

**S.NO: 22N1- UGI**

**Course Code: ECG1**

**A.D.M.COLLEGE FOR WOMEN, NAGAPATTINAM**

**(AUTONOMOUS)**

**UG Degree Examination – Extra Credit I**

**I Semester – November – 2022**

**EC I – FUNDAMENTALS OF MARINE GEOLOGY**

**Time: 3 hours**

**Maximum Marks: 100**

**Section – A**

**(50X1.5=75Marks)**

**Answer All the questions**

**Multiple Choice Questions:**

1. The nebular hypothesis was proposed by
  - a) Kant
  - b) Laplace
  - c) Kant and Laplace separately
  - d) Kant and Laplace independently
  
2. The theory of plate tectonics is the actual contribution of
  - a) A Snider
  - b) F V Taylor
  - c) Wagener
  - d) Morgan
  
3. The flattest portion of the earth's surface is formed by
  - a) Abyssal hills
  - b) Abyssal plains
  - c) Oceanic rises
  - d) Oceanic trenches
  
4. The part of ocean between 0 – 200 m depth is described as
  - a) Continental shelf
  - b) Continental slope
  - c) Continental rise
  - d) Oceanic trenches
  
5. Manganese nodules are considered to be:
  - a) hydrogenous sediment
  - b) lithogenous sediment
  - c) biogenous sediment
  - d) cosmogenous sediment

6. Which are NOT a biogenous sediment?

- a) calcareous ooze
- b) siliceous ooze
- c) coral reef deposits
- d) quartz-rich beach sand

7. Salinity at the equator is \_\_\_\_\_ because of \_\_\_\_\_.

- a) lower, runoff
- b) higher, evaporation
- c) lower, condensation
- d) higher, precipitation

8. The salts in the oceans come from

- a) Runoff on the continents
- b) comets
- c) Precipitation
- d) ice melting from the poles

9. The salts in the oceans come from

- a) waves
- b) tsunami
- c) currents
- d) tides

10. Which ocean is S shaped?

- a) Pacific Ocean
- b) Atlantic Ocean
- c) Mediterranean
- d) Indian Ocean

## II. MATCH THE FOLLOWING:

11. Match the following and choose the correct answer:

- |                              |   |                           |
|------------------------------|---|---------------------------|
| a) Big bang theory           | - | 1. Dr. Allan Sandage      |
| b) Pulsating Universe theory | - | 2. Abbe Georges Lemaitre  |
| c) Steady State Theory       | - | 3. Buffen                 |
| d) Dynamic Encounter Theory  | - | 4. Thomas Gold and Herman |

- a) A - 1 B - 2 C - 3 D - 4
- b) A - 1 B - 2 C - 4 D - 3
- c) A - 2 B - 1 C - 4 D - 3
- d) A - 2 B - 1 C - 3 D - 4

12. Match the following and choose the best alternative:

- |  |   |                   |
|--|---|-------------------|
| a) Proto continent                           | - | 1. Tethys         |
| b) Proto ocean                               | - | 2. Mid Cretaceous |
| c) Sea existed between Gondwana and Laurasia | - | 3. Pangea         |
| d) Breaking of Pangea                        | - | 4. Panthalassa    |

- a) A - 3 B - 1 C- 2 D - 4
- b) A - 4 B - 3 C- 1 D - 2
- c) A - 3 B - 4 C- 1 D - 2
- d) A - 4 B - 3 C- 2 D - 1

13. Match the following and choose the best alternative:

- a) Mindanao deep - Indian ocean
- b) Planet deep - Atlantic ocean
- c) Milwaukee deep - Pacific ocean
- d) Nares deep

- a) A - 3 B - 2 C- 2 D - 1
- b) A - 2 B - 2 C- 3 D - 1
- c) A - 3 B - 1 C-2 D - 2
- d) A - 2 B - 1 C- 3 D - 3

14. Match the following oceanic features

- a) North Mid Atlantic Ridge - 1. Challenger deep
- b) South Mid Atlantic Ridge - 2. Puerto rico
- c) Second Deep Trench - 3. Challenger ridge
- d) deepest point of Marianas - 4. Dolphin ridge

- a) A - 1 B - 2 C- 3 D - 4
- b) A - 4 B - 3 C- 2 D - 1
- c) A - 2 B - 3 C-1 D - 4
- d) A - 4 B - 1 C- 2 D - 3

15. Match the following:

- a) Neritic - 1. Shallower than 200 mbmsl
- b) Bathyal - 2. 200 - 2000 mbmsl
- c) Abyssal - 3. 2000 - 6000 mbmsl
- d) Hadal - 4. Morethan 6000 mbmsl

- a) A - 1 B - 2 C- 3 D - 4
- b) A - 4 B - 3 C- 2 D - 1
- c) A - 3 B - 2 C-1 D - 4
- d) A - 2 B - 1 C- 3 D - 4

16. Match the following:

- a) Lithogenic sediments - 1. Derived from geological agents
- b) Biogenic sediments - 2. Derived from precipitation
- c) Cosmogenic sediments - 3. Extra terrestrial
- d) Hydrogenic sediments - 4. Derived from biological activity

- a) A - 1 B - 4 C- 3 D - 2
- b) A - 4 B - 3 C- 2 D - 1
- c) A - 3 B - 2 C-1 D - 4
- d) A - 2 B - 1 C- 3 D - 4

17. Match the following:

- a) CCD - 1. Warm water replaces cold water
- b) Density of water - 2. Calcium Compensation Depth
- c) Downwelling - 3. Cold water replaces warm water
- d) Upwelling - 4. 1

- a) A - 2 B - 4 C- 1 D - 3
- b) A - 4 B - 3 C- 2 D - 1
- c) A - 3 B - 2 C-1 D - 4
- d) A - 2 B - 1 C- 3 D - 4

18. Match the following gases present in oceanic water (%):

- a) Nitrogen - 1. 36 (%)
- b) Oxygen - 2. 48 (%)
- c) Carbon dioxide - 3. 1 (%)
- d) other gas - 4. 15 (%)

- a) A - 2 B - 4 C- 1 D - 3
- b) A - 4 B - 3 C- 2 D - 1
- c) A - 3 B - 2 C-1 D - 4
- d) A - 2 B - 1 C- 4 D - 1

19. Match the following types of tide and impact on water:

- a) Diurnal tide - 1. Cyclic
- b) semi diurnal tide - 2. Regular pattern
- c) Mixed tide - 3. Varied

- a) A - 2 B - 1 C- 3
- b) A - 1 B - 3 C- 2
- c) A - 3 B - 2 C-1

20. Match the following types of tide and origin:

- a) Wind wave - 1. Seismic
- b) Tsunami - 2. Gravity of Sun and Moon
- c) Standing - 3. Wind movement
- d) Tide - 4. Wind, seismic and gravity

- a) A - 3 B - 2 C- 4 D - 2
- b) A - 4 B - 3 C- 2 D - 1
- c) A - 3 B - 2 C-1 D - 4
- d) A - 2 B - 1 C- 3 D - 4

### III. TRUE OR FALSE

21. The Sea floor concept first postulated by Alfred Wegener.

22. The sea floor concept was introduced by Holmes and later proposed by Harry Hess.

23. The rate of sedimentation is high at trench areas.

24. San Andreas fault, the largest fault is a strike slip fault
25. Manganese nodules are deposited in the ocean floor by biogenic origin.
26. Pelagic sediment deposited in ocean floor due to the biological process.
27. Density of the ice is less compare with water.
28. The chloride concentration is high compare with Sodium in sea water.
29. The rise and fall of sea water around the edges of the land.
30. The rising and falling of sea water are due to the gravitation and centrifugal forces.

#### **IV. Filling the blanks.**

31. The tidal hypothesis was proposed by \_\_\_\_\_.
32. \_\_\_\_\_ is least density in planet.
33. The broadest continental shelf found in \_\_\_\_\_ state in India.
34. The mid Atlantic Ridges system is an area of \_\_\_\_\_ plate boundary.
35. The \_\_\_\_\_ is a hydrological deposit.
36. Siliceous oozes are one of the \_\_\_\_\_ sediment.
37. Water has its maximum density at \_\_\_\_\_.
38. Different forms of condensed water falling from atmosphere to the earth are called \_\_\_\_\_.
39. The Tsunamis also called \_\_\_\_\_ in Japanese.
40. The \_\_\_\_\_ of sea water between polar and equatorial region is promote origin of oceanic currents.

#### **V. ANSWER IN ONE WORD:**

41. Who is the father of Indian geography?
42. Who is father of plate tectonic concept?
43. Who had explained formation of magma?
44. The vertical pipe like structure of magma rising from mantle called

45. The ocean deposits classified by
46. What is the full form of CDOM?
47. The majority of the ocean heat flux is through
48. What is the cause of ocean tides?
49. Mathematically, which theory is explained the origin of tides?
50. What are they biogenic sediment?

**Section -B**

**5 X 5 = 25**

Answer any **FIVE** Questions

51. Explain sea floor spread concept.
52. List out the oceanic basins.
53. Give short note on type of marine sediments.
54. Outline the physical properties of sea water.
55. Explain origin of tsunami and list out its effects.
56. Elaborate the origin of oceanic currents and tides.
57. Explain continental drift concept with evidences.
58. Give short notes on submarine canyon and oceanic ridges.

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