

SECTION 1 - SECTION 1

Question No.1

An individual seaweed attached to the substratum is known as a

- Holdfast
- Thallus
- Blade
- Stipe

Question No.2

Benthos are

- living in water column
- active swimmers
- Passive swimmers
- bottom dwelling organisms

Question No.3

Plankton that spend part of their life cycle in the water column, but live as adults in the benthos are

- Pleuston
- Meroplankton
- Holoplankton
- Mixoplankton

Question No.4

Exoskeleton of crustaceans are formed of

- Inuline
- Heparin
- Dextrin
- Chitin

Question No.5

The world's largest seagrass meadow is in

- Shark Bay Marine Park of Western Australia
- Palk Bay

- Great Barrier Reef
- Andaman & Nicobar Islands

Question No.6

Meiofauna have the size range of

- greater than 0.5 mm
- 0.5-0.062 mm
- less than 0.062 mm
- none of these

Question No.7

Charles Darwin is well known as a great marine biologist because of

- His work on coral reefs
- His classification of the barnacles
- His participation in the voyage of the H.M.S. Beagle
- All of these

Question No.8

A predominant phytoplanker in open ocean

- Prorocentrum
- Cosinodiscus*
- Thalassiothrix*
- Prochlorococcus*

Question No.9

Meroplankton are

- Temporary plankton
- phytoplankton
- permanent plankton
- zooplankton

Question No.10

Fish oil is recommended for a healthy diet because it contains

- Carboxylic acid
- Linoleic acid
- Alpha-linolenic acid

- Omega-3 fatty acids

Question No.11

Abundance of plankton

- Decreases with increased size of organisms
- Increases with increased size of organisms
- Increases with reduced size of organisms
- Decreases with reduced size of organisms

Question No.12

Bioluminescence occurs mostly in

- seawater surface
- shallow coastal sea
- neritic water
- deep sea environment

Question No.13

A blood pigment containing copper is

- Hemerythrin
- Hemocyanin
- Chlorocruorin
- Hemoglobin

Question No.14

Spring tides

- neither strong nor weak
- Weak tides
- strong tides
- either strong or weak

Question No.15

'Neritic zone' is

- Poor with benthic larval forms
- Rarely with benthic larval forms
- Frequently with benthic larval forms
- abundant with benthic larval forms

Question No.16

Marine species in the benthic environment

- least diverse
- not diverse
- less diverse
- diverse

Question No.17

As latitude increases, biodiversity generally

- Stays the same
- Increases
- Fluctuates randomly
- Decreases

Question No.18

Nekton

- Are defined as swimmers who can dive very deeply
- Move only with the currents
- Include protistan and other very small plankton
- Include larger fish and sea mammals

Question No.19

Crown-of-thorns star fish

- Butterfly fish
- Acanthaster planci*
- Surgeon fish
- Parrot fish

Question No.20

Change in sex occurs in

- Tridacna gigas*
- Clown fish
- Epinephelus*
- all of these

Question No.21

Sea anemone shares symbiotic relationship with

- Cardinal fish
- Catfish
- Parrot fish
- Clownfish

Question No.22

Mangroves

- Have roots that penetrate into the oxygenated sediment below
- Are common in high-latitude estuaries
- Must have roots adapted to the anoxic sediment
- Cannot live in regular sea water

Question No.23

SONAR refers to

- Net used for sampling
- Salinity measuring device
- Sound Navigation ranging
- Sound Nautical reference

Question No.24

'Tropical rainforest of the oceans' is

- mangrove ecosystem
- seagrass ecosystem
- kelp forest
- coral reef ecosystem

Question No.25

Redfield ratio is

- C:N:P ratio of 106:1:16
- C:N:P ratio of 16:1:16
- C:N:P ratio of 106:16:1
- C:N:P ratio of 106:1:1

Question No.26

Opportunistic species

- mostly sessile and sedentary
- Not sessile & sedentary
- rarely sessile & sedentary
- frequently sessile & sedentary

Question No.27

Zooxanthellae benefit their coral hosts

- Mainly by supplying oxygen in an oxygen-poor environment
- By transferring carbohydrates to their hosts, which is used for food
- By protecting them from uv light
- Principally by removing nitrogenous wastes

Question No.28

'La Nino' is

- usual condition of cold ocean temperatures
- unusual condition of cold ocean temperatures
- usual condition of warm ocean temperatures
- unusual condition of warm ocean temperatures

Question No.29

Invasive seaweed to Indian waters

- Kappaphycus alvarezii*
- Enteromorpha*
- Ulva sp.*
- Gracillaria*

Question No.30

The species richness in an ecosystem best explains

- Richness of species
- Ecosystem
- Forest density
- Biodiversity

Question No.31

Fjords

- Are likely to have anoxic bottom waters
- Always have the same salinity as the adjacent oceanic area
- Are never affected by tides
- Have an open connection with the ocean and are usually well oxygenated

Question No.32

Function of the lateral lines on both sides of fish

- Olfacto receptors
- Chemo receptors
- Photo receptors
- Mechanoreceptors

Question No.33

The largest Marine Protected Area in the world

- Mafia Island, Tanzania
- Gulf of Kutchch, India
- Great Nicobar Biosphere Reserve
- Great Barrier Reef, Australia

Question No.34

Vestimentiferans can live without a gut because

- They have symbiotic bacteria, which are the source of their nutrition
- They are protistans
- They live near sources of dissolved organic matter
- They are parasites living within the guts of bivalves

Question No.35

World's genetic paradises for mangrove diversity

- Baimaru, Papua New Guinea
- Bhitarkanika, Odisha, India
- Pichavaram, Tamilnadu, India
- Sundarbans, West Bengal, India

Question No.36

Deep-sea benthos is dominated by

- omnivores
- herbivores
- detritus feeders
- carnivores

Question No.37

The antibiotic penicillin is obtained from

- Virus
- Fish
- Fungus
- Bacteria

Question No.38

Ultraviolet light is important because

- It is harmful to marine life, owing to the damage it does to DNA
- It stimulates protein synthesis
- It causes beneficial warming of living tissues
- It helps in photosynthesis

Question No.39

The only flowering plants living under the sea

- Seagrass
- Salt marsh
- Angiosperms
- Sea fan

Question No.40

Coral bleaching is mostly due to

- Ozone depletion
- Elevated sea surface temperature
- Solar UV radiation
- Ocean acidification

Question No.41

SCUBA is abbreviated as

- Submarine-contained underwater breathing apparatus

- Self-contained underwater breathing apparatus
- Self-condensed underwater breathing apparatus
- none of these

Question No.42

The largest brackish water lagoon in Asia

- Muthupet lagoon
- Blue lagoon
- Chilka lake
- Pulicate lake

Question No.43

Meiobenthos

- Are greater than 1 mm in size
- Are smaller than microbenthos
- Are always epifaunal
- Are smaller than 0.5 mm

Question No.44

Coastal environment is

- more productive than Open Ocean
- equally productive to open ocean
- less productive than open ocean
- similarly productive to open ocean

Question No.45

The enzyme that converts protein into polypeptide is

- Pepsin
- Rennin
- Proteoamylase
- Amylase

Question No.46

Gas exchange into the fish swim bladder is regulated by

- The retemirabile
- The hemoglobin in the blood

- The gill
- The retina

Question No.47

Calanoid copepods are most closely related to

- Krill
- Pteropods
- Siphonophores
- Ctenophora

Question No.48

Organisms are strongly attached to the rocky substratum by means of

- holdfasts,
- tube feet cementing glands
- byssus threads
- all of these

Question No.49

Tidal waves are primarily due to

- Gravitational effect of the moon
- Atmospheric effect of the earth
- Magnetic effect
- Wind effect

Question No.50

The abyssal plain

- Actually has a slope of 3 degrees seaward
- Drains large river systems such as the Amazon River
- Never connects with an oceanic trench
- Is an average of about 4000 m depth

Question No.51

The giant clam

- Crossostrea madrasensis*
- Meritrix meritrix*
- Katelysia opima*

Tridacna

Question No.52

The largest single block of mangrove forest is in

- Sundarbans
- Pichavaram
- Bhitarkanika
- Muthpet

Question No.53

All arthropods share

- A strictly marine habitat
- A calcified external skeleton
- An external skeleton composed of chitin
- A calcified internal skeleton

Question No.54

Pelagic habitats

- Are found in estuaries
- Are seaward of the continental shelf
- Are deepwater habitats in shelf canyon
- All of these

Question No.55

“Niche”

- Habitat
- Role of an organism in space
- space where an organism occurs
- role of an organism in a community

Question No.56

The rate of evaporation is more in Bay of Bengal when compared to Arabian sea because

- Bay of Bengal is shallow
- Strong winds over Bay of Bengal
- More drainage of rivers in Bay of Bengal
- Monsoon winds

**Question No.57**

Most bioluminescent organisms use

- Luciferin
- Magnesium
- Hemerythrin
- Sodium ion

Question No.58

Larvae of estuarine benthic species

- Never leave the estuary
- May leave the estuary, but return depending upon water currents
- May leave the estuary but never return
- Are never planktonic, so as to prevent washout into coastal

Question No.59

Who discovered the Spreading Sea Floor theory?

- Charles Darwin
- George W. Bush
- Alfred Wegner
- Harry Hess

Question No.60

Pressure

- neither increases nor decreases with the depth of seawater
- increases with the depth of seawater
- either increases or decreases with the depth of seawater
- decreases with the depth of seawater

Question No.61

Keystone species

- Are found only in the intertidal zone
- Affect community structure by preying on competitively important prey species
- Are primary producers
- Are superior competitors and affect community structure

Question No.62

Stenohaline species have a

- Wide range of salinity tolerance
- Narrow range of temperature tolerance
- Narrow range of salinity tolerance
- Wide range of temperature tolerance

Question No.63

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

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

Question No.64

Algal species endosymbiotic to anemones and coral reefs

- Halimeda*
- Cocolithophores
- Synechococcus*
- Zooxanthellae

Question No.65

Marine biodiversity

- increases from Polar to tropics
- increases from tropics to polar
- reduces from Polar to tropics)
- reduces from tropics to polar

Question No.66

Most bony fish swim continuously

- By contracting a web of surrounding skin
- By hydro-jet propulsion
- By undulations of the entire body
- By strong movements of the caudal fin

Question No.67

Catadromous fish

- grow and breed only in seawater
- grow in the freshwater and migrate to seawater for breeding
- grow and breed either in seawater or freshwater
- grow in the seawater and migrate to freshwater for breeding

Question No.68

Biological production exceeds respiratory consumption in

- Upper 100 m of the water column of oceans
- Below 100 m of the water column of oceans
- below 50 m of the water column of oceans
- Upper 50 m of the water column of oceans

Question No.69

The mesopelagic zone ranges to depths of

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

Question No.70

Cetaceans are

- whales, dolphins, porpoises
- seals, elephant seals, sea lions and walruses
- sea otters
- manatees and dugongs

Question No.71

'Mustache of Ravana' is

- Clerodendrum inerme*
- Ipomea pes-caprae*
- Spinifex littoreus*
- Vitex negundo*

Question No.72

In nature nitrogen is fixed mostly by

- Symbiotic bacteria
- Chemosynthesis
- Lightning
- Denitrifying bacteria

Question No.73

Pelagic organisms

- adapt significantly for their survival
- less adapted for their survival
- do not adapt significantly for their survival
- strongly adapted

Question No.74

The two factors that most affect seawater density are

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

Question No.75

Animals living in association with the sea surface are called

- Plankton
- Krypton
- Epifauna
- Neuston

Question No.76

Salinity is often estimated by chlorinity because

- Chlorine can be separated from the seawater simply by evaporation
- Chlorine is in constant ratio to sodium and other major elements
- Chlorine is the only major element of seawater
- Salinity is not estimated by chlorinity but by sodium concentration

Question No.77

Seasonal temperature changes are the greatest in

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

Question No.78

The study of microscopic structure of tissues and organs is known as

- Pathology
- Malacology
- Endocrinology
- Histology

Question No.79

Red sea is because of blooms caused by

- Green algae
- Red algae
- Trichodesmium erythraeum
- Brown algae

Question No.80

The first offshore area managed for conservation.

- Gulf of Mannar, India
- Florida Keys, USA
- Great Barrier Reef, Australia
- Darwin mounds, UK

Question No.81

The Coriolis effect causes a deflection to the right in

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

Question No.82

Agar, extracted from

- Yellow algae
- Red algae
- Blue green algae
- Green algae

Question No.83

Branching staghorn coral

- Pachyseris sp.*
- Pocillopora sp.*
- Acropora cervicornis*
- Favites spp*

Question No.84

Olive Ridley is

- Eretmochelys imbricate*
- Dermochelys coriacea*
- Lepidochelys olivacea*
- Caretta caretta*

Question No.85

The only blue carbon forest

- Seagrasses
- Saltmarshes
- Mangroves
- Kelp forest

Question No.86

Seafans are

- seahare
- sponges
- echinoderms
- gorgonids

Question No.87

The two strands of DNA are held by

- Sulphide bond

- hydrogen bond
- Oxygen bond
- Phosphate bond

Question No.88

Phytoplankton

- Seaweed
- Seagrass
- Animal component of plankton
- Plant component of plankton

Question No.89

The Minemata epidemic was caused by

- Lead
- Cadmium
- Zinc
- Mercury

Question No.90

Sea grasses differ from seaweeds

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

Question No.91

The practice of swimming on or through a body of water equipped with a diving mask

- Submerging
- bottom water diving
- Snorkeling
- Open water diving

Question No.92

Two equal high and low tides in a day are called

- Neap tides
- Semidiurnal tides

-
- Diurnal tides
- Mixed tides

Question No.93

'Thermocline' is

- Depth zone of sudden decline in temperature
- Depth zone of sudden increase in temperature
- Depth zone of sudden increase in pressure
- Depth zone of sudden decline in pressure

Question No.94

The technical term of "Remote Sensing" was first coined by

- Japan
- UK
- India
- USA

Question No.95

The largest crab in the world

- Scylla serrata*
- Macrocheira kempferi*
- Portunus pelagicus*
- Uca*

Question No.96

"Peaceful" ocean is

- Antarctic ocean
- Indian Ocean
- Atlantic ocean
- Pacific ocean

Question No.97

Trace elements in seawater include

- Sodium and aluminum
- Sodium and chlorine

- Iron and strontium
- Chlorine and potassium

Question No.98

Oceanography

- Study of oceans
- Study of water
- Study of land
- Study of ocean animals

Question No.99

Pycnoclines are

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

Question No.100

Cyanobacteria

- Only occur in chains of cells
- Cannot live in stagnant waters
- Are capable of nitrogen fixation
- Are abundant only in estuaries