



# Ocean University of Sri Lanka

## Aptitude Test 2022/2023

### B.Sc. in Coastal and Marine Resources Management



NIC Number

Index No

Time Allowed: Two (02) hrs.

Date: .....

#### Instructions:

- Answer all the questions on this paper itself.
- Use a dark pencil/ black or blue ball point pen to mark the answers
- Calculators are not allowed

#### SECTION A - GENERAL KNOWLEDGE – 25 QUESTIONS

01. Ocean University of Sri Lanka was established by a Parliamentary Act in,
  - (i) 2000
  - (ii) 2009
  - (iii) 2014
  - (iv) 2019
02. What is the percentage of food inflation in Sri Lanka by September 2022 according to Central Bank of Sri Lanka?
  - (i) 80.5%
  - (ii) 75.2%
  - (iii) 94.9%
  - (iv) 105.5%
03. What is/are the official language(s) of Sri Lanka?
  - (i) Sinhala and Tamil
  - (ii) Sinhala
  - (iii) Sinhala, Tamil and English
  - (iv) Sinhala and English
04. What is IMF?
  - (i) an organization which provides interest free loans
  - (ii) a bank which provides low interest loans
  - (iii) an international organization which helps developing countries to overcome their debts
  - (iv) an international organization which provides financial assistance and advice to member countries
05. Where is the 27th Conference of the Parties of the UNFCCC (COP 27) to be held in 2022?
  - (i) USA
  - (ii) Egypt
  - (iii) South Africa
  - (iv) India
06. Which Chinese city will host the 19<sup>th</sup> Asian Games in 2023?
  - (i) Hangzhou
  - (ii) Beijing
  - (iii) Guangzhou
  - (iv) Wuhan
07. Covishield, the COVID vaccine of India is approved by WHO, is manufactured by;
  - (i) Bharat Biotech
  - (ii) Serum Institute of India
  - (iii) Panacea Biotec
  - (iv) Zydus Cadila

08. Which Amendment of Sri Lankan constitution is passed by the Sri Lankan Parliament recently?  
 (i) 19<sup>th</sup> (ii) 20<sup>th</sup> (iii) 21<sup>st</sup> (iv) 22<sup>nd</sup>
09. What is the difference between the time in Colombo and Greenwich Mean Time?  
 (i) 4:00 hrs (ii) 4:30 hrs (iii) 5:00 hrs (iv) 5:30 hrs
10. What does NASA stand for?  
 (i) National Air Space America (ii) National Air Space Administration  
 (iii) National Aeronautics and Space Administration (iv) Nation Aeronautics and Space Administration
11. Evidence suggests that life on Earth has existed for about \_\_\_\_\_.  
 (i) 3.5 million years (ii) 35 billion years  
 (iii) 35 million years (iv) 3.5 billion years
12. Fossil fuels are rich in carbon and \_\_\_\_\_.  
 (i) nitrogen (ii) hydrogen (iii) methane (iv) oxygen
13. Which Sri Lankan author has won the Booker Prize in 2022?  
 (i) Michael Ondaatje (ii) Ashok Ferrey  
 (iii) Sunanda Gunatilake (iv) Shehan Karunatilake
14. What is the percentage of nitrogen in atmosphere of the Earth?  
 (i) 0.94 (ii) 0.03 (iii) 78.03 (iv) 20.95
15. World Environmental Day is celebrated on \_\_\_\_\_ every year.  
 (i) 1<sup>st</sup> May (ii) 5<sup>th</sup> June  
 (iii) 1<sup>st</sup> October (iv) 1<sup>st</sup> December
16. Global warming is expected to result in;  
 (i) increase sea level (ii) change in crop pattern  
 (iii) change in coastline (iv) all of these
17. Which one of the following ecosystems covers the largest area of the earth surface?  
 (i) desert (ii) grassland (iii) mountain (iv) marine
18. Which of the following is a renewable source of energy?  
 (i) Atomic power (ii) Hydroelectric power  
 (iii) Thermal power (iv) Natural gas
19. Which one of the following is a landlocked country?  
 (i) Bulgaria (ii) Hungary (iii) Romania (iv) Ukraine
20. Which country recently reported its first known human death of the rare 'Monkey B virus'?  
 (i) USA (ii) Singapore (iii) China (iv) South Korea

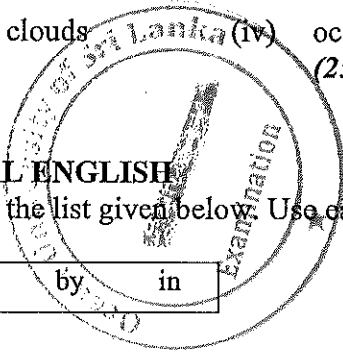
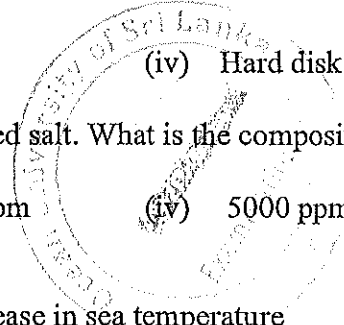
21. Which is the world's largest desert?  
 (i) Sahara (ii) Gobi (iii) Thar (iv) Takala Makan
22. Great Barrier Reef, the world's largest Coral Reef is located in;  
 (i) Sea around Caribbean Island (ii) North East Australian Coast  
 (iii) Philippine waters (iv) South coast of Indonesia
23. If one watches a distant ship coming towards the shore through a telescope one first sees  
 (i) its hull (ii) its funnel (iii) its mast (iv) the ship
24. The nuclear reactor, where the leak of radioactive substance was detected in Japan following the tsunami of 11 March, 2011 are in;  
 (i) Fukushima (ii) Kyoto (iii) Tokyo (iv) Hiroshima
25. Which of the following countries has got its map on its flag?  
 (i) Congo (ii) Cyprus (iii) Jordan (iv) Libya
- (25 marks)

### SECTION B - SUBJECT KNOWLEDGE – 25 QUESTIONS

01. Which of the following is considered as basic structural and functional unit of living matter?  
 (i) tissue (ii) atom (iii) cell (iv) system
02. What are the four main 'biomolecules'?  
 (i) lipids, water, proteins, carbohydrate (ii) proteins, water, minerals, vitamins  
 (iii) carbohydrates, lipids, proteins, (iv) lipids, proteins, carbohydrates, nucleic acids  
 minerals
03. What is the type of organism which cannot be separated as living or non-living?  
 (i) Bacteria (ii) Virus (iii) Amoeba (iv) Paramecium
04. Ramsar Convention is for the protection of internationally important;  
 (i) forests (ii) lakes (iii) wetlands (iv) ocean
05. Which of the following are the top three fish producing countries in the world in 2022?  
 (i) China, India, Indonesia (ii) USA, China, Russia  
 (iii) India, Chile, Indonesia (iv) Russia, China, Vietnam
06. Ozone layer is present in the  
 (i) troposphere (ii) stratosphere (iii) mesosphere (iv) ionosphere
07. Mercury would be most concentrated in which of the following organisms?  
 (i) tuna (ii) anchovy (iii) phytoplankton (iv) zooplankton

08. If the chemical formula of the hydroxide formed by the element X is X(OH), what is the formula of the sulphate formed by X  
 (i) XSO<sub>4</sub> (ii) X<sub>2</sub>SO<sub>4</sub> (iii) X(SO<sub>4</sub>)<sub>2</sub> (iv) X<sub>4</sub>SO
09. The most harmful air pollutant produced by automobiles is \_\_\_\_\_  
 (i) HNO<sub>3</sub> (ii) NO (iii) SO<sub>2</sub> (iv) CO
10. The most fundamental economic problem is \_\_\_\_\_  
 (i) security (ii) health (iii) scarcity (iv) education
11. The average income of a country is known as \_\_\_\_\_  
 (i) Real National Income (ii) Per Capita Income  
 (iii) Disposable Income (iv) None of the above
12. What is blue economy?  
 (i) High growth rate economy (ii) Economy based on marine tourism  
 (iii) Sustainable use of ocean resources for economic growth (iv) Economy based on ocean energy
13. What is the dominant force affecting the Earth's tides?  
 (i) Gravitational pull of moon and sun  
 (ii) Gravitational pull of sun and moon and rotation of earth  
 (iii) Gravitational pull of sun  
 (iv) Gravitational pull of moon
14. 100 cm<sup>3</sup> of an aqueous solution contains 4 g NaOH. What is the concentration of the solution in mol dm<sup>-3</sup>? (molecular mass [g mol<sup>-1</sup>] of Na=23, O=16, H=01)  
 (i) 0.1 (ii) 2 (iii) 1 (iv) 4
15. Refer to the equation regarding photosynthesis given below:
- $$\begin{array}{ccccccc}
 6\text{CO}_2 & + & 6\text{H}_2\text{O} & \xrightarrow[\text{chlorophyll}]{\text{Sunlight}} & \text{C}_6\text{H}_{12}\text{O}_6 & + & 6\text{O}_2 \\
 \text{Carbon dioxide} & & \text{water} & & \text{carbohydrate} & & \text{oxygen}
 \end{array}$$
- Accordingly, the possible effect of cutting down trees?  
 (i) Increase of CO<sub>2</sub> percentage and decrease of O<sub>2</sub> percentage in the atmosphere  
 (ii) Decrease of CO<sub>2</sub> percentage and increase of CO<sub>2</sub> percentage in the atmosphere  
 (iii) Increase of the supply of food for all organisms in the environment  
 (iv) Having balance CO<sub>2</sub> and O<sub>2</sub> concentration in the atmosphere
16. An inorganic compound contained in the living tissue  
 (i) lipid (ii) starch (iii) water (iv) protein
17. What are the three pillars of sustainable development?  
 (i) Energy, economy, and livelihoods (ii) Environment, economy, and social  
 (iii) Energy, economy, and environment (iv) Energy, economy, and evolution

18. The price of a product in free market is determined by;  
 (i) the law of supply and demand (ii) quality of the product  
 (iii) consumer preference (iv) durability
19. Which one of these also known as read/write memory?  
 (i) ROM (ii) RAM (iii) DVD (iv) Hard disk
20. 50 mg of potassium iodate is contained in 1 kg of Iodized salt. What is the composition of Potassium Iodate in that salt solution?  
 (i) 0.5 ppm (ii) 50 ppm (iii) 550 ppm (iv) 5000 ppm
21. What is the leading cause of coral bleaching?  
 (i) freshwater runoff (ii) increase in sea temperature  
 (iii) overexposure to sunlight (iv) heavy metal pollution
22. Which of the following ion is responsible for hardness of water?  
 (i)  $Cr^{3+}$  (ii)  $SO_4^{2-}$  (iii)  $Mg^{2+}$  (iv)  $Cl^-$
23. Starting from the least complex to the most, which is the correct order of species hierarchy?  
 (i) Individual, Community, Population, Ecosystem  
 (ii) Individual, Population, Community, Ecosystem  
 (iii) Population, Individual, Community, Ecosystem  
 (iv) Ecosystem, Community, Population, Individual
24. The seasonal reversal in the wind direction during the year is known as;  
 (i) weather (ii) climate (iii) atmosphere (iv) monsoon
25. The water cycle is driven by;  
 (i) sun (ii) moon (iii) clouds (iv) oceans



**SECTION C- GENERAL ENGLISH**

01. Fill in the blanks with a suitable preposition from the list given below. Use each preposition only once.

with	at	on	by	in
------	----	----	----	----

- i. She learned Russian ..... the age of 45.
- ii. The book was written ..... Mark Twain.
- iii. We can only get to the camp ..... foot.
- iv. My parents got married ..... the 1970s.
- v. Many of us eat ..... fork and spoon.

*(0.5\*05 = 2.5 marks)*

02. Underline the correct pronouns

- i. He really enjoyed..... party. (me, their, mine)
- ii. Their house is much bigger than..... (ours, our, my).
- iii. That dog has hurt..... (it's, its, their) leg.
- iv. Don't help me, I want to do it..... (my, I, myself).
- v. We are having..... (ours, us, our) holiday in April.

(0.5\*5 = 2.5 marks)

03. Fill in each blank with the correct form of the verb given in brackets

- i. He \_\_\_\_\_ (want) to become a pilot.
- ii. Raju \_\_\_\_\_ (go) to market yesterday.
- iii. I have \_\_\_\_\_ (complete) my homework just now.
- iv. Ramya \_\_\_\_\_ (be) a student.
- v. Anna has \_\_\_\_\_ (bring) a new car.
- vi. We had \_\_\_\_\_ (reach) the airport by 9 O'clock.
- vii. She \_\_\_\_\_ (pass) her secondary grade in the coming year.
- viii. She sometimes \_\_\_\_\_ (watch) movies while eating.
- ix. Silva \_\_\_\_\_ (meet) his family next year.
- x. It has just \_\_\_\_\_ (rain).

(0.5\*10 = 05 marks)

04. Construct questions to get the words in the bold print as answers

- i. The class will begin **on next Saturday**.

.....  
ii. **My sister** won the 1<sup>st</sup> place in the competition.

.....  
iii. Sudam goes to work **by his car**.

.....  
iv. We buy the books from **Sarasavi Book Shop Kururnegala**.

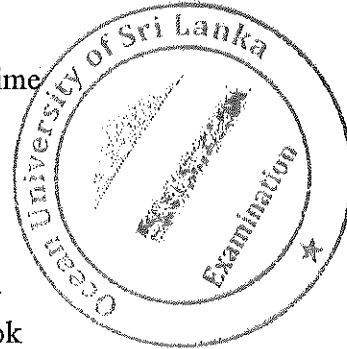
.....  
v. Subashini hasn't written the paper **because she is ill**.

(05 marks)

05. Of the options given below each sentence in bold print, underline the one that best expresses its meaning

- i. **Nimal isn't as old as he looks**
  - a Nimal isn't very young
  - b Nimal is old but he doesn't look old
  - c Nimal looks older than he is
  - d Nimal looks very young

- ii. **We would have been late if we hadn't hurried**
  - a We were late because we didn't hurry
  - b We did not hurry because we were not late
  - c We were not late because we hurried
  - d We did not hurry because we were late.
  
- iii. **In spite of the rain, they had a good time**
  - a If it had not rained, they would have had a good time
  - b It rained while they had a good time
  - c They had a good time, because it rained
  - d It rained, but still they had a good time
  
- iv. **Having completed the book he had a holiday**
  - a After he had completed the book he had a holiday
  - b He had had a holiday before he completed the book
  - c He had a holiday while he was completing the book
  - d He completed the book during his holiday
  
- v. **Ruwani no longer works here**
  - a Ruwani didn't work here for a long time
  - b Ruwani has been working here for a long time
  - c Ruwani does not work here now.
  - d Ruwani worked here a long time ago.



(05 marks)

06. Read the following passage given and answer the questions

We are living in the midst of a great chemical experiment, and some serious consequences are becoming apparent to scientists. More than two billion pounds of chemicals are spewed into the air each year, which are brewing a disastrous stew. The greatest consequences of the atmosphere crisis may be global warming and the ozone depletion. The Earth appears to be warming due to the greenhouse effect. Scientists estimate that average temperature could climb about 20°C in coming 20 years. Global warming is the predicted result of the greenhouse effect, created by the greenhouse gases, such as carbon dioxide and methane, in the atmosphere. This change in the global climate would have disastrous results including drought, coastal flooding, and increased species extinction. Also, the scientists have discovered a hole in the ozone layer. The ozone layer is the only protection for life on Earth against deadly ultraviolet radiation from the Sun. Once the ozone layer is destroyed, all life on the Earth will cease to exist, killed by the deadly radiation. The planet will become a barren rock devoid of all life. And when this happens the process of industrialization would have to take the blame, which has resulted in increased use of fossil fuels such as coal, petroleum, and diesel.

[RBI (GRADE B), 2009]

a. What does the passage primarily focus on?

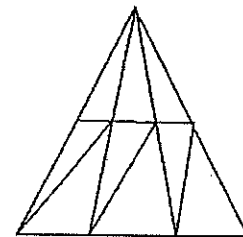
.....

- b. What are the gases that cause greenhouse effect?  
 .....
- c. How does the ozone layer protect the Earth?  
 .....
- d. Which of the following best explains the usage of the phrase *brewing a disastrous stew*? (Underline the correct answer)
- (i) The continuous rise in the Earth's temperature has been proved to be very dangerous
  - (ii) Lack of efforts to curb the greenhouse effects would degrade the environment in the near future
  - (iii) The harmful ultraviolet radiations are slowly destroying the life on the Earth
  - (iv) The fraternity of scientists has been opposing the process of industrialization
- e. What does the following words in bold texts from the passage explain?
- i. Discovered - .....
  - ii. Cease - .....
  - iii. Barren - .....
  - iv. Blame - .....

(05 marks)

SECTION D – IQ TEST – 25 QUESTIONS

01. What number should replace the question mark?  
 29, 36, 44, 53, ?  
 (i) 55                      (ii) 63                      (iii) 65                      (iv) 69
02. Find the answer for following expression  
 Divide 52 by 4 and add 17 multiplied by 3  
 (i) 10                      (ii) 27                      (iii) 33                      (iv) 64
03. If CENTURION is coded as 325791465, and RANK as 18510, what will the figure 78510 represent?  
 (i) TANK                      (ii) BANK                      (iii) TAKE                      (iv) SANK
04. If 2 fligs make a flog and 3 flogs make a flug, how many fligs in 12 flugs  
 (i) 17                      (ii) 34                      (iii) 36                      (iv) 72
05. In which range include the correct number of triangles in this diagram?

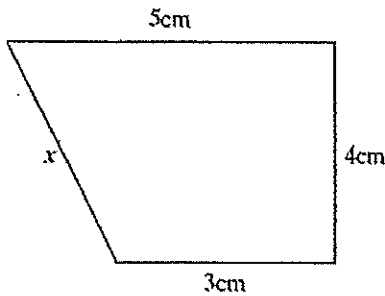


- (i) 5-10                      (ii) 11-17                      (iii) 16-20                      (iv) 21-25

06. In which equation shows the following statement?  
**x is 6 or less and more than -5**  
 (i)  $5 < x \leq 6$       (ii)  $5 > x \leq 6$       (iii)  $-5 \leq x \leq 6$       (iv)  $-5 < x < 6$

07. What is the speed in m/s of a car that travels 30 km in 20 minutes?  
 (i) 25      (ii) 50      (iii) 75      (iv) 100

08. The length of x equals



- (i) 6 cm  
 (ii)  $\sqrt{6}$  cm  
 (iii)  $5\sqrt{5}$  cm  
 (iv)  $2\sqrt{5}$  cm

09. How many cases do you need if you have to pack 112 pairs of shoes into cases that each hold 28 shoes?  
 (i) 4      (ii) 8      (iii) 12      (iv) 16

10. Saman bought a car valued at Rs. 7700,000. One year later the car's value had decreased by  $\frac{2}{7}$ . What is the new value of the car?  
 (i) 2200,000      (ii) 5500,000      (iii) 9900,000      (iv) 4400,000

11.  $5 \times -2 - (8 - 12) + 16 \div -8 =$   
 (i) 6      (ii) -8      (iii) -16      (iv) -6

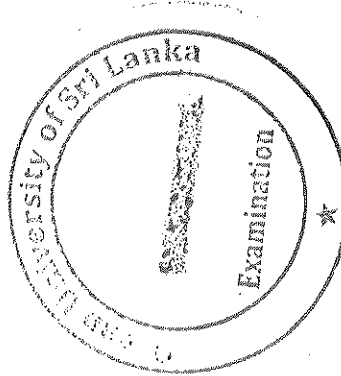
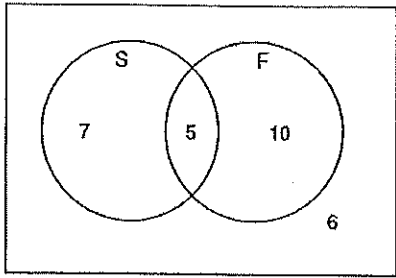
12. If five men can build a house in 21 days, how long will it take seven men to build the house, assuming all men work at the same rate?  
 (i) 10      (ii) 15      (iii) 20      (iv) None of these

13. The average of three numbers is 19. The average of two of these numbers is 24. What is the third number?  
 (i) 3      (ii) 6      (iii) 9      (iv) 12

14. Solve:  $-(-3)^3 =$   
 (i) -9      (ii) 27      (iii) 9      (iv) -27

15. The call center received its highest number of enquiries between 3 p.m. and 4 p.m., which was 40% more than the 250 enquiries it received between 2 p.m. and 3 p.m. How many calls did the call center receive between 3 p.m. and 4 p.m.?  
 (i) 150      (ii) 250      (iii) 350      (iv) 450

16.

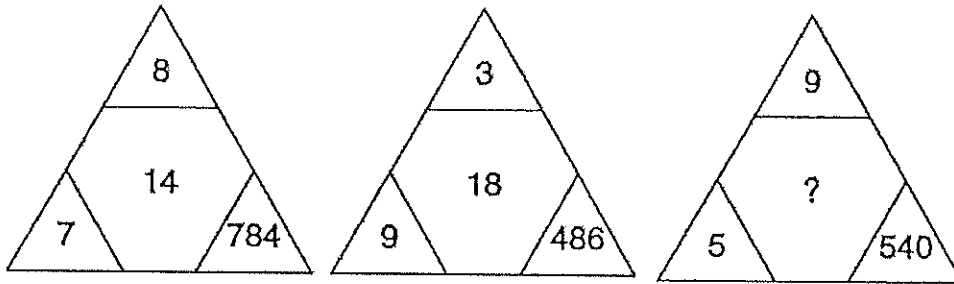


The Venn diagram shows a class of music students and instruments they learn.  
S=Saxophone ; F=Flute

What is the total number of students in the class?

- (i) 17                      (ii) 22                      (iii) 23                      (iv) 28

17.



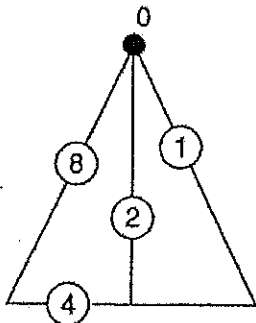
What number should replace the question mark?

- (i) 10                      (ii) 12                      (iii) 14                      (iv) 16

18. When full, a barrel of water contains 85 liters. How many liters remains after 40% has been used?

- (i) 31                      (ii) 41                      (iii) 51                      (iv) None of these

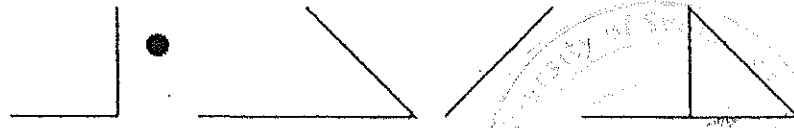
19.



If the number 1943 is represented by symbols;



What number is represented by the symbols;

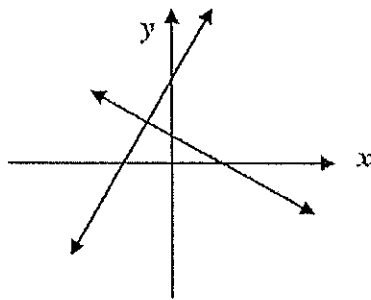


- (i) 30683                      (ii) 30917                      (iii) 60587                      (iv) 60316

20. A company produces 864 white, black and red motor vehicles per week in the ratio 1:5:3. How many black cars does the company produces per week?

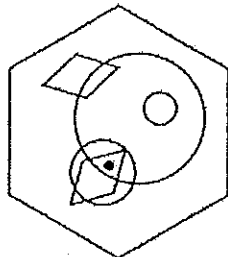
- (i) 96                      (ii) 384                      (iii) 480                      (iv) 288

21. The coordinates of the point of intersection for the two graphs could only be:

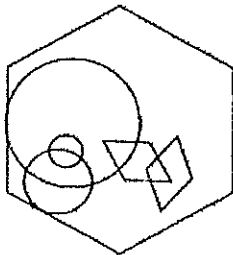


- (i) (-1,2)  
 (ii) (-1,-2)  
 (iii) (1,2)  
 (iv) (1,-2)

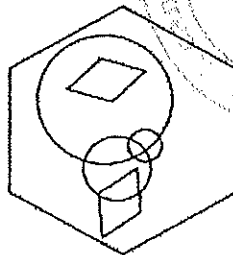
22.



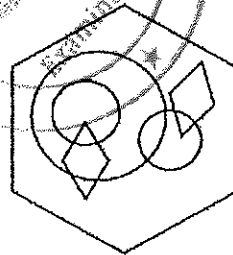
To which hexagon below can a dot be added so that it then meets the same conditions as in the hexagon above?



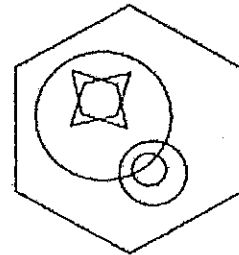
(i)



(ii)



(iii)



(iv)

