_308_D

If 16% of the persons in a population show a recessive trait, what is the allelic frequency for the dominant allele?

- 16%
- 84%
- 96%
- 4%

94 of 100

277 PU_2016_308_D

Proteinacious agents that cause a number of neurodegenerative diseases such as Creutzfeld-Jacob disease and Mad Cow disease are called:-

- Viroids
- Virusoids
- Bacteria
- Prions

95 of 100

270 PU_2016_308_D

The advantage of the Edman's reagent (phenyl isothiocyanate-PTH) over Sanger's reagent (fluorodinotrobenzene-FDNB) in peptide analysis is:-

- that the process can be repeated on the remaining peptide
- complete denaturation
- complete hydrolysis
- complete oxidation of all disulfides

96 of 100

279 PU_2016_308_D

Which of these is not a living fossil?

- Archaeopteryx
- Lung fish
- Duck-billed platypus
- Frog

97 of 100

280 PU_2016_308_D

If your microscope has a 10X ocular lens and you are using the 100X objective lens, what is the total magnification?

- 1000
- 1100
- 10

- 100

98 of 100

274 PU_2016_308_D

The pH of blood of a healthy person is maintained at 7.40 ± 0.05. Assuming that this pH is maintained entirely by the bicarbonate buffer (pKa1 and pKa2 of carbonic acid are 6.1 and 10.3 respectively), the molar ratio of [bicarbonate] / [carbonic acid] in the blood is:-

- 10
- 1
- 20
- 0.05

99 of 100

272 PU_2016_308_D

Mutations often occur as a result of base substitutions. The most common cause of base substitutions is:-

- Meiotic errors
- Tautomeric shifts
- Base insertions
- Base deletions

100 of 100

297 PU_2016_308_D

"Acetylsalicylic Acid" is commonly known as:-

- Salsalate
- Aspirin
- Wintergreen
- Paracetamol