

National Testing Agency

Question Paper Name: Refresher Course in Marine Science
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Refresher Course in Marine Science

Group Number : 1
Group Id : 90958228
Group Maximum Duration : 0
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Break time: 0
Group Marks: 100

Refresher Course in Marine Science

Section Id : 90958228
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 100
Number of Questions to be attempted: 100
Section Marks: 100
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 90958230
Question Shuffling Allowed : Yes

Question Number : 1 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Antarctic surface is covered with ice by _____ % of its area.

- A. 100%
- B. 50%
- C. 77%
- D. 98%

Options :

1. A
2. B
3. C
4. D

Question Number : 2 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

How a simple sessile sea creature does survive in space competition?

- A. By moving from one place to another
- B. By using physical defense
- C. By using chemical weapons
- D. None of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 3 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The change in ice-sheet extent during the peak glacial as compared to interglacial intervals, caused

- A. Global increase in sea level by ~110 m
- B. Global drop in sea level by ~110 m
- C. No change in global sea level
- D. Enrichment of stable oxygen isotopic ratio of seawater by ~1.0‰

Options :

1. A
2. B
3. C
4. D

Question Number : 4 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

OTEC uses the following:

- A. Cold sea water only
- B. Warm Sea water only
- C. Warm sea water and Ammonia
- D. Warm and cold sea water

Options :

1. A
2. B
3. C
4. D

Question Number : 5 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

With regard to benthic environment, diatoms are _____

- A. Macrobenthos
- B. Zoobenthos
- C. Phytobenthos
- D. Meiobenthos

Options :

1. A
2. B
3. C
4. D

Question Number : 6 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If d is the difference of temperature at the bottom of the ocean from the temperatures at surface of the ocean, then d near equator is

- A. larger than d at the high latitudes
- B. smaller than d at the high latitudes
- C. Same as d at the high latitudes
- D. 10 times that of d at the high latitudes

Options :

1. A
2. B
3. C
4. D

Question Number : 7 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following represents the concentration of dissolved oxygen under hypoxic condition?

- A. $O_2 > 62.49 \mu M$
- B. $4.46 < O_2 = 62.49 \mu M$
- C. $O_2 = 4.46 \mu M$
- D. $O_2 = 0 \mu M$

Options :

1. A
2. B
3. C
4. D

Question Number : 8 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the process responsible for conversion of nitrate to molecular nitrogen?

- A. Denitrification
- B. Nitrification
- C. Nitrogen fixation
- D. Ammonification

Options :

1. A
2. B
3. C
4. D

Question Number : 9 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The coldest temperature ever directly recorded at ground level on Antarctica is

- A. -98°C
- B. -69°C
- C. -89°C
- D. -99°C

Options :

1. A
2. B
3. C
4. D

Question Number : 10 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Upwelling of cooler water required to close the conveyor belt takes place in

- A. Atlantic Ocean
- B. Pacific Ocean
- C. Indian Ocean
- D. All over the oceans

Options :

1. A
2. B
3. C
4. D

Question Number : 11 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Southern Ocean takes up nearly _____ of the global annual uptake of CO₂ from the atmosphere

- A. 60%
- B. 40%
- C. 20%
- D. 10%

Options :

1. A
2. B
3. C
4. D

Question Number : 12 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ocean Temperature is measured using

- A. Conductivity meter
- B. Calorimeter
- C. Thermistor
- D. pH meter

Options :

1. A
2. B
3. C
4. D

Question Number : 13 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

With an increase in the grain size from clay to sand the number of suspension feeders

- A. Decreases
- B. Increases
- C. Remain constant
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 14 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ice shelves are _____

- A. Attached to basements
- B. Floating and attached to ice sheets
- C. Floating freely in water
- D. Grounded and attached to ice sheets

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 15 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The eccentricity component of the Milankovitch cycle refers to the

- A. Change in shape of earth's orbit around the Sun and has a periodicity of 20 kyr
- B. Change in the tilt of earth's axis and has a periodicity of 100 kyr
- C. Change in shape of the earth's orbit around the Sun and has a periodicity of 100 kyr
- D. Change in the tilt of earth's axis and has a periodicity of 20 kyr

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 16 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a chemosynthetic organism

- A. Vesicomidae
- B. Solemyidae
- C. Squat lobster
- D. Thyasiridae

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 17 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Following antibiotic natural product was discovered from Fungi

- A. Taxol
- B. Penicillin
- C. Thiazole
- D. Halichondrin

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 18 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If S is a property that can be advected, which of the following statements is true?

- A. The change in S with time is local to a given place.
- B. The change in S with time depends on both space and time.
- C. The change in S cannot be written as the sum of partial derivatives.
- D. The change in the field S in one direction is not independent of the change in another direction or in time.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 19 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Induced breeding for fish is carried out by the application of

- A. Water
- B. Hormone
- C. Antibiotics
- D. None

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 20 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Dispersal of larvae from the spawning ground is mainly affected by

- A. Biological factors
- B. Anthropogenic factors
- C. Physical factors
- D. Chemical factors

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 21 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Tide is measured NOT using the following instruments

- A. Pressure gauge
- B. Radar Gauge
- C. Acoustic gauge
- D. Electric gauge

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 22 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Where do you expect maximum storm surge on a straight-line coast, if the maximum cyclonic winds are observed at 30km from the centre of the cyclone?

- A. 30km
- B. 15km
- C. 60km
- D. 10km

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 23 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Why marine organisms are useful in the development of therapeutic molecules?

- A. Organisms are available in plenty
- B. These organisms produce bioactive metabolites for their survival
- C. Some of these organisms are sessile filter feeders
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 24 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ebermaier mentioned the medical application of the roasted bath sponge in the year

- A. 1915
- B. 2015
- C. 1850
- D. 1815

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 25 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of these fisheries can meet the future demand for growing population?

- A. Culture Fisheries
- B. Capture Fisheries
- C. None
- D. Traditional Fisheries

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 26 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The estimate of the ballast water capacity of a single bulk cargo ship of 200, 000 tonnes is around

- A. 10 tonnes
- B. 500 tonnes
- C. 8000 tonnes
- D. 60000 tonnes

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 27 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Closed cycle OTEC uses:

- A. Low boiling point fluid
- B. High boiling point fluid
- C. Low viscosity fluid
- D. Any boiling point or viscosity fluid

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 28 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Why is the EICC weaker during the summer monsoon compared to March-April?

- A. The winds are weaker during the summer monsoon.
- B. The alongshore winds are stronger during March-April.
- C. Remote forcing from the equator and the interior of the Bay of Bengal is opposite in direction to the strong EICC forced by local winds and the net result is a weak current.
- D. Remote forcing from the Bay of Bengal forces a strong poleward EICC during summer monsoon.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 29 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following exist due to nonlinearity?

- A. The Lakshadweep High.
- B. The sub-tropical gyre in the North Atlantic.
- C. The offshore jets off Oman.
- D. The Ekman drift off Oman.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 30 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is true for nonlinear systems?

- A. Output is proportional to input.
- B. There is no possibility of making predictions.
- C. Output is proportional to input.
- D. Nonlinearity limits the prediction horizon.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 31 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is most widely used format for the exchange of seismic data

- A. SEG-D
- B. SEG-B
- C. EXOBYTE
- D. SEG-Y

Options :

- 1. A

2. B
3. C
4. D

Question Number : 32 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Select a region of where surface water can sink into the deep ocean.

- A. Weddell Sea
- B. North Pacific Sea
- C. Red Sea
- D. Caspian Sea

Options :

1. A
2. B
3. C
4. D

Question Number : 33 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is the most detrimental factor due to which OTEC is not widely used ?

- A. Use of Ammonia
- B. Corrosion of parts
- C. High Capital cost
- D. High operating cost

Options :

1. A
2. B
3. C
4. D

Question Number : 34 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Following is not a component of OTEC plant

- A. Condenser
- B. Evaporator
- C. Cooling tower
- D. Turbine

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 35 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Following marine natural product is used in Ayurvedic formulation

- A. Kapardika
- B. Sponge spicule
- C. Sea urchin spine
- D. Shark cartilage

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 36 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Domoic acid is the toxin responsible for

- A. Diarrhetic shell fish poisoning
- B. Amnesic shell fish poisoning
- C. Paralytic shell fish poisoning
- D. Ciguatera shell fish poisoning

Options :

- 1. A

2. B
3. C
4. D

Question Number : 37 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Drifting buoys measure

- A. Chlorophyll
- B. Sea surface temperature
- C. Oxygen
- D. Electric field

Options :

1. A
2. B
3. C
4. D

Question Number : 38 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Storm surge generation due to a tropical cyclone at a coastal location is mainly a phenomena based on

- A. local characteristics
- B. regional characteristics
- C. global characteristics
- D. both regional and local characteristics

Options :

1. A
2. B
3. C
4. D

Question Number : 39 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

SPF in fisheries stands for

- A. Specific Popular Farming
- B. Specific People Friendly
- C. Specific Pathogen Free
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 40 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A measure of stratification in the ocean is given by

- A. Surface heat flux
- B. Compressibility
- C. Brunt-Vaisala Frequency
- D. Velocity profile

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 41 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The surface meteorological and oceanographic parameters over the Ocean are measured using the following instruments

- A. Argo profiling floats
- B. Moored buoys
- C. Drifting buoys
- D. Expendable Bathythermograph

Options :

- 1. A

2. B
3. C
4. D

Question Number : 42 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Frozen grounds in polar regions are known as _____

- A. Fjord
- B. Glacier debris
- C. Permafrost
- D. Ice shelf

Options :

1. A
2. B
3. C
4. D

Question Number : 43 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

SO₄ reduction by AOM pathway may be represented by the equation

- A. $\text{CH}_4 + \text{SO}_4^{2-} \rightarrow \text{HCO}_3^- + \text{HS}^- + \text{H}_2$
- B. $\text{CH}_4 + \text{SO}_4^{2-} \rightarrow \text{HCO}_3^- + \text{HS}^- + \text{O}_2$
- C. $\text{CH}_4 + \text{SO}_4^{2-} \rightarrow \text{HCO}_3^- + \text{HS}^- + \text{H}_2\text{O}$
- D. $\text{CH}_4 + \text{SO}_3^{2-} \rightarrow \text{HCO}_3^- + \text{HS}^- + \text{H}_2\text{O}$

Options :

1. A
2. B
3. C
4. D

Question Number : 44 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In which wave, the direction of particle motion is perpendicular to propagation direction

- A. P-wave
- B. S-wave
- C. Rayleigh wave
- D. Love wave

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 45 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of these is a good source of PUFA?

- A. Chicken
- B. Mutton
- C. Egg
- D. Fish

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 46 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the renewable energies from the ocean is NOT due to Sun

- A. wave energy
- B. tidal energy
- C. Ocean Thermal Energy conversion
- D. bioenergy

Options :

- 1. A

2. B
3. C
4. D

Question Number : 47 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one from this is an exotic species?

- A. *Penaeus monodon*
- B. *Penaeus indicus*
- C. *Penaeus vannamei*
- D. All of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 48 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- is an indiscriminate non selective fishing gear.

- A. gill net
- B. purse seine
- C. shore seine
- D. trawling

Options :

1. A
2. B
3. C
4. D

Question Number : 49 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When one piece of earth slides against the other such an earthquake is called a

- A. strike slip earthquake
- B. normal earthquake
- C. thrust earthquake
- D. mega earthquake

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 50 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Recirculatory Aquaculture System (RAS) is a system that

- A. Uses water from external source
- B. Same water is used again and again
- C. Both a & c
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 51 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which process is responsible for oxygen to produce in the ocean?

- A. Photosynthesis by Blue-green Algae
- B. Primary production by land plants
- C. Oxidation of calcium carbonate
- D. Reduction of iron deposits

Options :

- 1. A
- 2. B

3. C

4. D

Question Number : 52 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Why strong oxygen minimum zone forms in the Arabian Sea

- A. High Primary production
- B. Sluggish circulation of intermediate waters
- C. High bacterial decomposition rates
- D. All above

Options :

1. A

2. B

3. C

4. D

Question Number : 53 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The speed of tsunami wave depends on

- A. the square root of wave length
- B. the square root of water depth
- C. the square root of wave period
- D. the square root of bottom friction

Options :

1. A

2. B

3. C

4. D

Question Number : 54 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

During passage of a cyclone over the ocean, a minimum pressure of 990mb at the eye of the cyclone and an ambient pressure of 1010mb were observed. In this case, how much sea level raise is expected at the centre of the cyclone due to an inverted barometer effect?

- A. 10cm
- B. 40cm
- C. 20m
- D. 20cm.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 55 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The following process lead to the major change in atmospheric CO₂ during glacial interglacial intervals

- A. Meteoritic dust influx
- B. Riverine influx
- C. Southern Ocean productivity and upwelling
- D. Terrestrial carbon sink

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 56 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Carcinus meanas is a

- A. Crab
- B. Starfish
- C. Clam
- D. Polychaete

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 57 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In the world ocean, which regions of the ocean high dissolved gases concentrations are found?

- A. Equatorial region
- B. Subtropical region
- C. Temperate region
- D. Polar region

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 58 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The marine bio-invasion vectors include

- A. Shipping
- B. Navigation buoys
- C. Floating Marine Debris
- D. All of the above

Options :

- 1. A
- 2. B

3. C

4. D

Question Number : 59 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which source does not belong to marine seismic

A. Air gun

B. Water gun

C. Sparker

D. Vibroseis

Options :

1. A

2. B

3. C

4. D

Question Number : 60 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Methane hydrate is stable at

A. Standard T and P

B. High T and low P

C. High P and low T

D. Low T and Low P

Options :

1. A

2. B

3. C

4. D

Question Number : 61 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which among the following is/ are true when ocean pH decreases,

- I. More metal complexation more bioavailability
 - II. Less metal complexation more bioavailability
 - III. More metal complexation less bioavailability
- A. I
 - B. II
 - C. III
 - D. II & III

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 62 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If a tropical cyclone generates 3m of surge at the coast, assuming a uniform and impermeable coastal slope of 1m in 100m. How long the surge propagates approximately along the coast by ignoring frictional effects.

- A. 3km
- B. 10km
- C. 300m
- D. 1km.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 63 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The interaction of storm surges and tides depends

- A. only on tidal phase,
- B. only on tidal amplitude
- C. on both tidal amplitude and its phase.
- D. none of the above

Options :

- 1. A
- 2. B

3. C

4. D

Question Number : 64 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Geostationary satellites are launched at a height of

- A. 3600 km
- B. 36000 km
- C. 28000 km
- D. 1000 km

Options :

1. A

2. B

3. C

4. D

Question Number : 65 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In bottom up approach, the diversity is controlled by -----.

- A. primary productivity
- B. light
- C. salinity
- D. consumers

Options :

1. A

2. B

3. C

4. D

Question Number : 66 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Electrical signal in geophones is produced due to

- A. piezoelectric transducers
- B. permanent magnet
- C. electrical coil
- D. relative movement between magnet and coil

Options :

1. A

2. B

3. C

4. D

Question Number : 67 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Ctenophore (comb jelly) marine bio-invasion capability is enhanced by

- A. Precocious development in stable half animal
- B. Specific food requirement
- C. Specific light requirement
- D. Specific temperature requirement

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 68 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

BGHSZ is the

- A. Top of gas hydrate zone
- B. base of gas hydrate zone
- C. middle of gas hydrate zone
- D. sea bed

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 69 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Out in the deeper regions of the ocean the tsunami waves

- A. do not have increased heights
- B. have increased heights
- C. are flat
- D. none of the above

Options :

- 1. A
- 2. B
- 3. C

4. D

Question Number : 70 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Why does the WICC flow into the wind during the winter monsoon?

- A. The alongshore salinity gradient.
- B. The alongshore wind off the Indian west coast.
- C. Remote forcing from the Bay of Bengal.
- D. All of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 71 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Increase in sea surface temperature by 1°C

- A. Enriches $\delta^{18}\text{O}$ of surface dwelling planktic foraminifera, *Globigerinoides ruber* by ~0.2‰
- B. Depletes $\delta^{18}\text{O}$ of surface dwelling planktic foraminifera, *Globigerinoides ruber* by ~0.2‰
- C. Does not affect $\delta^{18}\text{O}$ of surface dwelling planktic foraminifera, *Globigerinoides ruber*
- D. Enriches $\delta^{18}\text{O}$ of surface dwelling planktic foraminifera, *Globigerinoides ruber* by ~1.2‰

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 72 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vibrio fischeri is associated with

- A. Pompeii worm
- B. Ascidian
- C. Hawaiian bobtail squid
- D. Prawn

Options :

1. A
2. B
3. C
4. D

Question Number : 73 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which method is best suited for the mapping of stratigraphy trap

- A. Magnetic
- B. Gravity
- C. Seismic
- D. None of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 74 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The physical process that enables nutrient uptake by phytoplankton is -----.

- A. upwelling
- B. advection
- C. down welling
- D. diffusion

Options :

1. A
2. B
3. C
4. D

Question Number : 75 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The 100 kyr periodicity in glacial-interglacial transitions during the Quaternary was modulated by

- A. Milankovitch cycles
- B. Meteoritic impacts
- C. Anthropogenic activities
- D. Volcanic eruptions

Options :

1. A
2. B
3. C
4. D

Question Number : 76 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Primary waves (P-waves) are

- A. transverse waves
- B. Longitudinal waves
- C. gravity waves
- D. none of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 77 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

How many visible bands are there on OCM sensor

- A. 6
- B. 8
- C. 7
- D. 4

Options :

1. A
2. B
3. C
4. D

Question Number : 78 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The deep ocean is cold because of :

- A. due to evaporation
- B. deep water originate at higher latitude
- C. due to hydrothermal vents
- D. due to global warming

Options :

1. A

2. B
3. C
4. D

Question Number : 79 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fulvic acid is an example of

- A. organic pollutant
- B. natural ligand
- C. inorganic pollutant
- D. All of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 80 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- binding sugar chain units (glucose and mannose) are reported in all subunits of SIPC and are important in the settlement of *B. amphitrite*.

- A. Gly max
- B. Wheat germ agglutinin
- C. Lens culinaris agglutinin

Options :

1. A
2. B
3. C

Question Number : 81 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In NO signaling pathway, ----- and ----- are two groups of enzymes, which are found in multiple isoforms.

- A. NO Synthase and Phosphodiesterase
- B. Sildenafil and Dipyridamole
- C. Guanylyl Cyclase and cGMP-dependent-protein kinase G
- D. None of the above

Options :

1. A
2. B

3. C

Question Number : 82 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Effects of eutrophication can cause

- A. Oxygenation
- B. Deoxygenation
- C. Acidification
- D. Ozone layer depletion

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 83 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following regions, weak oxygen minimum zone occurs?

- A. Eastern Equatorial Pacific
- B. Western Equatorial Pacific
- C. Arabian Sea
- D. Bay of Bengal

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 84 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Optical sensors are always equipped with NIR bands

- A. To give aerosol correction to short wave bands while retrieving OACs
- B. To give correction for sun-glint
- C. To give Rayleigh correction
- D. To eliminate the reflectance from the bottom of coastal waters.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 85 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A majority of the past monsoon records from the Indian Ocean suggest that the

- A. Summer monsoon was weaker during the last glacial maximum
- B. Summer monsoon was stronger during the last glacial maximum
- C. Riverine runoff increased during the last glacial maximum
- D. Salinity was lower by 8-10 psu, during the last glacial maximum

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 86 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following cannot generate a tsunami

- A. Earthquake and volcanic eruption,
- B. landslide and underwater explosion,
- C. glacier calving and meteor impact
- D. cyclone

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 87 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Lopophore is a characteristic _____ organ

- A. Locomotory
- B. Feeding
- C. Reproductive
- D. Excretory

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 88 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In NO signaling pathway, ----- and ----- are two groups of enzymes, which are found in multiple isoforms.

- A. NO Synthase and Phosphodiesterase
- B. Sildenafil and Dipyridamole
- C. Guanylyl Cyclase and cGMP-dependent-protein kinase G
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C

Question Number : 89 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is the dominant OAC affecting $Rrs(\lambda)$ when it peak to green part of EMR

- A. Chl-a
- B. TSM
- C. CDOM
- D. Water molecules

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 90 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sea anemones belong to class _____

- A. Scyphozoa
- B. Hydrozoa
- C. Anthozoa
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 91 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Larvae of marine invertebrate display high degree of -----

- A. mortality
- B. dispersion
- C. geotropism
- D. stability

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 92 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Loss of species in recent years is primarily due to -----

- A. habitat degradation
- B. human population
- C. pollution
- D. bloom formation

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 93 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Effects of acid rain are mainly visible in

- A. Open ocean
- B. Polar regions
- C. Land and coastal region
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 94 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The depth of the ocean is measured using

- A. XBT sensor
- B. Conductivity meter
- C. Voluntary Observing system
- D. Pressure sensor

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 95 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Geochemical index is calculation as,

- A. $I_{geo} = \log_2 \frac{Cn}{1.5 Bn}$
- B. $I_{geo} = \frac{Cn}{Bn}$
- C. $I_{geo} = \log_2 Cn \cdot 1.5Bn$
- D. $I_{geo} = \sqrt{PLI \cdot CF}$

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 96 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The interactions between bacterial exopolymers and cypris temporary adhesive are most likely to be effected via ----- groups

- A. Non-polar
- B. Polar
- C. Acetyl

Options :

- 1. A
- 2. B
- 3. C

Question Number : 97 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The life cycle of *Balanus amphitrite* includes planktotrophic larval development consisting of ----- naupliar instars

- A. Five
- B. Eight
- C. Six

Options :

- 1. A
- 2. B
- 3. C

Question Number : 98 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

_____ is an exclusively marine phyla

- A. Mollusca
- B. Arthropoda
- C. Echinodermata
- D. Annelida

Options :

- 1. A
- 2. B
- 3. C

Question Number : 99 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In general, polar orbiting satellites are sun-synchronous because

- A. This makes the satellite to see a place at the same local time when passes over the region
- B. Intensity of incident light will be different when the satellite passes over the region.
- C. Atmospheric correction is not required for data obtained from such sensors
- D. Sun-glint correction is easy for such sensors.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 100 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Methane source at the cold seep sites in K-G basin is of

- A. Thermogenic origin
- B. Biogenic origin
- C. Mixed thermos and biogenic
- D. All of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D