

R6430

SUB.CODE

911F/3171F1

**M.Sc./B.Com. DEGREE EXAMINATION, NOVEMBER–2021**

**Integrated Marine Biology/Commerce (Apprenticeship Embedded)**

**First Semester**

**FRENCH-I: CULTURE & CIVILIZATION – I**

**(Common for M.Sc., Integrated Marine Biology/ B.Com., Apprenticeship Embedded)**

**(CBCS – 2019 Onwards)**

Time: 3 Hours

Maximum: 75 Marks

**SECTION –A**

**[10 X 1 =10]**

**I. Choisissez la meilleure réponse :**

1. France ressemble à \_\_\_\_\_  
a] Un carré    b] La un pentagone    c] un hexagone    d] un octagone
2. Le Coq est un animal . Il est le symbole de \_\_\_\_\_  
a] L'Algérie    b] La Belgique    c] La Côte d'Ivoire    d] La France
3. Le français est une langue officielle dans \_\_\_\_\_  
a] 9 pays    b] 19 pays    c] 29 pays    d] 39 pays
4. « Un pour tous et tous pour un » est la devise \_\_\_\_\_  
a] du Cambodge    b] du Québec    c] du Luxembourg    d] de la suisse
5. En Belgique , on utilise « septante » pour dire \_\_\_\_\_  
a] Soixante    b] Soixante –dix    c] Quatre –vingts    d] Quatre-vingt –dix
6. 14 : \_\_\_\_\_  
a] Quinze    b] Quatorze    c] treize    d] douze
7. \_\_\_\_\_ France  
a] La    b] Les    c] La    d] L'
8. \_\_\_\_\_ Livre  
a] de    b] une    c] un    d] des
9. Nous \_\_\_\_\_ français.  
a] parlent    b] parles    c] parlez    d] parlons
10. J' \_\_\_\_\_ deux crayons.  
a] as    b] ai    c] avons    d] avez

**SECTION –B**

**[5 x 7 =35]**

**Answer ALL The Questions, Choosing either a (or) b**

11. a) Retrouvez les jours de la semaine .
- a) lejud \_\_\_\_\_
  - b) eamisd \_\_\_\_\_
  - c) dulni \_\_\_\_\_
  - d) cmidahne \_\_\_\_\_
  - e) damir \_\_\_\_\_
  - f) evdeirdn \_\_\_\_\_
  - g) rmceidre \_\_\_\_\_
- [ou]
- b) Écrivez les mois de l'année.
12. a) Écrivez la conjugaison du verbe << être>> au présent de l'indicatif.
- [ou]
- b) Écrivez la conjugaison du verbe << parler>> au présent de l'indicatif
13. a) Transformez les phrases au pluriel.
- i. Un discours difficile
  - ii. Une moto américaine.
  - iii. Une voix merveilleuse
  - iv. Un objet curieux.
  - v. Un gaz rare.
  - vi. Un restaurant japonais.
  - vii. Une voiture propre.
- [ou]
- b) Complétez avec l'article indéfini [un ,une, des] ou l' article défini [Le, La, L', Les ]
- a) \_\_\_\_\_ classe
  - b) \_\_\_\_\_ Livre
  - c) \_\_\_\_\_ professeur
  - d) \_\_\_\_\_ ordinateur
  - e) \_\_\_\_\_ stylo
  - f) \_\_\_\_\_ gomme
  - g) \_\_\_\_\_ crayon
14. a) Écrivez les couleurs .
- [ou]
- b) Écrivez les noms des animaux domestiques.
15. a) Écrivez en lettres les nombres suivants .
- 4, 11, 22, 34, 47, 50, 7

[ou]

b) Complétez avec le pronom personnel sujet .

[Je ,j' ,Tu, Il , Elle, Nous, vous , Ils , Elles]

- i. Daria et Maria sont italiennes, \_\_\_\_\_ parlent italien.
- ii. \_\_\_\_\_ allez bien , madame ?
- iii. Je te présente Béatrice, \_\_\_\_\_ est au lycée avec moi.
- iv. \_\_\_\_\_ as 17 ans , \_\_\_\_\_ ai 15 ans : \_\_\_\_\_ sommes lycéens.
- v. Robert est français, \_\_\_\_\_ habite à Nice.

**SECTION –C**

**[ 3 X 10 =30]**

**Answer any THREE Questions .**

16. Lisez le texte suivant et répondez.

Salut ! Je m'appelle Agnès

Salut tout le monde ! Je suis Agnès. J'ai 16 ans et Je suis en seconde au lycée Victor Hugo. Dans ma famille , nous sommes six. Mon père s'appelle Georges, il a 52 ans. Ma mère Klara, a un prénom allemand mais elle est française ,elle a 49 ans . Mes parents sont pharmaciens et ils aiment bien leur travail. Mes deux sœurs s'appellent Sarah et Émilie ; elles ont 11 et 13 ans et elles vont au collège. Mon grand frère Édouard a 21 ans ; actuellement , il se trouve à l'université de Dublin pour ses études. Notre maison est à la campagne ; mon école est à 30 Kilomètres et , tous les matins , je prends le bus scolaire. J'adore les animaux : nous avons trois chiens , un chat et une tortue. Souvent, je m'occupe aussi du cheval de nos voisins, M. et Mme Duvent . Leurs enfants sont très sympas : Françoise est en classe avec moi et son frère Paul est encore à l'école élémentaire.

I. Choisissez la meilleure réponse .

- a] Elle a 11 ans \_\_\_\_\_  
i] Agnès            ii] Sarah            iii] Émilie
  - b] C'est la voisine d' Agnès. \_\_\_\_\_  
I] Klara            ii] Émilie            iii] Françoise
  - c] Elle va au lycée . \_\_\_\_\_  
i] Sarah            ii] Émilie            iii] Françoise
  - d] Elle travaille dans une pharmacie. \_\_\_\_\_  
I] Klara            ii] Mme Duvent    iii] Françoise
  - e] Il va à l'université. \_\_\_\_\_  
i] Paul            ii] Édouard            iii] Georges
- II. vrai ou faux ?
- f. Agnès est lycéenne.
  - g. Elle a un frère, Paul.
  - h. Sa mère est hollandaise.
  - i. Agnès va à l'école en voiture.
  - j. Agnès est la sœur d'Édouard.

17. Transformez les phrases au féminin.

- a) Un ami spontané.
- b) Un journaliste mexicain
- c) Un étudiant réservé.
- d) Un candidat hollandais.
- e) Un artiste espagnol
- f) Un commerçant chinois.
- g) Un architecte âgé.
- h) Un voisin charmant.
- i) Un jeune suisse.
- j) Un avocat sénégalais.

18. Écrivez la conjugaison des verbes au présent de l'indicatif.

i] habiter

ii] aller

19. Écrivez le dialogue entre l'employé et l'élève à la bibliothèque.

20. Traduisez en anglais.

- a) Bonjour Monsieur
  - b) Asseyez –vous !
  - c) Cherchez le mot dans le dictionnaire.
  - d) Comment ça s'écrit ?
  - e) Écoutez le dialogue
  - f) Écrivez les phrases dans le cahier.
  - g) Comment on dit en français ?
  - h) Je n'ai pas compris.
  - i) Vous pouvez répéter , s'il vous plaît ?
  - j) Merci beaucoup.
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**R6090**

**Sub. Code**

**91BPEL**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**First Semester**

**Integrated Marine Biology**

**PROFESSIONAL ENGLISH FOR LIFE SCIENCES – I**

**(CBCS – 2020 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** the questions.

1. What is the purpose of following instructions?
2. Write any four modal verbs with examples.
3. Write any two imperative sentences.
4. What is Skimming? Give an example.
5. Fill up using (Rinse, Dispose, Wear, Dilute)
  - (a) \_\_\_\_\_ lab coat before entering the lab.
  - (b) \_\_\_\_\_ waste in the dustbin.
6. What is Role Play?
7. Give synonym for the following:
  - (a) Scientific
  - (b) Module.

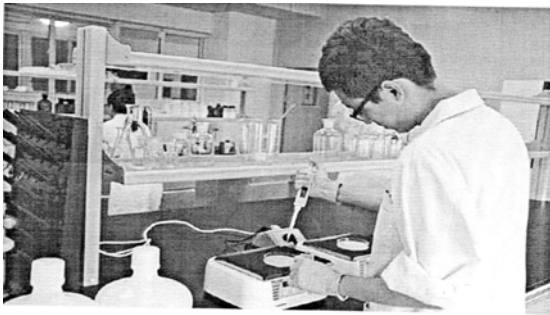
8. Give picture representation for success and failure.
9. Write the four words or expressions used to Contrast \_\_\_\_\_ (However, Unlike, Yet, Both, Like, Even though, On the other hand,)
10. Write two instructions to be followed during brainstorming.

**Part B**

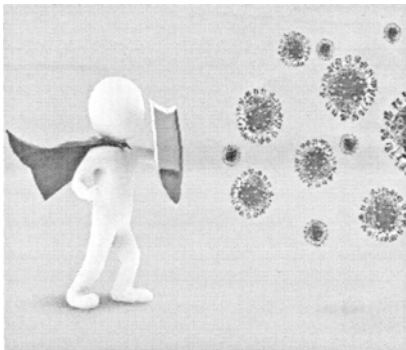
(5 × 5 = 25)

Answer any **five** of the following

11. Write any five instructions that are to be followed while working in the laboratories.



12. Attempt a paragraph with your immediate reaction on seeing the picture given below.



13. Here is a dialogue for informal conversation between friends who meet after a long time : Frame the sentences for the answers.

Priya : Hi, Aparna. How are you? It has been long since we met.

Aparna: \_\_\_\_\_

Priya : I am sure you have completed your Graduation. What are you doing now?

Aparna : \_\_\_\_\_

Priya : \_\_\_\_\_

Aparna : What about you? I remember you joining Engineering at ABC College.

Priya : \_\_\_\_\_

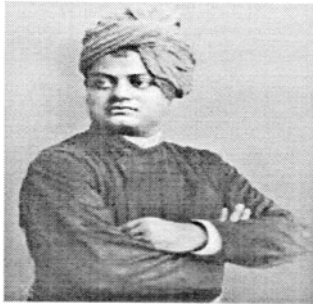
Aparna : Congratulations! I am on my way to Adyar to report for duty at 8'oclock. Bye for now.

Priya : \_\_\_\_\_

14. Match the following words with their meaning:

- (a) Hydrosphere - A unit of liquid
- (b) Gallon - All the waters on the earth's surface
- (c) Sanitation - A body of permeable rock which can contain and transmit ground water
- (d) Aquifers - The source of supply, support or aid
- (e) Resource - The process of keeping places clean and healthy

15. Write a brief note on the personality you find in the picture.



16. Match the following:

- | S.No | Who am I?   | I am a/an   |
|------|---|-------------|
| (a)  | I have five arms but neither has blood nor brain. I live in sea.  | – Spider    |
|      | I have eight legs but don't have antennae.                        | – Dog       |
| (b)  |   |             |
| (c)  | I am a domestic animal. A friend of police and enemy for thieves. | – Lion      |
| (d)  | I am the king of the jungle. I belong to cat family.              | – Earthworm |
| (e)  | I live inside the soil. I do not have, eyes, arms or legs.        | – Starfish  |

17. "All that glitters is not gold" Expand the proverb in a paragraph.

18. Write Five clear instructions to a stranger to reach the Alagappa University Science campus from the main entrance of Alagappa University.



**Part C**

(3 × 10 = 30)

Answer any **three** of the following questions.

19. Write an essay on how to start growing a hibiscus in water.
20. Sketch mind maps for the following:
  - (a) Micro-Organisms
  - (b) Future Goals
  - (c) Why Mind mapping is so powerful?
21. Based on your own experiences and the input from the media, draft an essay on the unselfish services rendered by the frontline workers (Health Care workers such as Doctors, Nurses and Ambulance Drivers, Sanitary Workers and Police Men) during COVID-19.
22. What would you do if you were given a chance to become the Chief Minister of your state for a day?
23. Read the passage and answer the questions given below:

Prof. Radha wanted to explain to her students the functions of the digestive system. Before the class, she penned down the functions as (a) Ingestion (b) Digestion (c) Absorption (d) Egestion. She then went to class, taught her students elaborately and asked them to write down the entire content of the class. The write-up of one of her students reads this way:

Food nourishes our body and influences our health by the nutrition it provides. Nutrition is relatively a new discipline of science that studies food and how the body uses it. Nutrients are substances in food which are carbohydrates, fats, proteins, vitamins, minerals and water. These are the fuels of our body which help us do our job just like any vehicle would need. The energy of these nutrients is measured in kilo calories. On food labels calorie actually refers to kilo calories (kcal).

The digestive system takes care of the body's need for its fuel. It is made of a group of organs that work together. It starts functioning the moment the food is put into our mouth. First, the salivary glands containing amylase moistens the food. Teeth get involved in biting and grinding the larger chunks of food into smaller pieces. The tongue then pushes the food after forming it into a bolus, to the back of the mouth to swallow. Through esophagus the bolus reaches the stomach and reacts with gastric juices, mucus and enzymes making it into a soupy liquid. The soupy liquid enters the small intestine and remains there up to six hours. It is after this process; the nutrients pass into the circulatory system and are taken to where they are needed in the body. The ileum compacts the leftovers to pass through into the large intestine. The large intestine absorbs water from the waste material leftover and produce vitamin K and some B vitamins using the helpful bacteria that live in it. Now, all leftover waste is compacted and stored at the end of the large intestine called the rectum.

Answer the following questions based on the reading passage.

(Go back to the passage to find your answers)

- (i) How does the food we take help us in nourishing our body and influencing our health?
- (ii) What does the word bolus mean?
- (iii) Where is Vitamin K produced?
- (iv) In which organ does the digestion end?
- (v) What will happen to the leftovers in the rectum?

**R6091**

**Sub. Code**

**548101**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**First Semester**

**Integrated Marine Biology**

**PHYSICAL OCEANOGRAPHY**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

Each answer should be in about 10 words.

1. James Cook
2. *Fram* expedition
3. Density
4. UV radiation
5. Littoral currents
6. Tides
7. Isotacy
8. *La Nina*
9. Fog
10. Monsoon

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

All questions carry equal marks.

Each answer should not exceed 500 words.

11. (a) Summarize the modern trends in Oceanography.  
Or  
(b) Discuss about the National expedition in Oceanography.
12. (a) Describe the properties of Seaiice.  
Or  
(b) Infer the viscosity of seawater.
13. (a) Explain the Ekman spiral.  
Or  
(b) Note briefly on waves in shallow waters.
14. (a) Explain estuaries.  
Or  
(b) Comment on global warming.
15. (a) Write note on Cyclones.  
Or  
(b) Explain Clouds and their classification.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

All questions carry equal marks.

Each answer should be in about 1000 words.

16. Write a detailed account on history of Oceanography.
17. Conclude the thermal properties of seawater

18. Give a detailed account on equatorial currents.
  19. Elaborate the regional and global effects of sea level changes.
  20. Evolution Indian Climatology with special, reference to seasonal distribution.
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**R6092**

**Sub. Code**

**548102**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**First Semester**

**Integrated Marine Biology**

**CHEMICAL OCEANOGRAPHY**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

Each answer should be in about 10 words.

1. Chlorinity
2. Major elements
3. Dissolved oxygen
4. BOD
5. Trace elements
6. Anoxic basins
7. DOM
8. Humic substances
9. Phosphorous
10. Denitrification

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

Each answer should not exceed 500 words.

11. (a) Discuss the constancy of ionic Composition.  
Or  
(b) Explain the concept of salinity of seawater.
12. (a) List the factors governing the distribution of CO<sub>2</sub>.  
Or  
(b) Explain the non- reactive gases.
13. (a) Briefly explain the residence time.  
Or  
(b) Infer the cycling of trace elements in coastal waters.
14. (a) Describe the growth inhibitors.  
Or  
(b) Summarize the sources of particulate organic matter in the sea.
15. (a) Explain the seasonal variation of Nitrogen in the sea.  
Or  
(b) Describe the Silicon distribution in the sea.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

All questions carry equal marks.

Each answer should be in about 1000 words.

16. Discuss the chemical properties of seawater.
17. Elaborate the origin, distribution and importance of noble gases.

18. Summarize the interaction of major and minor elements with marine organisms.
  19. Describe the ecological process and significance of particulate organic matter.
  20. Elaborate the fertility of Sea.
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**R6093**

**Sub. Code**

**9MB1A1**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**First Semester**

**Integrated Marine Biology**

**Allied I: GENERAL CHEMISTRY-I**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** the questions.

1. Distinguish between ore and mineral.
2. Mention the alloys of copper and nickel.
3. Define Bohr effect.
4. Draw the structure of hemoglobin.
5. Define homolytic cleavage with example.
6. Name any four examples of rearrangement reaction.
7. What is meant by reducing sugar give examples?
8. Define Chemotherapy.
9. Define synthetic rubber with example.
10. Mention the properties of Teflon.

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a short note on fuel gases.

Or

- (b) Elaborate on zone refining and electrolysis.

12. (a) Explain the applications of metal carbonyls as catalyst with examples.

Or

- (b) Define ligand and explain their classification.

13. (a) Discuss the types of structural isomerism in organic compounds.

Or

- (b) Explain the different types of organic reactions.

14. (a) Outline the functions of protein.

Or

- (b) How are vitamins classified? Explain.

15. (a) Write a note on classification of plastics with suitable examples.

Or

- (b) Discuss the synthesis and applications of phenol-formaldehyde resin and urea formaldehyde resin.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Explain the following terms with examples for each
- (a) Ore
  - (b) Mineral
  - (c) Alloy
  - (d) Amalgam
17. (a) Discuss the biological importance of metal porphyrin complexes.
- (b) Write the difference between coordination compounds and normal compounds.
18. Elaborate the stability and reactions of carbocations, carbanions and free radicals.
19. Explain the various structures of proteins with examples.
20. Explain the synthesis and applications of neoprene and styrene butadiene rubbers.

**R6094**

**Sub. Code**

**931T**

**M.Sc. (INTEGRATED) DEGREE EXAMINATION,  
NOVEMBER – 2021**

**Third Semester**

**Marine Biology**

**காப்பியமும், புதினமும்**

**(CBCS – 2019 onwards)**

Time : Three Hours

Maximum : 75 Marks

**பகுதி அ**

**(10 × 2 = 20)**

**அனைத்து வினாக்களுக்கும் விடை எழுதுக.**

1. மணிமேகலையில் பாத்திரத்தின் மரபைக் கூறுபவர் யார்?
2. தேம்பாவணியின் ஆசிரியர் யார்?
3. நாவலாசிரியர் சு. சமுத்திரம் – சிறு குறிப்புத் தருக.
4. 'வேரில் பழுத்த பலா' நாவலின் மையக் கரு யாது?
5. யாப்பு என்றால் என்ன?
6. அணியின் வகைகள் சிலவற்றைக் குறிப்பிடுக.
7. ஐஞ்சிறுகாப்பியங்கள் யாவை?
8. எழுத்தாளர் எஸ். இராமகிருஷ்ணனின் எந்த நாவலுக்குச் சாகித்திய அகாடெமி விருது கிடைத்தது?

9. புதுக்கவிதை என்றால் என்ன ?
10. நீவிர் அறிந்த மரபுக் கவிஞர்களின் பெயர்களைச் சுட்டுக.

**பகுதி ஆ**

(5 × 5 = 25)

**அனைத்து** வினாக்களுக்கும் விடை எழுதுக.

11. (அ) பெரியபுராணத்தின் வழி கோச்செங்கட் சோழ நாயனார் வரலாற்றைக் கூறுக.

(அல்லது)

- (ஆ) சீறாப்புராணத்தின் வழி நபிகள் நாயகத்தின் பெருமைகளைப் புலப்படுத்துக.

12. (அ) சு. சமுத்திரத்தின் மொழிநடையை அவர் தம் நாவலின் வாயிலாக திறனாய்க.

(அல்லது)

- (ஆ) 'வேரில் பழுத்த பலா' நாவலின் சமூகச் சிக்கலை வெளிக்கொணர்க.

13. (அ) அசை எத்தனை வகைப்படும்? சான்றுடன் விளக்குக.

(அல்லது)

- (ஆ) வெண்பாவிற்குரிய பொது இலக்கணங்கள் யாவை?

14. (அ) காப்பிய இலக்கியத்திற்குரிய இலக்கணங்களைச் சுட்டுக.

(அல்லது)

- (ஆ) பிற்கால காப்பியங்கள் குறித்து எழுதுக.

15. (அ) கவிதைக்குரிய இலக்கணத்தை விளக்குக.

(அல்லது)

- (ஆ) மரபுக் கவிதைக்குரிய இயல்புகளை எடுத்துரைக்க.

எவையேனும் மூன்று வினாக்களுக்கு விடை எழுதுக.

16. சிலப்பதிகார மங்கல வாழ்த்துப் பாடலில் காணலாகும் செய்திகளைத் தொகுத்துக் கட்டுரை வரைக.
17. 'வேரில் பழுத்த பலா' நாவல் சமுதாயத்திற்கு உணர்த்தும் சிந்தனைகளை வெளிக்கொணர்க.
18. தமிழில் உள்ள பாக்களின் பொது இலக்கணங்களைச் சான்றுகளுடன் விவரிக்க.
19. தமிழ் இலக்கிய வரலாற்றில் புதின இலக்கியத்தின் பங்களிப்பு குறித்து ஆய்க.
20. 'முயற்சி' என்னும் தலைப்பில் நீவிர் விரும்பும் பாவகையில் மரபுக் கவிதை ஒன்று எழுதுக.

**R6354**

**Sub. Code**

**931F**

**M.Sc. Integrated Marine Biology DEGREE  
EXAMINATION, NOVEMBER – 2021**

**Third Semester**

**French III : CULTURE AND CIVILIZATION – III**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Section A**

(10 × 1 = 10)

I. Choisissez la meilleure réponse :

1. La Tour Eiffel a été construite par \_\_\_\_\_.

- (a) voltaire                      (b) Victor Hugo  
(c) Rousseau                      (d) Gustave Eiffel

2. Nous allons \_\_\_\_\_ France.

- (a) au                                  (b) aux  
(c) à                                      (d) en

3. \_\_\_\_\_ avenue.

- (a) Le                                  (b) L'  
(c) Les                                  (d) La

4. \_\_\_\_\_ musée.

- (a) un                                  (b) une  
(c) des                                  (d) de

5. Le symbole de Paris est \_\_\_\_\_.
- (a) un monument
  - (b) un fromage
  - (c) un bateau
  - (d) un vin
6. \_\_\_\_\_ traverse Paris.
- (a) La Seine
  - (b) Le Rhône
  - (c) La Garonne
  - (d) Le Rhin
7. Comment s'appelait Paris dans l'ancien temps ?
- (a) Lyon
  - (b) Lutèce
  - (c) Vichy
  - (d) Lille
8. Le Louvre est \_\_\_\_\_.
- (a) Un café
  - (b) Un musée
  - (c) Un parfum
  - (d) Un vin
9. Trente-sept :
- (a) 34
  - (b) 35
  - (c) 36
  - (d) 37
10. \_\_\_\_\_ a créé le mot « francophonie »
- (a) Victor Hugo
  - (b) Rousseau
  - (c) Onésime Reclus
  - (d) Léopold Senghor



**Section B**

(5 × 7 = 35)

Answer **all** the questions.

11. (a) Écrivez les phrases en remplaçant les mots soulignés par y.
- (i) Je vais demain au musée !
  - (ii) Elles restent souvent à la maison
  - (iii) Mes parents habitent à Nancy
  - (iv) Ils vont régulièrement à la mer.
  - (v) Je vais toutes les semaines au cinéma
  - (vi) J'habite dans le centre – ville.
  - (vii) Nous allons au restaurant.

Ou

- (b) Remettez des phrases correctes :
- (i) Peux / Je / donner / informations / des /te
  - (ii) lui / parlez / Vous / ne / pas
  - (iii) moi ! / Écoutez / parle / -/je / quand / vous
  - (iv) Y / n' / Tu / jamais / vas
  - (v) manière ! / parle / de / me / pas/ cette / Ne
  - (vi) en / Tu / deux / acheter/ dois / encore
  - (vii) beaucoup / mangeons / Nous
12. (a) Mettez dans l'ordre les actions pour chercher un document sur Internet :
- (i) Je me connecte à Un moteur de recherche.
  - (ii) J'allume mon ordinateur

- (iii) Je télécharge le document.
- (iv) Je surfe sur le site que j'ai choisi
- (v) Je clique sur le lien correspondant au site
- (vi) Je ferme le site
- (vii) Je tape mon mot de passe.

Ou

- (b) Trouvez le nom d'une forme :
  - (i) la o v e \_\_\_\_\_.
  - (ii) g l u r e a i n r t c a e \_\_\_\_\_.
  - (iii) e b u c \_\_\_\_\_.
  - (iv) r c é a r \_\_\_\_\_.
  - (v) i a r a g n u t e r l l \_\_\_\_\_.
  - (vi) e n l e x a o h g a \_\_\_\_\_.
  - (vii) d o r n \_\_\_\_\_.

13. (a) Transformez au pluriel :

- (i) Chou
- (ii) Travail
- (iii) Trou
- (iv) Pneu
- (v) National
- (vi) Fauteuil
- (vii) Festival

Ou

- (b) Écrivez les mots et expressions des voyages.

14. (a) Vrai ou faux?
- (i) Paris a été fondé par les Romains.
  - (ii) Paris s'appelle Lutèce au 1<sup>er</sup> siècle après J.C.
  - (iii) Avant d'être un musée, le Louvre était une résidence royale.
  - (iv) La tour Eiffel devait être démolie en 1909.
  - (v) Il y a des monuments très anciens dans le quartier de la Défense.
  - (vi) À Paris, il y a plus de touristes que d'habitants.
  - (vii) La seine traverse à Paris.

Ou

- (b) Décrivez les lieux de la ville.

15. (a) Conjuguez les verbes au présent de l'indicatif.
- (i) Nous \_\_\_\_\_ (manger) à la cantine à midi.
  - (ii) On sonne à la porte ! Tu \_\_\_\_\_ (ouvrir) s'il te plaît?
  - (iii) Christine \_\_\_\_\_ (ranger) toujours ses affaires.
  - (iv) Je \_\_\_\_\_ (corriger) mes fautes.
  - (v) Nous \_\_\_\_\_ (commencer) nos courses à 8 heures.
  - (vi) Vous \_\_\_\_\_ (placer) les spectateurs.
  - (vii) Les guides \_\_\_\_\_ (accueillir) les touristes à l'entrée du musée.

Ou

- (b) Décrivez les mots et expressions des fêtes.

**Section C**

(3 × 10 = 30)

Answer any THREE Questions.

16. Traduisez en Anglais :

- (a) Ariane a mis un vêtement en soie blanche avec des rayures noires.
- (b) J'ai retrouvé un vieil album de photographies.
- (c) Au marché aux puces, il y avait beaucoup d'articles originaux.
- (d) Le nouvel ordinateur que j'ai acheté a un écran plus grand
- (e) Cette annonce propose gratuitement des objets d'occasion en bon état.
- (f) Quand ma mère était jeune, elle sortait avec ses amies tous les dimanches
- (g) Dernièrement J'ai introduit de nouvelles méthodes au travail.
- (h) Il faut étudier avec passion et suivre régulièrement les cours

17. Complétez avec qui ou que [qu'] :

- (a) Les langues \_\_\_\_\_ elle étudie au Lycée sont l'anglais et l'allemand.
- (b) Je connais une dame \_\_\_\_\_ parle cinq langues étrangères.
- (c) Le cadeau \_\_\_\_\_ il y a sur la table est pour toi
- (d) Il m'a raconté une histoire \_\_\_\_\_ m' a beaucoup impressionné.
- (e) L'ordinateur \_\_\_\_\_ je viens d'acheter est déjà en panne !
- (f) C'est notre équipe \_\_\_\_\_ a gagné le match.

- (g) C'est moi \_\_\_\_\_ tu dois remercier !.
- (h) La dame \_\_\_\_\_ habite au quatrième étage est médecin.
- (i) Voici la liste des objets \_\_\_\_\_ peuvent être réutilisés et \_\_\_\_\_ je n'ai pas l'intention de vendre.

18. Ecrivez les mots et expressions de l'informatique :

19. Compréhension :

Il était une fois un bûcheron et sa femme qui avaient sept enfants, tous des garçons!

Ils étaient très pauvres et avaient beaucoup de mal à les nourrir. Le dernier était tout petit et ne parlait jamais. À sa naissance, il n'était pas plus gros qu'un pouce et, pour cette raison, on l'avait appelé le Petit poucet.

C'était un enfant gentil, intelligent et très astucieux; il parlait peu mais il écoutait beaucoup ! Un soir, alors que les sept frères étaient couchés. Le bûcheron a dit à sa femme; « Il n'y a plus rien à manger depuis des mois ! Si nous ne voulons pas voir nos enfants mourir de faim devant nos yeux, il faut les perdre dans la forêt! »

- (a) Combien de frères et sœurs a le Petit Poucet?
- (b) Pourquoi les parents étaient inquiets pour leur dernier enfant?
- (c) Pourquoi le dernier enfant s'appelle le Petit Poucet?
- (d) Quelles sont ses qualités?
- (e) Quelle décision prennent les parents? Pourquoi?

20. Décrivez les fêtes et les traditions en France

**R6095**

**Sub. Code**

**932E**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**Third Semester**

**Integrated Marine Biology**

**ENGLISH III – ENGLISH FOR ENRICHMENT –III**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is the message of the story “Two Old Men”?
2. Why did the Verger lose his job?
3. Give two examples for supernaturalism in Riders to the Sea.
4. What did the Sergeant confess about the nature of the police work?
5. In “A Kind of Justice”, who is the only person to remain alive and why?
6. Who is Ashok? Who is Ramul?
7. Phase the verbs in brackets in the correct tense:  
When he \_\_\_\_\_ (reach) the railway station,  
already the train \_\_\_\_\_ (leave).

8. Rewrite the following sentences, as per the instructions given:
- (a) A Committee of experts is examining the report. (Change into Passive Voice)
  - (b) Good teachers are respected by everyone. (change into Active Voice)
9. Define: Minutes
10. Define: Notice

**Part B** (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Comment on the character of Matilde.
- Or
- (b) Write a note on the character of Ratan.
12. (a) Discuss the sea as a symbol in Riders to the Sea.
- Or
- (b) Comment on the character of the Sergeant in “The Rising of the Moon”.
13. (a) Analyze the character of the young wife figuring in “A Kind of Justice”.
- Or
- (b) Comment on the character of Mita.
14. (a) Read the passage and put the verbs in brackets in the correct tense:

A university ————— (stand) for humanism, tolerance and the search for truth. It ————— (symbolize) the onward march of the human race towards even higher objectives. If the universities

\_\_\_\_\_ (discharge) their duty adequately,  
then it \_\_\_\_\_ (be) well with the nation.  
But if the temple of learning itself \_\_\_\_\_  
(become) a home of narrow bigotry, how then the  
nation will prosper.

Or

- (b) Complete the following sentences using the appropriate form of the adjective.
- (i) She is \_\_\_\_\_ than her sister. (pretty, prettier, prettiest)
  - (ii) Martha is a \_\_\_\_\_ girl. (nice, nicer, nicest)
  - (iii) Supriya is the \_\_\_\_\_ girl in the classe. (intelligent, more intelligent, most intelligent)
  - (iv) Martin speaks English \_\_\_\_\_ (well, better, best)
  - (v) China is a \_\_\_\_\_ (big, bigger, biggest)
15. (a) As the Secretary of Your College's Cultural Club. draft a notice, inviting the willing candidates to enroll their names for the college Youth Festival.

Or

- (b) Draft an Agenda for the Valediction of the Soft Skills Training Programme conducted in your college.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

- 16. Sketch the character of the Verger.
- 17. Bring out the pathos in the play, Riders to the Sea.



18. Discuss the psychological elements in “A Kind of Justice.”
19. Rewrite the following sentences as per the directions given in brackets:
- (a) If he is rich, he \_\_\_\_\_ (help) the poor.  
(Place the correct form of the verb)
  - (b) No sooner I \_\_\_\_\_ (reach) the college,  
than the bell rang. (Place the correct form of the  
verb)
  - (c) He told me that he \_\_\_\_\_ (help) me if he  
could.
  - (d) If I \_\_\_\_\_ (be) a bird, I would fly.
  - (e) If he had been intelligent, he \_\_\_\_\_ (pass)  
the examination.
  - (f) Beautiful giraffes roam the savannah. (change into  
Passive voice)
  - (g) The choir really enjoys that piece. (change into  
passive voice)
  - (h) Taj Mahal is visited by thousands of tourists every  
year. (change into Active Voice)
  - (i) He is one of the most intelligent boys in this class.  
(Change into Positive form)
  - (j) She is taller than any other girl in the class.  
(Change into Superlative Form)
20. Describe the tourist spots you have visited.
- \_\_\_\_\_

**R6096**

**Sub. Code**

**548301**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**Third Semester**

**Integrated Marine Biology**

**INVERTEBRATES**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

Each answer should be in about 10 words.

1. Sporozoa
2. Atoll
3. Actinotrocha
4. Lamp-shells
5. Swarming
6. Telson
7. Pallium
8. Osphradium
9. Aristotle's lantern
10. Retrogressive metamorphosis

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

All questions carry equal marks.

Each answer should be in about 500 words.

11. (a) Describe the characteristic features of invertebrates.

Or

- (b) Discuss in brief that coelenterates are at tissue levels of organizations.

12. (a) Discuss in detail about the concept of major and minor phyla.

Or

- (b) Explain the evolutionary significance of Brachiopoda.

13. (a) Give short account on the characters of crustacea and classify upto orders with one example for each order.

Or

- (b) Write an essay on adaptive radiation of polychaeta.

14. (a) Give an outline classification of phylum mollusca with key characters and examples.

Or

- (b) Explain the reproduction and embryogeny of mollusca.

15. (a) Describe the ambulacral system and its importance of echinodermata.

Or

- (b) Describe the structure of acidian tadpole larva and its metamorphosis.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

All questions carry equal marks.

Each answer should be in about 1000 words.

16. Discuss in detail about the types of corals and theories of coral reefs.
17. Describe the functional morphology, reproduction, development and affinities of ectoprocta.
18. Write an essay on larval forms of crustacea and its biological significance.
19. Give a detailed account on torsion and detorsion in gastropoda.
20. Classify phylum echinodermata upto order level with suitable examples with salient features.

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**R6097**

**Sub. Code**

**548302**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**Third Semester**

**Integrated Marine Biology**

**VERTEBRATES**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

Each answer should be in about 10 words.

1. Chorda dorsalis
2. Eons
3. Agnatha
4. Missing link
5. Terrible lizard
6. Ichthyosaurs
7. Ornithorhynchus
8. Corium
9. Epiboly
10. Somites

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

All questions carry equal marks.

Each answer should be in about 500 words.

11. (a) Classify phylum chordata and write the main Characteristics of subphylum vertebrata.

Or

- (b) Write a brief account on origin of chordates.

12. (a) Discuss the distribution, characters and evolution of jawless vertebrates.

Or

- (b) Write an account on lung fish and its affinities.

13. (a) Write an essay on living reptiles.

Or

- (b) Describe how birds are adapted to its aquatic mode of life.

14. (a) Write a short note on marsupials.

Or

- (b) Comment on the origin and ancestry of mammals.

15. (a) Explain the type of cleavage of fish.

Or

- (b) Comment on the sex determination in fishes.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

All questions carry equal marks.

Each answer should be in about 1000 words.

16. Define geological time scale. Discuss the sequence of vertebrates showing their range and relative abundance through time.
17. Write an essay on evolution and adaptive radiation of bony fishes.
18. Discuss in detail about the rise and fall of dinosaurs and give your justification for the extinction of dinosaurs.
19. Write an elaborate account on evolution of man.
20. Describe the embryogenesis of fish.

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**R6098**

**Sub. Code**

**9MB3A1**

**M.Sc. (Integrated Marine Biology) DEGREE  
EXAMINATION, NOVEMBER – 2021**

**Third Semester**

**Allied III: BOTANY-I (PLANT DIVERSITY, PLANT  
PATHOLOGY AND ANATOMY THALLOPHYTA)**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** the questions.

1. Is *Oscillatoria* multicellular or unicellular?
2. Teleutospore
3. Hair cap moss
4. List out the symptoms of viral disease
5. Ligule
6. Amphistomatic
7. What are the two types of leaves present in *Pinus*?
8. What is a spur in *Pinus*?
9. What are the characteristics features of permanent tissue?
10. Phellogen



**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain about life cycle pattern of lichens.

Or

- (b) Write short notes on the economic importance of *Polysiphonia*.

12. (a) Elaborate in detail about the general characters of mosses.

Or

- (b) Add a note on the symptom and control measures of citrus canker.

13. (a) Distinguish between homophyllum and heterophyllum.

Or

- (b) Explain about the general characters of *Selaginella*.

14. (a) Explain the types of cones present in *Pinus*.

Or

- (b) Discuss about life cycle pattern of *Pinus*

15. (a) Write short notes on parenchyma tissues.

Or

- (b) Briefly explain about anomalous secondary thickening in monocot stem.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on various types of spores present in *Puccinia*.
  17. Discuss in detail about the development of gametophytes in mosses.
  18. Give a detailed account on the life pattern of *Selaginella*
  19. Describe in detail about the external morphology of *Pinus*
  20. Explain in detail about the types of permanent tissue
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**R6099**

**Sub. Code**

**548501**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**Fifth Semester**

**Integrated Marine Biology**

**BIOCHEMISTRY**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

1. Macromolecule
2. Carbohydrate
3. Polysaccharides
4. Glucose
5. Amino acids
6. NEAA
7. PUFA
8. Sterols
9. ATP
10. Catabolism

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

All questions carry equal marks.

11. (a) Explain Biomolecules.

Or

(b) Write notes on acid base maintenance and their significance.

12. (a) Briefly explain the classification of carbohydrates.

Or

(b) Explain the biological importance of polysaccharides.

13. (a) Write notes on sources of essential amino acids.

Or

(b) Write briefly on the isoelectric point of proteins.

14. (a) Give a brief account on the significance of lipoproteins.

Or

(b) Write short notes on bio-chemical properties of lipids.

15. (a) Write notes on pentose phosphate pathway (HMP).

Or

(b) Write briefly on the Urea cycle.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

All questions carry equal marks.

16. Write an essay on the Thermodynamic laws and their significance.
  17. Write elaborately on the structure, properties and biological importance of polysaccharides.
  18. Give a detailed account on synthesis and significance of cholesterol.
  19. Write an essay on the classification and structural level of organizations of proteins.
  20. Write an essay on the GLP.
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**R6100**

**Sub. Code**

**548502**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**Fifth Semester**

**Integrated Marine Biology**

**COASTAL AND BRACKISH WATER AQUACULTURE**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** the questions.

All question carry equal marks.

1. Brood Stock
2. Overexploitation
3. Alkalinity
4. Dyke
5. Nursery
6. Alginates
7. Fingerling
8. Induced breeding
9. MPEDA
10. CAA

**Part B**

(5 × 5 = 25)

Answer **all** the questions, choosing either (a) or (b).

All questions carry equal marks.

11. (a) Why aquaculture is proposed in India?

Or

- (b) Discuss briefly about the impacts of overfishing

12. (a) Write notes on cage and pen culture techniques.

Or

- (b) Explain briefly on the steps involved in shrimp farm construction.

13. (a) Give a brief account on fish disease management.

Or

- (b) Write short notes on seaweeds culture techniques.

14. (a) Describe briefly on the types and components of shrimp hatchery.

Or

- (b) Describe briefly on the maintenance of crustacean brood stock.

15. (a) Write notes on the role of fisherman SHG's in Fisheries development.

Or

- (b) Describe the role of fish farmer's development agencies in aquaculture production.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

All questions carry equal marks.

16. Give a detailed account on the socio-economic problems of fish farmers.
17. Write an essay on the criteria involved in site selection for a shrimp farm.
18. Elaborate the importance of water quality management in shrimp farming.
19. Discuss in detailed about the Hatchery seed production in shrimp hatchery.
20. Give a detailed note on the importance of probiotics in shrimp culture.

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**R6101**

**Sub. Code**

**548E01**

**M.Sc. DEGREE EXAMINATION, NOVEMBER – 2021**

**Fifth Semester**

**Integrated Marine Biology**

**MARINE BIODIVERSITY AND CONSERVATION**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

1. What is endemic?
2. Define vulnerability.
3. Define small population?
4. What is species richness?
5. Define hot spot.
6. What is restoration?
7. What is micro plastic pollution?
8. What is ocean mining?
9. Explain IUCN.
10. What is a traditional society?

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the levels of biodiversity.

Or

- (b) Discuss the island biogeography.

12. (a) Write a detailed note on small population.

Or

- (b) Explain the ex-situ conservation strategies.

13. (a) Write a detailed note on importance of marine protected areas.

Or

- (b) Write a detailed note on the Gulf of Mannar.

14. (a) Explain the various marine ecosystem.

Or

- (b) Write a detailed note on jurisdictional gaps and overlaps?

15. (a) What is the National Biodiversity authority? Explain the role.

Or

- (b) Explain the traditional marine resource management.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write a detailed note on importance of Marine Biodiversity
  17. Discuss types of population and its role in biodiversity.
  18. Write a detailed note on restoration ecology.
  19. Write an essay on problems in biodiversity conservation.
  20. Write a detailed note on the role of government in conservation and sustainable development.
-

**R6102**

**Sub. Code**

**548E02**

**M.Sc. Integrated Marine Biology DEGREE  
EXAMINATION, NOVEMBER – 2021**

**Fifth Semester**

**COASTAL ZONE MANAGEMENT**

**(CBCS – 2019 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **ALL** the questions.

1. Define coastal zone.
2. Write a short note on UNEP.
3. What is Marine Park?
4. Define conservation.
5. Write a short note on natural hazards.
6. What is mean sea level?
7. What is bioshield?
8. Write a short note on CRT.
9. Brief note on the role of MOEF.
10. Write a short note on NIO.

**Part B**

(5 × 5 = 25)

Answer **ALL** questions, choosing either (a) or (b).

11. (a) Discuss about coastal zone.

Or

- (b) Describe the Indian Antarctic programme.

12. (a) Write a note on Gulf of Mannar Marine Natural Park.

Or

- (b) Write a note on protected areas.

13. (a) Write a note on tsunami.

Or

- (b) Describe the impact of sea level rise.

14. (a) Discuss why marine biodiversity is unique.

Or

- (b) What are the obstacles in protecting marine environment?

15. (a) Write a note on Indian national ocean research institutes.

Or

- (b) List the funding agencies which support ocean research in India.

**Part C**

(3 × 10 = 30)

Answer any **THREE** questions.

16. Write a detailed note on law of the sea.
  17. Write a detailed note on recommendation and management practices for protected areas.
  18. Write an essay on global warming and climate change.
  19. Write a detailed note on biological and cultural diversity.
  20. List National and International Agencies and Organization for Ocean Management.
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**R6103**

**Sub. Code**

**548701**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2021**

**Seventh Semester**

**Integrated Marine Biology**

**IMMUNOLOGY**

**(CBCS – 2018 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Adaptive immunity
2. Cords of Billroth
3. CDRs
4. Mucosal paint
5. Hapten
6. Avidity
7. Naive lymphocyte
8. CD<sub>4</sub>
9. Opsonization
10. Cytokines.

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write an account on mechanisms of innate immunity.

Or

- (b) Describe the structural characteristics of spleen.

12. (a) Give a brief account on immune diseases.

Or

- (b) Write a short account on heavy chain isotype switching.

13. (a) Enumerate the various types of antigen and antibody interactions.

Or

- (b) Explain the features of Type I and Type IV hypersensitivity reactions.

14. (a) Illustrate the various stages of lymphocyte maturation.

Or

- (b) Describe the effector mechanisms of immune responses.

15. (a) Explain the role of helper T cells in antigen recognition.

Or

- (b) Write an account on development of cell mediated immune responses.



**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write a detailed account on structure and functions of primary lymphoid organs.
  17. Describe the structure and functions of IgG antibody and its subclasses.
  18. Discuss in detail about the causes, types and treatment of auto immune diseases.
  19. Write an essay on the role of lymphocytes in immunity.
  20. Give a detailed account on B cell activation and antibody production.
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**R6104**

**Sub. Code**

**548702**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2021**

**Seventh Semester**

**Integrated Marine Biology**

**GENETICS**

**(CBCS – 2018 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Backcross and testcross.
2. Heterosis.
3. Incomplete dominance.
4. Epistasis.
5. HDN.
6. Pseudo alleles.
7. Map unit distance.
8. Holandric genes.
9. PKU.
10. Consanguineous marriages.

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the reason why did Mendel used the pea plants as his experimental material?

Or

- (b) Discuss the importance of Law of Dominance.

12. (a) Write a short account on complementary factors and supplementary factors.

Or

- (b) Explain the characteristics of Polygenic inheritance.

13. (a) What is multiple allelism? Explain the origin of mutiple alleles.

Or

- (b) Explain the process of linkage and mention its significance.

14. (a) Describe the procedure of chromosome mapping.

Or

- (b) Write a brief account on gynandromorphs and sex mosaics.

15. (a) Comment on inborn errors of metabolism with examples.

Or

- (b) What is pedigree analysis? Write a note on its applications.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Give a detailed account on mendelisms and its practical applications.
  17. In man, genotype AABB and aabb are responsible for black and white skin colour respectively. What will be the skin colour of the offsprings from a mating of black with white and what fraction of the  $F_2$  would be expected to be like either parent?
  18. Illustrate the phenomenon of multiple allelism with suitable examples.
  19. Write an essay on X-linked inheritance with suitable examples.
  20. Discuss in detail about the various autosomal and allosomal anomalies in Man.
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**R6105**

**Sub. Code**

**548703**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2021**

**Seventh Semester**

**Integrated Marine Biology**

**APPLICATIONS OF REMOTE SENSING AND GIS**

**(CBCS – 2018 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define remote sensing.
2. What is spectrum?
3. What is photogrammetry?
4. Define earth-orbiting satellite.
5. Define MSS.
6. What is an urban planning?
7. Explain spectrometry.
8. Define MODIS.
9. Define vector data.
10. What are the components of GIS?

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a detailed note on electromagnetic spectrum.

Or

- (b) Write a detailed note on scattering.

12. (a) Explain the active and passive sensors.

Or

- (b) Discuss about aerial photographic missions.

13. (a) Write a detailed note on land use and land cover mapping.

Or

- (b) Write a detailed note on microwave sensing.

14. (a) Write a detailed note on EROS and Seasat and its applications.

Or

- (b) Write detailed note on NOAA.

15. (a) Explain about raster data.

Or

- (b) Application of DEM.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on principal and concepts of remote sensing.

17. Write a detailed note on photogrammetry.

18. Write an essay on uses of remote sensing in oceanography.
  19. Write an essay on GPS.
  20. Write a detailed note on problems in image classification.
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**R6106**

**Sub. Code**

**548E03**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2021**

**Seventh Semester**

**Integrated Marine Biology**

**MARINE RESOURCES**

**(CBCS – 2018 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

1. EEZ.
2. Give some example of allogenic resource of ocean.
3. Manganese nodules.
4. Placer minerals.
5. Give example of two indigenous crafts and gears of India.
6. Scientific name of Mackerel and Bombay Duck.
7. MNP.
8. Bioactive compounds.
9. Carotenoids.
10. Sterols.



**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write brief notes on coastal aquifer.

Or

- (b) Briefly explain renewable and non-renewable resources of ocean.

12. (a) Explain mineral enrichment in black sea.

Or

- (b) Briefly describe the methods in the exploration of seafloor mineral deposits.

13. (a) Write notes on the sea baulk.

Or

- (b) Write notes on the potential of Prawn fishery in Indian coastal waters.

14. (a) Write short notes on deep sea fishery.

Or

- (b) Write down the reasons for decline in fish production.

15. (a) Write briefly on bioactive compound with suitable examples from marine sources.

Or

- (b) Write brief notes on different type of toxins in marine biota.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on the various marine living and non-living resources.
  17. How manganese nodules are being explored from seafloors - discuss.
  18. Write an essay on sustainable utilization of fishery resources.
  19. Describe various marine natural products and their significance.
  20. Explain Pharmacological properties of toxins and venoms from marine living resources.
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