

119 PU Ph D Marine Biology

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Which of the following is the larval stage barnacle?

- Zoea
- Bipinaria
- Nauplius
- Veliger

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The deficiency of this vitamin causes night blindness:-

- 'K'
- 'C'
- 'A'
- 'B'

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What is the basic difference between ultraviolet, visible, and infrared radiation?

- Half-life
- Wave velocity
- Wavelength
- Temperature

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Pure water can be obtained from sea water by:-

- Centrifugation
- Sedimentation
- Plasmolysis
- Reverse osmosis

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Among the different organic food items, the highest energy is provided by:-

- Proteins
- Vitamin
- Lipid

- Starch

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Prokaryotic genetic material consist of:-

- DNA but no histones
- Both DNA and histones
- Either DNA or histones
- Neither DNA nor histones

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The term bleaching is associated with:-

- Seaweeds
- Corals
- Oysters
- Sea graesse

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Pedal disc present in:

- Hydra*
- Aurelia*
- Obelia*
- Metridium*

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The most primitive nervous system is found in:-

- Earthworm
- Amoeba
- Sponge
- Hydra

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Seasonal temperature changes are the greatest in:-

- The deep sea
- The Equatorial region
- Mid-latitudes

- Polar waters

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Bioluminescent organisms mostly use:-

- Hemerythrin
- Luciferin
- Sodium ion
- Magnesium

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Lepas and *Balanus* are included in the order:-

- Thoracica
- Decapoda
- Amphipoda
- Rhizocephala

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Fertilium is secreted by:-

- Nereis*
- male *Heteronereis*
- female *Heteronereis*
- None

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Pycnoclines are:-

- Vertical gradients in oxygen concentration
- Vertical gradients in temperature only
- Vertical gradients in sea water density
- Small scale changes in current structure

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Isinglass is obtained from:-

- Skin of fish
- Fins of fish
- Air bladder

- Fish scales

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Nautilus adjusts its vertical position in the water column by means of:-

- Use of low density ions
- Delicate projections from the shell that prevent sinking
- Swimming upwards continuously
- Gas secretion

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"Historia animalium" was written by:

- Aristotle
- John Ray
- Huxley
- Carlos Linnaeus

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Which pyramid will always be straight?

- Environmental factor
- Biomass
- Energy
- Number

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Tertiary sewage treatment would involve:-

- Removal of oxygen
- Removal of dissolved nutrients
- Removal of heavy metals
- The removal of very fine particulate matter

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Those are non-functional in higher chordates:-

- Pharyngeal gills
- Islets of langerhans
- Auditory organs

- Appendages

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Radiata include:-

- Porifera & Platyhelminthes
- Coelenterata & Ctenophora
- Porifera & Coelenterata
- Coelenterata & Platyhelminthes

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Visible light has the wavelength range of:-

- <200nm
- 400-700nm
- 700-900nm
- 200-400nm

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Poikilotherms:-

- Always lose heat to the surrounding sea water
- Are regulators with regard to body temperature
- Are conformers with regard to body temperature
- None of the above

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In the embryonic development, which is the starting phase:-

- Cleavage
- Fertilization
- Gametogenesis
- Gastrulation

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The blood in the body of the insects:-

- flows in open circulation
- resembles human beings in color
- contains hemoglobin in erythrocytes

- flows in arteries and veins

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In a sucker fish the sucker is a modification of:-

- Mouth
- Gill slit
- Dorsal fin
- Ventral fin

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Dissolved oxygen is usually measured chemically by:-

- Radiometric techniques
- The Calvin method
- The Winkler method
- The polarographic method

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Sea weeds are important source of:-

- Fluorine
- Chlorine
- Bromine
- Iodine

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Tidal range denotes:-

- High tide
- Difference between high and low tide
- Low tide
- None of the above

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Sea grasses differ from seaweeds:-

- In having the ability to spread asexually
- In living on soft sediment
- In having chlorophyll

- In having flowers

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Seasonal temperature changes are the greatest in:-

- The Equatorial region
- Mid-latitudes
- Polar waters
- The deep sea

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Which of the following well defines sea weeds?

- Microalgae
- Autotrophic macrothalic algae
- Diatoms
- Heterotrophic algae

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Organisms which obtain energy by the oxidation of reduced inorganic compounds are called:-

- Photoautotrophs
- Coproheterotrophs
- Saprozoic
- Chemoautotrophs

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Red sea is a part of the:-

- Pacific Ocean
- Bay of Bengal
- Indian Ocean
- Atlantic Ocean

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Mutation was first observed by:-

- Mendel
- Emerson
- Darwin

- Hugo de Vries

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The carcinogenic effect of ultraviolet light causes:-

- RNA break down
- Mutation
- Pyrimidine dimers
- DNA destruction

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Sea pantagon is a:

- Mollusca
- Echinodermata
- Porifera
- Coelenterata

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The Coriolis effect causes a deflection to the right in:-

- The Southern Hemisphere
- The Pole
- The Equator
- The Northern Hemisphere

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The blue green algae belong to:-

- Prokarytoa
- Myxomycetes
- Eucaryota
- Cyanophyceae

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Chordates have evolved from:-

- Auricularia larvae
- Balanoglossus
- Holothurians

- Echinoderms

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The study of Mollusca is generally known as:

- Helminthology
- Malacology
- Herpatology
- Concology

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Best example of Secondary adaption is:-

- Bat
- Star fish
- Whale
- Sea horse

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Wheel organ is a part of:

- Velum
- Oral hood
- Mouth
- Pharynx

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The two factors that most affect seawater density are:-

- Nitrogen and temperature
- Temperature and salinity
- Oxygen and salinity
- Temperature and oxygen

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What is meant by intracellular parasite?

- parasite between the cells
- parasite on the outer surface of cells
- parasite inside the cells

- parasite which interconnects neighboring cells

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Wood borers:-

- Involves chemical action only in bivalves
- Is found only in isopods
- Is found only in the bivalves
- Is found in bivalves and isopods

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The organ of fishes useful in detecting pressure changes:-

- Internal ear
- Blood pressure
- Lateral line sense organs
- Air bladder

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Maximum growth rate in a culture medium measured in the:-

- Exponential phase
- Senescence phase
- Stationary phase
- Log phase

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R.B.C. is found in the food vacuole of:-

- Entamoeba histolytica*
- Leishmania donovani*
- Amoeba proteus*
- Trypanosoma gambiense*

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Fecundity refers to the:-

- A method of locomotion
- Release of enzymes
- Release of eggs or offspring

- None of the above

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Polymers are well defined as:-

- Micromolecules
 Submicromolecules
 Macromolecules
 Normal molecules

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What kind of symmetry occurs in sea anemone?

- Bilateral
 Asymmetry
 Radial
 None of the above

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What is the blood colour of crayfish:-

- Green
 Blue
 White
 Red

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Trace elements in seawater include:-

- Sodium and chlorine
 Sodium and aluminum
 Chlorine and potassium
 Iron and strontium

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Ecdysone is:-

- PGH
 BH
 JH

- PTTH

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"Survival of the fittest" was propounded by:-

- Darwin
- Lamarck
- Spencer
- De Vries

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Ancestral history of an organism is known as:-

- Phylogeny
- Ontogeny
- Evolution
- Biogenetic law

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The mesopelagic zone ranges to depths of:-

- 150 m
- 4000 m
- bottom of tidal zone
- 2000 m

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The large conch shell "Shankh" is known as:-

- Pila*
- Turbinella*
- Mytilus*
- Pinctada*

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Brachiopoda are also called as:-

- Cowries
- Tusk shell
- Lamp shell

- Turban shell

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Sediments in the marine environment, which is formed as a result of chemical process:-

- hydrogenic
- Biogenic
- Terrigenous
- Authigenic

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Fluorescence microscopy is based on the ability of certain molecules to:-

- Absorb light of different wavelength
- Absorb light of a given wavelength and emit light at shorter wavelength
- Absorb light of a given wavelength and emit light of a longer wavelength
- Absorb light of a constant wavelength

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What is the most advance method of classification of organism?

- Morphology
- 16S RNA sequence
- Biochemical characterization
- Gram staining

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White caps in the sea are formed due to:-

- Tsunami waves
- Tidal phenomena
- Storm surges
- Wind and water interaction

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When sunlight is on the chloroplast, pH is lowest in the:-

- Space enclosed by the inner and outer membranes
- Stroma
- Space enclosed by the thylakoid membranes

- Cytosol

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The light emitted by Noctiluca is due to:-

- Fluorescence
- Bioluminescence
- Reflection of light
- None of the above

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When a solvent passes through a semi-permeable membrane towards the solution the process is called as:-

- Adsorption
- Osmosis
- Transfusion
- Diffusion

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Hfr bacterium contains:-

- A plasmid integrated into its chromosome
- Ability to undergo transduction
- Chromosome acquired from recipient cell
- Usual Plasmids

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Polymorphism occurs due to:-

- Monogenic inheritance
- Polygenic inheritance
- Both of the above
- None of the above

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What is the mechanism behind the movement of eukaryotic cilia and flagella?

- Dynein moving on microfilaments
- Myosin moving on microfilaments

- Kinesin moving on microfilaments
- Dynein moving on microtubules

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Which of the following is not an amino acid?

- Benzidine
- Arginine
- Lysine
- Aprotic acid

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Hydrogen bonds in α -helix are:-

- Within a single chain
- Only between amino acids of opposite charge
- Between the chains that run side by side
- Between polar amino acids and water

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Water is a liquid due to:-

- Hydrogen bond
- Covalent bond
- Sigmoid bond
- Ionic bond

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In the vertebrates, the type of blood circulation is:-

- Made of blood vessels
- Made of blood sinuses
- Open type
- Closed type

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Cyanobacteria differ from purple and green photosynthetic bacteria as:-

- Do not require light
- Use H_2S as an electron donor

- They have nucleus enclosed by membrane
- Produce oxygen during photosynthesis

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The acid in which -COOH group is not present:-

- Picric acid
- Palmitic acid
- Ethanoic acid
- Lactic acid

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The Bohr effect in hemoglobin refers to the:-

- Reduced affinity for O₂ at lower pH
- Increased affinity for O₂ at lower pH
- Effect of pH on hemoglobin and myoglobin
- Higher pH found in actively metabolizing tissues

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In the earth's atmosphere, electrical conductivity increases with the altitude due to:-

- Accelerated proton
- The charge
- Voltage
- Reflection of atmosphere

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Two taxonomically different species are distinguished from each other due to:-

- Their inability to interbreed
- Discontinuity in a set of correlated characters
- Ability to exchange genes freely
- Similarity in morphological characters

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In the pyrimidine ring, atoms are derived from:-

- Carbamoyl phosphate and aspartate
- Glycine

- Aspartate
- Glutamine

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The cells which secrete male sex hormone testosterone are:-

- Isthmus
- Lieberkiihn
- Leydig's cell
- Crypt cells

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Fungal disease in human is caused by:

- Inhalation of conidia
- Contamination of wounds with conidia or mycelial fragments
- Invasion of mucous membrane
- All of the above

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Ink glands as a means of escape from predators are present in:-

- Unio (Pelecypoda)
- Sepia (Cephalopoda)
- Pila (Gastropoda)
- Dentalium (Scaphopoda)

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Among coelenterates medusoid individuals are absent in members of the class:-

- Anthozoa
- Scyphozoa
- Hydrozoa
- None of the above

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The planula larva is found in the life history of:-

- Anthozoan
- Hydrozoan

- Scyphozoan
- All of the above

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Nereis is commonly called:-

- Ring worm
- Earthworm
- Calm worm
- Round worm

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Devil fish is the common name of:-

- Sepia
- Teredo
- Loligo
- Octopus

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Internal shell is present in:-

- Lamellidens
- Sepia
- Chiron
- Pila

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Collagen is:-

- Lipid
- Carbohydrate
- Fibrous protein
- Globular protein

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Skeletal muscle fibre is:-

- anucleated
- uninucleated

- binucleated
- Multinucleated

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The central fluid filled cavity of the blastula is known as:-

- Morula
- Blastocyst
- Archenteron
- Blastocoel

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The iodine used in Gram staining serves as a:-

- Chelator
- Cofactor
- Mordant
- Catalyst

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Multiple antibiotic resistance is mediated by:-

- a) Episome
- b) Plasmid
- c) Colplasmid
- d) Both b and c

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Gas vesicles in bacteria:-

- Store oxygen for growth anaerobically.
- Are bounded by a membrane impervious to gas
- Help move cells to optimal nutrient levels.
- Are bounded by a lipid bilayer membrane.

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The echinoderms are related to chordates by their similarity in the development of:-

- coelom
- gut

- nervous system
- heart

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The poisonous fluid present in the nematocysts of Hydra is:-

- Haematin
- Hypnotoxin
- Venom
- Toxin

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Fasciola hepatica is an endoparasite that lives in the:-

- spleen of sheep
- Intestine of sheep
- blood of sheep
- liver of sheep

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Hanging drop method for motility study was first introduced by:-

- Robert Koch
- Jenner
- Louis Pasteur
- Leeuwenhock

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The first invertebrates to develop a true nervous system are:-

- Annelids
- Flat worms
- Coelenterates
- Sponges

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The respiratory organs in a freshwater mussel are:-

- Pulmonary sacs
- Gills

- Respiratory siphons
- Book lungs