

Ocean University of Sri Lanka

Aptitude Test 2022/2023

B. Tech. in Aquaculture and Seafood Technology



Number

Index No

Time Allowed: Two (02) hrs.

Date: 19.11.2022

Instructions:

- Answer all the question 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 How many recognized public universities are there under the control of the University Grants Commission (UGC) in Sri Lanka?
 (i) 15 (ii) 16 (iii) 17 (iv) 18
- 02 How many administrative districts are there in Sri Lanka?
 (i) 22 (ii) 24 (iii) 25 (iv) 27
- 03 Who is the first executive President of Sri Lanka?
 (i) William Gopallawa (ii) D.S. Senanayaka
 (iii) R. Premadasa (iv) J.R Jayawardene
- 04 Which crop is native to Sri Lanka?
 (i) tea (ii) coffee (iii) rubber (iv) cinnamon
- 05 Which medal/position is won by Sri Lanka's Yupun Abeykoon in the Commonwealth Games 2022?
 (i) Gold (ii) Silver (iii) Bronze (iv) Fourth place
- 06 How many countries are there in Men's T20 World Cup 2022?
 (i) 14 (ii) 15 (iii) 16 (iv) 17
- 07 Which film got the best film award at the 94th Oscar Award held in 2022?
 (i) The Batman (ii) The Adam Project (iii) CODA (iv) The Kashmir files
- 08 Nobel Peace Prize for 2022 is awarded to ;
 (i) Alain Aspect (ii) Ales Bialiatski (iii) Annie Ernaux (iv) Svante Pääbo
- 09 Which is the latest cyclonic storm generated in Bay of Bengal?
 (i) Tauktae (ii) Sitrang (iii) Titli (iv) Karim

- 10 A healthy person's blood pressure is _____.
- (i) 170/81 mmHg (ii) 120/80 mmHg (iii) 140/70 mmHg (iv) 180/120 mmHg
- 11 Which of the following is not a member of SAARC?
- (i) Bhutan (ii) Nepal (iii) Singapore (iv) Maldives
- 12 What does the "19" in COVID-19 refers to?
- (i) There are 19 variants of the corona virus.
(ii) There are 19 symptoms of coronavirus.
(iii) This is the 19th coronavirus pandemic.
(iv) The coronavirus and disease it causes were identified in 2019.
- 13 What does GSP-Plus stand for?
- (i) General System of Preferences-Plus (ii) Generalized System of Preferences-Plus
(iii) General System of Product-plus (iv) Generalized System of Product-Plus
- 14 High inflation levels in the economy leads to _____ in the supply of money.
- (i) increase (ii) decrease (iii) no change (iv) None of the above
- 15 Solar eclipse occurs when _____.
- (i) Earth comes between sun and moon (ii) Moon is at right angle to the earth
(iii) Moon comes between sun and earth (iv) Sun comes between moon and earth
- 16 The chemically inactive gas present in the atmosphere is _____.
- (i) nitrogen (ii) argon
(iii) water vapor (iv) oxygen
- 17 Of the total water on the Earth, freshwater reserve a constitute approximately;
- (i) 70% (ii) 3% (iii) 10% (iv) 9%
- 18 Which is the smallest country?
- (i) Vatican City (ii) Nauru (iii) Monaco (iv) Palau
- 19 World Ocean Day is celebrated on _____ every year.
- (i) 2nd February (ii) 5th June
(iii) 8th June (iv) 1st December
- 20 Global warming is expected to result in;
- (i) increase sea level (ii) change in crop pattern
(iii) change in coast line (iv) all of these
- 21 Which city is the headquarters of International Monetary Fund (IMF)?
- (i) London (ii) Paris
(iii) Geneva (iv) Washington D.C.

- 22 Natural gas is mainly composed of which type of gas?
 (i) propane (ii) butane (iii) methane (iv) ethane
- 23 Which country is the largest producer of fertilizer in the world? _____
 (i) China (ii) India (iii) USA (iv) Russia
- 24 Which of the ocean touches the shores of Asia on one side and that of America on the other?
 (i) Indian Ocean (ii) Pacific Ocean (iii) Atlantic Ocean (iv) Antarctic Ocean
- 25 The deflection of the winds to the right in the northern hemisphere is caused by
 (i) Revolution of the Earth (ii) Rotation of the Earth
 (iii) Uneven heating of the Earth (iv) All the above

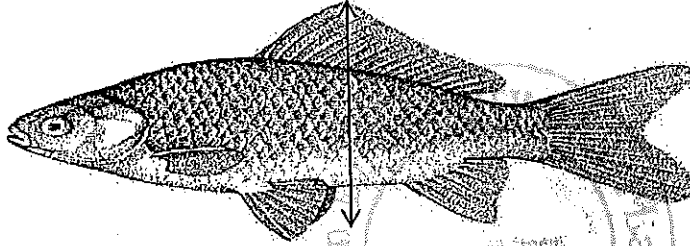
(25 marks)

SECTION B - SUBJECT KNOWLEDGE – 25 QUESTIONS

- 01 What type of land is suitable for a mud pond?
 (i) clay soil with rapid slope (ii) sandy soil with rapid slope
 (iii) clay soil with smooth slope (iv) sandy soil with smooth slope
- 02 Suitable ranges of ammonia, dissolved oxygen, pH and temperature for the aquaculture are _____
 (i) (0.025 - 1) mg/L, >0 mg/L, 6.5 - 9.0 and (25 - 32) °C
 (ii) (0 - 0.025) mg/L, >8 mg/L, 6.5 - 7.0 and (18 - 28) °C
 (iii) (0 - 0.025) mg/L, >5 mg/L, 6.5 - 8.5 and (18 - 28) °C
 (iv) (0 - 0.025) mg/L, >5 mg/L, 6.5 - 8.5 and (22 - 28) °C
- 03 Winkler method is used to determine the _____
 (i) pH of water (ii) nitrate concentration of water
 (iii) turbidity of water (iv) dissolved oxygen of water
- 04 $\text{NH}_3, \text{NH}_4^+ \xrightarrow{(a)} \text{NO}_2^- \xrightarrow{(b)} \text{NO}_3^-$
 What are the microbes involved in (a) and (b) processes in the nitrogen cycle?
 (i) *Nitrosomonas* and *Nitrobacter* (ii) *Nitrosomonas* and *Nitrosomonas*
 (iii) *Nitrobacter* and *Nitrobacter* (iv) *Nitrobacter* and *Nitrosomonas*
- 05 *Artemia* is widely used in aquaculture as a _____
 (i) dry feed (ii) live animal feed (iii) powdered feed (iv) granular feed
- 06 Fish is the richest source of _____
 (i) silica (ii) protein (iii) magnesium (iv) zinc
- 07 Which species is being used as a biological weed control agent?
 (i) common carp (ii) silver carp (iii) grass carp (iv) bighead carp

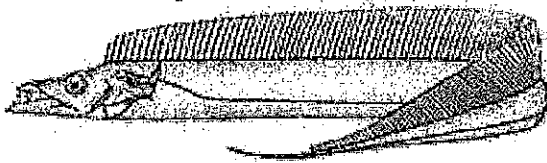
- 08 Cephalopods belong to the group;
 (i) Crustacea (ii) Mammalia (iii) Mammalia (iv) Mollusca
- 09 What is a phenomenon that occurs when there is excess nitrogen and phosphorus in an aquatic ecosystem?
 (i) nitrification (ii) eutrophication (iii) putrefaction (iv) deterioration
- 10 Which organ of the fish allows it to float?
 (i) swim bladder (ii) air sac (iii) vacuoles (iv) none of the above
- 11 What is meant by polyculture?
 (i) culture of fish in a pond (ii) culture of move prawns in a pond
 (iii) culture of more than one species in a pond (iv) culture of crabs in a pond
- 12 Which of the following is a bacterial disease?
 (i) velvet disease (ii) fin rot
 (iii) costiasis (iv) cilodon disease
- 13 What is the commonly used method to increase pH of water?
 (i) addition of gypsum (ii) liming
 (iii) addition of oil cake (iv) being substances which are insoluble in water or fatty acids
- 14 Oviparous fish produce _____.
 (i) babies (ii) adult ones (iii) eggs (iv) none of the above
- 15 _____ is the potential egg producing capacity of a fish during a reproductive cycle.
 (i) Ovulation (ii) Fecundity (iii) Milking (iv) Productivity
- 16 Main vitamins contain in fish oil are _____.
 (i) A and B (ii) A and C (iii) A and D (iv) B and D
- 17 During the enzymatic spoilage, fish glycogen converts into;
 (i) acetic acid (ii) palmitic acid (iii) linoleic acid (iv) amino acid
- 18 Which is the submerged aquatic plant?
 (i) *Eichhornia* (ii) *Salvinia* (iii) *Nymphaea* (iv) *Vallisneria*
- 19 To maximize efficiency of oxygen absorption in fish, the blood flows;
 (i) from the gills to the heart
 (ii) from the body directly to the gills
 (iii) in the same direction as the flow of water
 (iv) in the opposite direction to that of the water

20 What is the axis shown in the picture?



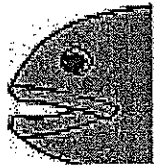
- (i) Dorso-ventral Axis (ii) Anteroposterior Axis
(iii) Left right Axis (iv) Dorso-ventral axis

21 What is the shape of bellow fish?



- (i) Globiform (ii) Compress form (iii) Ribbon like (iv) Thread like

22 What type of mouth is this?



- (i) terminal (ii) sub-terminal (iii) superior (iv) inferior

23 What is shrimp/lobster carapace made of?

- (i) calcium (ii) chitin (iii) cartilage (iv) potassium

24 What color is lobster blood?

- (i) red (ii) blue (iii) green (iv) colourless

25 Select the correct statement from the following

- (i) Red seaweeds are sources for the extraction of agar and carrageenan.
(ii) Seaweeds obtain nutrients directly from the seawater.
(iii) Seaweeds are a group of photosynthetic non-flowering species.
(iv) All the above are correct.

(25 marks)

SECTION C- GENERAL ENGLISH

01 Fill the blank selecting correct pronoun given in the bracket.

1) (my / I/ me /) best colleague is Imalka. 2) (his / her / she) is in the second year at the university 3)..... (my /I /me) have two sisters and three brothers. 4)..... (their / them / they) help me a lot for my University education. I also help 5)..... (they / them/ their) in their works. In Saturday evening 6) (us/ our/ we) play volleyball in 7)..... (our/us/ we) home garden. Our father joins with 8) (us /our /we) to play volleyball. My mother is a teacher. I love 9) (her / she / him) teaching style. My parents are very generous. 10) (their / them / they) love and affection make us successful.

(05 marks)

02 Underline the correct preposition given within brackets.

- i. I am writing you this email (to/for) describe my need
- ii. My father tried to cut the rope (with/by) a knife.
- iii. The old man suffered (from/for) a heart attack.
- iv. There is a shortcoming (in/of) the assembly of the building.
- v. Those teachers' viewpoints are mismatched (to/with) each other.
- vi. The Vice Chancellor is very much unsatisfied (in/with) you for acting this manner.
- vii. Nishanthi is qualified (to/for) the aptitude test.
- viii. The meeting begins (from/at) 10 a.m.
- ix. My brother jumped (in/into) the swimming pool.
- x. He has boundless love (for/to) his girlfriend.

(05 marks)

03 Underline the correct verb to complete these sentences.

- i. When they arrived at the airport, their plane (already left /had already left/leaves).
- ii. In the kitchen, mother realized that father (had taken / has taken /was taken) his lunch.
- iii. It (has rained/is raining/ was raining) when I stepped down in India.
- iv. On Sunday evening they (go /went/ have gone) to the fair to get some fruits.
- v. Nishani told her instructor that her mother (has assisted/ had assisted /having assisted) her with her assignments.

(05 marks)

04 Underline the correct word from those given in brackets

- i. Children are advised to use their own (dramatic/dreams/dream) for the assignment.
- ii. In the cancer hospital, smoking is strictly (omitted/ prohibited/ disqualified) in 1958.
- iii. What is that (students/student's/ students') registration number?
- iv. Girls must keep luxurious (jewellery/jewelleries/jewells) in a safe place like a bank.
- v. People seen on the television that the child had been (hijacked/kidnapped/abducted) by an underworld team.

(02½ marks)

05 Complete the following dialogue using the words given below

fresh milk, brown rice, piece, for, matches, wet, gum bottle, item, do, lunch

Father : Saman, come here!

Saman : What _____ father?

Father : To write the _____ list your mother want to buy.

Saman : Oh.. Father my hands are _____ Nayana please _____ it.

Mother : Daughter, please come with a pen and a _____ of paper.

Nayana : Ok mother, tell me.

Mother : Two kilos of _____, one packet of _____, a bundle of _____ sheets, and a box of _____

Saman : Mother please write a _____ for me.

Father : ok then give me the list. I am going, bye!

Nayana: Good bye papa!

(02½ marks)

06 Read the following passage and answer the questions.

FISH ARE FRIENDS, NOT JUST FOOD!

Humans are consuming seafood at a level that cannot be maintained. If the fishing industry collapses, not only will many people lose their livelihoods, but millions will lose their main source of protein. Since 1990, global total fish consumption has increased by 122%. This places a massive burden on the fishing industry, a job market and food source that billions of people rely on. Overfishing is also a grave threat to marine life and the number of endangered species is getting bigger every year. As more and more species are threatened, the oceans' fish populations will become increasingly sparse. Around three billion people worldwide depend on fish as their main source of protein. The fishing industry is a critical part to the economy and many people's survival. If this food source is lost, people will be forced to turn to other, less sustainable sources, only adding to the climate crisis.

With greater technological advances, fishermen and hatcheries can harvest more fish annually than ever before. Also, as global incomes rise and people learn about the health benefits of eating fish, the demand for seafood has risen. Unsustainable harvesting practices are meeting this demand to an excess. Globally, 156 tons of seafood are available for human consumption. However, much goes to waste. By supporting more sustainable seafood consumption practices, this loss can be minimized. For example, fish caught by hook-and-line or spear fishing have a lower impact on the environment. Purchasing seafood from producers that use sustainable practices is an easy way to reduce the harmful effects of overfishing on people who rely on seafood for food and economic benefits.

(Excerpt from *Earth Today*, [June 20th 2022])

(i) What is meant by the phrase "demand for seafood has risen"?

.....

(ii) How is the fishing industry threatened?

.....

(iii) List two sustainable fishing practices mentioned in the passage?

.....

(iv) What do the following words in bold texts from the passage refer to?

Harmful :

Overfishing :

(05 marks)

SECTION D – IQ TEST – 25 QUESTIONS

01 10,11,9,12,8,13,7,14, ?,?

What are the next two numbers in the above sequence?

- (i) 18,9 (ii) 16,8 (iii) 6,15 (iv) 15,6

02 What is $\frac{3}{4}$ of 92 plus 13?

- (i) 69 (ii) 82 (iii) 207 (iv) 897

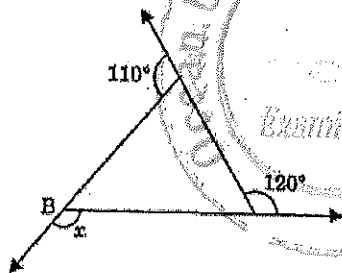
03 In a given code SISTER is coded as 535301, UNCLE as 84670 and BOY as 129. How is RUSTIC written in the code?

- (i) 633185 (ii) 185336 (iii) 363815 (iv) 581363

04 Amal, Wimal and Kamal wish to share out a certain sum of money between them. Amal gets two-fifth, Wimal gets 0.45 and Kamal gets Rs. 21.00. How much is the original sum of money?

- (i) 100 (ii) 120 (iii) 140 (iv) 160

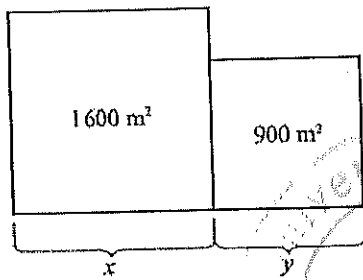
05



What is the value of the angle x?

- (i) 100 (ii) 110 (iii) 120 (iv) 130

06

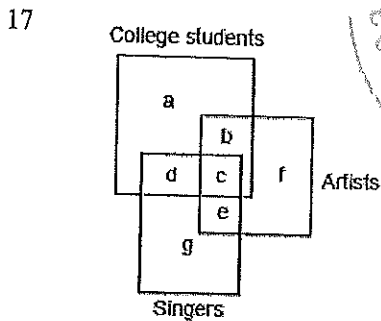


The area of each square is given in the diagram. What is the value of $x+y$?

- (i) 30 m (ii) 40 m (iii) 70 m (iv) 120 m
- 07 An item sells for Rs. 20 per kilogram. What is the cost in cents per gram for this item?
 (i) 0.02 (ii) 0.2 (iii) 2 (iv) 20
- 08 If the circumference of circle is doubled, then the area of the circle
 (i) increases 4 times (iii) decreases 4 times
 (ii) increases 2 times (iv) decreases 2 times
- 09 Concrete is made by mixing screenings, cement and sand in the ratio 3:1:6. How much sand would be needed to make 125 tons of concrete?
 (i) 45 (ii) 60 (iii) 75 (iv) 95
- 10 Naveen walks 7 km to the north then turns left and walks 3 km. Then takes another left and continue walking this time another 7 km forward. How much distance in km is he away from the starting point?
 (i) 10 (ii) 6 (iii) 3 (iv) 2
- 11 A train travelling at a speed of 75 kmph enters a tunnel that is 2.5 km long. The length of the train is 0.25 km. How long does it takes for all of the train to pass through the tunnel, from the moment the front enters to the moment the rear emerges?
 (i) 1.8 minutes (ii) 2.0 minutes (iii) 2.2 minutes (iv) 2.4 minutes
- 12 $\frac{4x-3}{5} - \frac{2x-3}{2} = -2$
 Solve for x
 (i) $x = 5\frac{1}{2}$ (ii) $x = -5\frac{1}{2}$ (iii) $x = -14\frac{1}{2}$ (iv) $x = 14\frac{1}{2}$
- 13 Today is Vihanga's birthday. One year from today he will be twice as old as he was 12 years ago. How old is Vihanga today?
 (i) 20 years (ii) 22 years (iii) 23 years (iv) 27 years
- 14 The average of three unique numbers is 50. If the lowest number is 30, what is the sum of other two numbers?
 (i) 110 (ii) 120 (iii) 130 (iv) 150

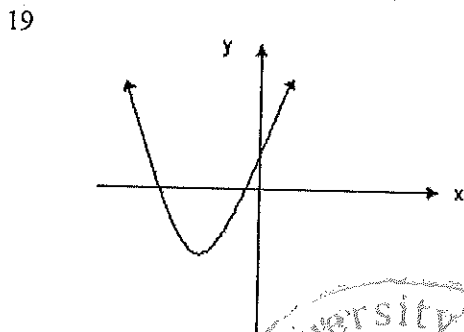
- 15 Expand and simplify
 $-6(2x-3)-11$
 (i) $-12x-29$ (ii) $7-12x$ (iii) $12x-7$ (iv) $7+12x$

- 16 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



According to the above Venn diagram, Find the college students who are artists but not singers represented by;

- (i) c (ii) b (iii) f (iv) e
- 18 In a city, 40 % of the adults are illiterate while 85% of the children are literate. If the ratio of the adults to that of the children is 2:3, then what percent of the population is literate?
 (i) 20% (ii) 25% (iii) 50% (iv) 75%



The turning point of the graph could only be:

- (i) $(-3,3)$ (ii) $(3,4)$ (iii) $(-2,3)$ (iv) $(-3,-3)$

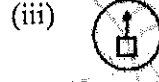
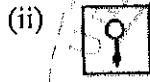
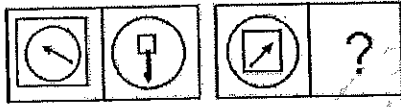
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₹	₹	₹	₹
A	B	C	D

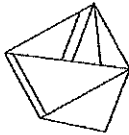
What is the odd one out?

- (i) A (ii) B (iii) C (iv) D

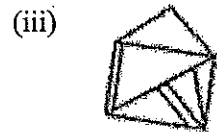
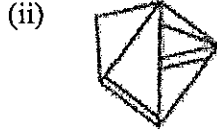
20 Which would replace the question mark?



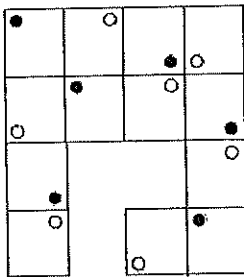
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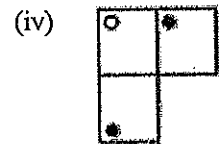
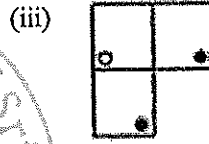
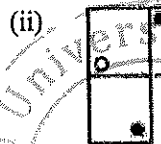
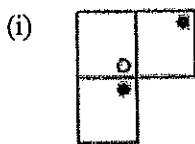
Which one of the figures below can be formed by rotating the figure above?



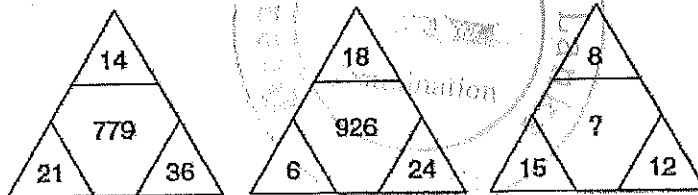
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Which is the missing section?



24



Which number should replace the question marks?

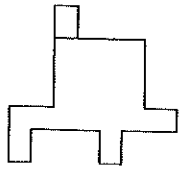
(i) 125

(ii) 253

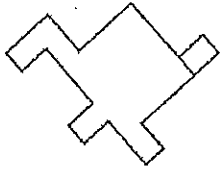
(iii) 453

(iv) 534

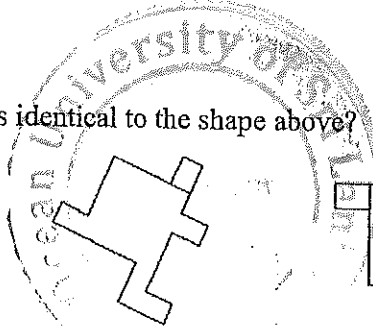
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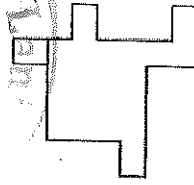
Which shape below is identical to the shape above?



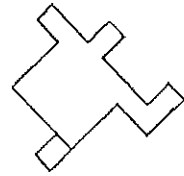
(i)



(ii)



(iii)



(iv)

(25 marks)

*****End of Paper*****