

PU Ph D Marine Biology

1 of 100

111 PU_2015_119

The apparent daily path of the Sun changes with the seasons because:-

- The Sun rotates
- Earth's distance from the Sun changes
- Earth's axis is tilted
- The Sun revolves

2 of 100

127 PU_2015_119

Enzymes are:-

- Fatty acids
- Proteins
- Vitamins
- None of these

3 of 100

207 PU_2015_119

Which of the following is greatly influenced by Ocean currents?

- Energy distribution
- Nutrient cycling
- Land formation
- Climate

4 of 100

105 PU_2015_119

What is most likely concerning Okazaki fragments?

- Pieces of DNA made during replication.
- Pieces of histone molecules released during transcription.
- Pieces of RNA which will join to form messenger RNA.
- Discovered by Linus Pauling as parts of the hemoglobin molecule.

5 of 100

213 PU_2015_119

Coelome is formed from which of the following germ layer?

- Ectoderm
- Mesoderm
- Endoderm

- All the three

6 of 100

168 PU_2015_119

What is standing stock?

- Biomass in a given locality
- Biomass in a give ecosystem
- Biomass in an area
- Biomass of a population present at any given time

7 of 100

158 PU_2015_119

The average salinity of ocean water:-

- 44 ‰
- 40 ‰
- 25 ‰
- 35 ‰

8 of 100

141 PU_2015_119

Which of these cellular organelles have their own DNA?

- Chloroplast
- Nucleus
- Mitochondrion
- All of these

9 of 100

217 PU_2015_119

The protoplasm is a:-

- Solution
- Emulsion
- Colloidal solution
- Suspension

10 of 100

202 PU_2015_119

Cyclones formed in the Atlantic Ocean are generally called as?

- Tornadoes
- Depressions
- Hurricanes

Typhoons

11 of 100

210 PU_2015_119

In the atmosphere where the ozone layer lies?

Above the troposphere

At the upper limit of the stratosphere

Troposphere

Below the troposphere

12 of 100

208 PU_2015_119

Tectonic forces is related with the building of various features of?

Earth's crust

Mountains

Ridges

Earth's surface

13 of 100

131 PU_2015_119

Which of the following statement is true?

Velocity of light is constant in all media

Velocity of light in vacuum is maximum

Velocity of light is same in all reference frames

Laws of nature has identical form in all reference frames

14 of 100

214 PU_2015_119

Which of the following is mesodermal in origin?

Neural tube

Protocord

Notochord

Archenteron

15 of 100

106 PU_2015_119

Where would you find the "Calvin cycle"?

The Calvin cycle is the cycle of nitrogen fixation and is found in the soil and roots of plants.

The Calvin cycle only occurs in mitochondria.

It is found in sea water.

- The Calvin cycle only occurs in autotrophs.

16 of 100

133 PU_2015_119

Which of the following pieces of oceanographic equipment is the most accurate when measuring seawater salinity?

- Salinometer
- Hydrometer Set
- CTD meter
- Chemical Test Kit (Knudsen Titration)

17 of 100

144 PU_2015_119

Standard visibility measurements of the sea water by the marine scientists made with the:-

- Fathometer
- Lux meter
- Refractometer
- Secchi disc

18 of 100

173 PU_2015_119

Most valuable mineral resources taken from beneath the sea floor:-

- Calcium
- Radiolarian
- Petroleum
- Manganese

19 of 100

182 PU_2015_119

The populations in any environment are known as sympatric, because:-

- Two populations are physically isolated by natural barriers.
- Two populations are isolated but occasionally come together to interbreed.
- Two populations share the same environment but cannot interbreed.
- Two populations live together and freely interbreed to produce sterile offspring.

20 of 100

185 PU_2015_119

Which of the following is the main feature of the ocean bottom?

- Guyots.
- Oceanic ridges.

- Seamounts.
- Trenches.

21 of 100

137 PU_2015_119

Dinoflagellates:-

- Breaks down oil
- Reproduce by simple cell division
- Produce blooms known as red tide
- Produce bioluminescence

22 of 100

147 PU_2015_119

Euryhaline indicates:-

- Tolerance of wide variations of salinity
- High salinity tolerance
- Low salinity tolerance
- Tolerant to varying temperature

23 of 100

204 PU_2015_119

Which of the following is the main factor in causing water pollution?

- Smoke
- Industrial waste
- Detergent
- Ammonia

24 of 100

216 PU_2015_119

The main components of the cell membrane are:-

- Vitamins and polysaccharides
- Carbohydrates only
- Proteins and lipids
- Fats and glycerol

25 of 100

139 PU_2015_119

The plasma membrane does all of these except:-

- Contains the hereditary material
- Regulates passage of material in and out of the cell

- Functions in the recognition of self
- Acts as a boundary or border for the cytoplasm

26 of 100

166 PU_2015_119

What is epifauna?

- Animals live on ocean bottom
- Animals live as parasites on other organisms
- Animals live on water surface
- Animals live by attaching on other organisms

27 of 100

104 PU_2015_119

You are given a piece of a molecule and told that it can be described in a shorthand notation as 3' CGGUUCCCCGGG 5'. Which of the following is most likely concerning this molecule?

- It is a piece of DNA which gives enough information to add 12 amino acids to a growing protein chain.
- It is a piece of RNA which gives enough information to add 4 amino acids to a growing protein chain.
- It is a piece of RNA which gives enough information to add 12 amino acids to a growing protein chain.
- It is a piece of either DNA or RNA.

28 of 100

192 PU_2015_119

A colloidal solution exhibits?

- No osmotic pressure
- High osmotic pressure
- Very high osmotic pressure
- Low osmotic pressure

29 of 100

109 PU_2015_119

How many molecules of CO₂ are generated for each molecule of acetyl CoA introduced into the Krebs cycle?

- Three
- Four
- One
- Two

30 of 100

200 PU_2015_119

Anticyclones are formed due to?

- High velocity winds
- Heavy rain fall
- Winds that rotate round the centre of minimum low barometer pressure
- Winds that flow spirally outward from the centre

31 of 100

157 PU_2015_119

The average velocity of sound in the ocean is:-

- 1450 m/s
- 100 m/s
- 334 m/s
- 1200 m/s

32 of 100

169 PU_2015_119

Upwelling is:-

- Algal blooming
- A process by which nutrient rich water is brought to the surface by pipe lines
- A process by which nutrient rich water is brought to the surface by natural oceanic processes
- Nutrient recycling in the ocean

33 of 100

102 PU_2015_119

Which is most accurate concerning thylakoids?

- Is the structure contains chemical substance for the digestion of cellulose in grass.
- Found inside the mitochondria.
- These are the stacks of disks inside chloroplasts.
- A community of microorganisms that live in the ocean and contain cyanobacteria as a major component.

34 of 100

188 PU_2015_119

What type of ribosomes is found in prokaryotic cell?

- 80 S
- 100 S
- 60 S
- 70 S

35 of 100

162 PU_2015_119

Great barrier reef is found in:-

- Newzealand
- Mediteranean sea
- Australia
- India

36 of 100

179 PU_2015_119

Warm water current in the ocean, which brings dry weather condition is known as:-

- La nino
- Aghulas
- El nino
- El lilo

37 of 100

218 PU_2015_119

The nucleus has the maximum size during which phase?

- Metaphase
- Prophase
- Interphase
- Telophase

38 of 100

100 PU_2015_119

Which of the following is a remarkable similarity between the chemical composition of the oceans and that of our blood?

- Both have naturally concentrations of fluoride.
- Both have naturally concentrations of chromium.
- Both have naturally concentrations of sodium and potassium.
- Both have naturally concentrations of potassium and boron.

39 of 100

122 PU_2015_119

Ethers are isomeric with:-

- Carboxylic acids
- Ketones
- Aldehydes
- Alcohols

40 of 100

136 PU_2015_119

During which era did the initial opening of the present-day Atlantic Ocean most likely occur?

- Cenozoic
- Mesozoic
- Paleozoic
- Late Proterozoic

41 of 100

134 PU_2015_119

Which of the following pieces of equipment would be most helpful to a marine scientist who wanted to describe the exact location of a sample?

- Electron Microscope
- Telescope
- Satellite
- GPS unit

42 of 100

126 PU_2015_119

The main structural feature of protein is:-

- Hydrogen bond
- Ether linkage
- Ester linkage
- Peptide linkage

43 of 100

154 PU_2015_119

The Challenger expedition for oceanographic studies were conducted:-

- 1872 - 1876
- 1896 - 1900
- 1885 - 1892
- 1832 - 1836

44 of 100

124 PU_2015_119

Lower amines are soluble in water due to:-

- Formation of complexes
- Low molecular mass
- Affinity with water
- Formation of hydrogen bonds with water

45 of 100

115 PU_2015_119

Which of the following is a lyophobic colloid?

- Sulphur
- Gelatin
- Starch
- Gum Arabic

46 of 100

143 PU_2015_119

Long, whiplike microfibrils that facilitate movement by cells are known as:-

- Leather
- Cilia
- Pseudopodia
- Flagella

47 of 100

151 PU_2015_119

The flow of solvent through a semi-permeable membrane towards the solution side is the phenomenon of:-

- Diffusion
- Osmosis
- Transfusion
- Absorption

48 of 100

118 PU_2015_119

Which of the following compound is most soluble in water?

- Sr SO₄
- CaSO₄
- MgSO₄
- BaSO₄

49 of 100

129 PU_2015_119

In anaerobic reaction, there is net gain of:-

- 38 ATP
- 2 ATP
- 50 ATP
- 10 ATP

50 of 100

103 PU_2015_119

Which is most accurate concerning fermentation?

- Part of the synthesis of carbohydrates by photosynthesis.
- Produces lactic acid in our muscles.
- Part of the breakdown process of cellulose in the human intestine.
- Produces ethanol in our muscles

51 of 100

177 PU_2015_119

Fishes are characterized by:-

- Four chamber heart
- Branchial heart
- Venous heart
- Two chamber heart

52 of 100

113 PU_2015_119

The function of the salt bridge is to:-

- Keep the level of solution same.
- Allow the current to flow through the cell and keep the solution electrically neutral.
- Allow ions to move from anode to cathode
- Allow solutions from one-half cell to the other half cell.

53 of 100

196 PU_2015_119

The average diameter of the earth is approximately:-

- 10,000 miles
- 25,000 miles
- 16,000 miles
- 8,000 miles

54 of 100

164 PU_2015_119

What is break water?

- Sea walls to protect high waves
- An artificial structure constructed to protect a coastal region from the force of ocean waves
- Natural structures which protect a coastal region from the force of ocean waves
- Coastal water body

55 of 100

107 PU_2015_119

Which of the following is most accurate concerning "crossing over"?

- It occurs only when there is mutation.
- Crossing over produces genetic variability during meiosis.
- Crossing over forms Okazaki fragments.
- Crossing over occurs only while a new strand of messenger RNA is being made.

56 of 100

211 PU_2015_119

Which of the following is responsible for stability of the nucleus?

- Neutron
- Proton
- Positron
- Electron

57 of 100

205 PU_2015_119

Which of the following is not an atmospheric pollutant?

- Hydrocarbons
- SO₂
- CO₂
- CO

58 of 100

120 PU_2015_119

Dissolution of SO₂ in water produces:-

- H₂SO₃
- H₂S₂O₇
- H₂S₂O₈
- H₂SO₄

59 of 100

155 PU_2015_119

Corals are:-

- Invertebrates belonging to Phylum Arthropoda
- Plants
- Invertebrates belonging to Phylum Echinodermata
- Invertebrates belonging to Phylum Cnidaria

60 of 100

160 PU_2015_119

Lagoons are:-

- Large water bodies having it own current circulation pattern
- Landward shallow water bodies with narrow connection with the sea
- Salt water bodies surrounded by land mass
- Water bodies along the sea coast

61 of 100

250 PU_2015_119

The Esophagus in bony fishes is?

- Short and compressed
- Short and expandable
- Long and expanded
- Long and compressed

62 of 100

247 PU_2015_119

The teeth of Elasmobranchs are modified as:-

- Cycloid scales
- Ctenoid scales
- Ganoid scales
- Placoid scales

63 of 100

229 PU_2015_119

The first global summit on the Ozone depletion was held in:-

- Washington, 1884
- Brazil, 1985
- Vienna, 1985
- New Delhi, 1984

64 of 100

239 PU_2015_119

Bottom pair trawling is also known as:-

- Double trawling
- Bull trawling
- Heavy trawling
- Pair trawling

65 of 100

252 PU_2015_119

This species of prawn is commonly known as Banana prawn:-

- Penaeus semisulcatus*
- Penaeus indicus*
- Penaeus monoceros*
- Penaeus merguensis*

66 of 100

225 PU_2015_119

What is the settlement stage larva of barnacle called?

- Nauplius
- Cyprid
- Mysis
- Zoea

67 of 100

231 PU_2015_119

The technology of bioremediation using microorganism was first developed by?

- C.D Bridges
- G. M. Robionson
- J.D. Watsen
- H.F.C Crick

68 of 100

258 PU_2015_119

Which is the atmospheric layer near the surface of earth?

- Ionosphere
- Troposphere
- Mesosphere
- Stratosphere

69 of 100

255 PU_2015_119

Which of the following method is best suited to determine bacteriophages concentration in a sample?

- Plaque assay
- Spectrophotometry
- Microscopy
- Chromatography

70 of 100

241 PU_2015_119

What is the spawning pattern in Oysters?

- Benthic spawners
- Nest spawners
- Substract spawners
- Broadcast spawners

71 of 100

223 PU_2015_119

The process transfer of genetic material from donor cell to recipient cell in bacteria is known as:-

- Transversion
- Transformation
- Conjugation
- Transduction

72 of 100

227 PU_2015_119

When groups of different population are found in a given area, it is known as?

- Environment
- Ecosystem
- Community
- Endemism

73 of 100

221 PU_2015_119

Which of the following exhibits endosymbiosis?

- Centrioles
- Ribosome
- Mitochondria
- Peroxisomes

74 of 100

256 PU_2015_119

By Electroporation a foreign DNA is introduced into the target organism by:-

- Active transport across the cell wall
- Changing the electric potential of the cell wall
- Lysis of the cell wall
- Changing the porosity of the cell wall

75 of 100

254 PU_2015_119

What is the role of SDS in polyacrylamide gel electrophoresis for the separation of a mixture of proteins?

- Have uniform charge density on the proteins
- Stabilize the protein
- Solubilize the protein
- Decrease the surface tension of buffer

76 of 100

237 PU_2015_119

In this Males obligatory parasites on their females:-

- Labeo sp*
- Diorosoma sp*
- Ceratias sp*
- Osteochilus sp*

77 of 100

245 PU_2015_119

What is the latest freezing technique?

- IFQ
- IQF
- TQF
- PQF

78 of 100

233 PU_2015_119

Which of the following Ice fish of the Antarctic have no haemoglobin in the blood?

- Pseudochaenichthys leorgianus*
- Pseudochaenichtys triorgians*
- Pseudochaenichthys georgianus*
- Pseudochaenichthys heorgianus*

79 of 100

235 PU_2015_119

Which year the FAO Code of Conduct for Responsible Fisheries was adopted?

- October 1895
- October 1890
- October 1998
- October 1995

80 of 100

243 PU_2015_119

Which of the following fish migration is Amphidromous?

- Anguilla Anguilla*
- Hilsa ilisha*
- Gobies*
- King salmon*

81 of 100

272 PU_2015_119

Which of the following statements do not define the characteristic property of water "water is a universal solution"?

- It has very low dielectric constant
- It is polar
- It can dissolve maximum number of compounds
- It has high liquid range

82 of 100

285 PU_2015_119

Which of the following energy is not a source of renewable energy from the sea?

- Tidal energy
- Petroleum
- Wave energy
- Ocean thermal energy

83 of 100

281 PU_2015_119

Which of the following do not represent G-proteins correctly?

- Energy for their activity comes from the GTP molecules
- They are activated by interaction with 7-pass receptors
- Their activation always increase the concentration of cAMP
- They are membrane associated proteins

84 of 100

262 PU_2015_119

The marine sponge can be differentiated from other animals due to the presence of:-

- Choanocytes
- Coelenteron
- Hollow body

- Dermal papillae

85 of 100

290 PU_2015_119

In a tidal cycle, which tide has a minimum current?

- Flood tide
- Ebb tide
- Slack tide
- Lunar tide

86 of 100

294 PU_2015_119

Biodiversity hot spots are recognized on the basis of:-

- Number of endemic species and the degree to which the organisms are threatened and endangered
- Total area of forest cover
- Their proximity to the national parks
- Number of species in the area

87 of 100

268 PU_2015_119

Which of the following is the similar characteristic in the development of echinoderms and chordates?

- Coelom
- Nervous system
- Heart
- Gut

88 of 100

274 PU_2015_119

The hardness of water is estimated by?

- Distillation method
- Conductivity method
- EDTA method
- Titrimetric method

89 of 100

280 PU_2015_119

Why glycolipids are found in the exterior side of the Cell membrane not in the cytoplasmic side?

- Inner layer is not thick enough to accommodate carbohydrates
- Carbohydrates are removed from the cytoplasmic side by glycosylase
- These are added only to lipids on the lumen side of the ER and golgi membranes

- Flippases move the glycolipids to this side of the membrane

90 of 100

283 PU_2015_119

Monoclonal antibodies are secreted by hybridomas which are generated by:-

- Fusion of immune spleen cells with plasmacytoma cells
- Growing immune spleen cells in the presence of HAT
- Growing immune spleen cells in the presence of B cells growth factors
- Fusion of immune spleen cells with any type of cells capable of growing in tissue culture

91 of 100

270 PU_2015_119

Which contains both polar and nonpolar covalent bonds?

- HCN
- H₂O₂
- CH₄
- NH₄Cl

92 of 100

260 PU_2015_119

Occurrence of algal bloom in the aquatic ecosystem indicates?

- Nitrification
- Pollution
- Eutrophication
- Biomagnification

93 of 100

266 PU_2015_119

Hydra is put under the phylum Cnidaria because they have:-

- Interstitial Cell
- Cnidoblasts
- Hypostome
- Tentacles

94 of 100

264 PU_2015_119

Which of the following organisms larval form is known as Ephyra?

- Aurelia
- Hydra
- Sea anemone

Obelia

95 of 100

296 PU_2015_119

Which of the following statement identify the biological magnification?

- Toxins become concentrated in successive trophic levels food web
- Toxins lost at each level in a food web
- Primary producers are at the bottom of the food chain
- Greenhouse effect having strong impact on tropical ecosystem

96 of 100

276 PU_2015_119

The empirical formula of a compound is CH_2 then it will be:-

- Alkane
- Alkene
- Arene
- Alkyne

97 of 100

292 PU_2015_119

When a dominant epistasis is operative between two gene loci, the 9:3:3:1 ratio becomes modified into:-

- 12:3:1
- 9:3:4
- 15:1
- 9:6:4

98 of 100

278 PU_2015_119

Photochemical smog is caused by:-

- CO
- CO_2
- NO_2
- O_3

99 of 100

298 PU_2015_119

When coral reefs grow in shallow waters along the coast, it is called:-

- Ahermatypic corals
- Hard reef
- Fringing reef

Coastal reef

100 of 100

288 PU_2015_119

In the ocean, the zone where availability of sunlight is not enough for the rate of photosynthesis to exceed respiration is known as:-

Neritic zone

Coastal zone

Aphotic zone

Photic zone