

2M1N22333

(Pages : 2)

Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester Integrated M.Sc Geology Degree Examination, November 2022

GL01IB01 - EARTH AND ENVIRONMENT

(2020 Admission onwards)

Time: 2 hours

Max. Marks: 60

(Draw neat sketches, wherever necessary)

PART – A

Answer all questions.

Each question carries Two mark.

Ceiling -20 Marks

1. Describe the upper continental crust and lower continental crust
2. What is asthenosphere?
3. Explain re-metamorphism and intense-metamorphism.
4. Differentiate between *craters* and *calderas*
5. Define block mountains
6. What is meant by Fissility and schistosity?
7. Describe the different parts of a fold.
8. Define *petrified fossils* and *carbon films*.
9. What do you mean by Divergent plate boundary?
10. Distinguish the stratosphere and Ionosphere.
11. Define Fumeroles. What are *Mofettes*, *Saffoni* and *Salfataras*
12. What are Meteorites and comets??

PART – B

Answer *all* questions.

Each question carries Five marks.

Ceiling -30 Marks

13. Briefly explain the various indirect methods of ascertaining the earth's age.
14. Discuss the types and causes of Landslide.
15. What is a mineral? Write a note on luster, hardness and habit properties of a mineral.
16. Define Unconformity. Describe the different types of unconformities.
17. Briefly discuss the various theories of Isostasy with neat sketches
18. Explain the theory of Sea floor spreading with evidences
19. Write brief explanatory note on concept of Rock cycle.

PART - C

Answer any *one* question.

Each question carries Ten marks.

20. Write a detailed essay on Geological Time Scale
21. What is an earthquake? Give an account of the causes, classification, intensity and magnitude of an earthquake in detail.

(1 x 10 = 10 Marks)

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Reg. No:

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First semester MSc. Integrated Geology Examination, November 2022

CHE11C01: GENERAL CHEMISTRY

(2022 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

PART- A**Answer all questions****Each question carries Two marks****Ceiling- 25 Marks**

1. What are metallochromic indicators? Give two examples.
2. Define Normality of a solution.
3. What are the basic requirements for a substance to be used as a primary standard?
4. State and explain Hund's rule.
5. Predict the shape of BCl_3 and H_2O molecules on the basis of VSEPR theory.
6. He_2 doesn't exist. Comment.
7. What are free radicals? Give examples.
8. Explain the term isolated system with a suitable example.
9. What are intensive properties?
10. Write the Schrodinger wave equation and explain the terms.
11. State Henry's law.
12. Explain the term accuracy.
13. What is single electrode potential?
14. Define cell constant.
15. What are reference electrodes?

PART- B
Answer *all* questions
Each question carries Five marks
Ceiling- 35 Marks

16. Give the important postulates of Bohr's atomic theory.
17. Explain the term hydrogen bonding. Differentiate intermolecular and intramolecular hydrogen bonding with suitable examples.
18. Distinguish between bonding and antibonding molecular orbitals.
19. Write a short note on
 - (a) Spontaneous process
 - (b) Entropy and its significances
20. Explain Non-stoichiometric and stoichiometric defects
21. What are colligative properties? Explain.
22. State and explain Ostwald's dilution law.
23. What are the factors influencing the solubility of a gas in liquids?

PART- C
Answer *any two* questions
Each question carries Ten marks

24. Draw the MO energy level diagram of oxygen molecules and explain the magnetic behavior.
25. Write a short note on
 - (a) Standard Hydrogen electrode
 - (b) Microanalysis and its advantageous
26. Explain
 - (a) Kohlrausch's law
 - (b) the effect of dilution on specific conductance and molar conductance
27. (a) Osmosis and osmotic pressure (b) Fuel cells

2 x 10= 20 Marks

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Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester Integrated M.Sc Geology Degree Examination, November 2022

GL03IB03 – GEOMORPHOLOGY

(2020 Admission onwards)

Time: 2 hours

Max. Marks: 60

(Draw neat sketches, wherever necessary)**PART – A**Answer *all* questions.Each question carries **Two** mark.**Ceiling -20 Marks**

1. How does an esker form?
2. Distinguish between *hogbacks* and *cuesta*
3. Explain Hydraulic action, abrasion, attrition and cavitation.
4. What do you mean by *Crystal growth* weathering?
5. Define perched water table.
6. Define *alluvial fan*.
7. Uses of Brunton Compass.
8. Describe the formation of *Waterfall*.
9. What is debris avalanche
10. What are contour lines?
11. What is meant by Porosity and permeability?
12. Describe Stalagmite.

PART – B

Answer *all* questions.

Each question carries **Five** marks.

Ceiling -30 Marks

13. Define sand dunes. Briefly describe different types of sand dunes.
14. Describe the various processes and factors effecting chemical weathering
15. Explain the causes and landforms formed by sea erosion
16. Write a note on Landslide. Briefly describe the various types of LS.
17. Give an account of geysers and springs.
18. Briefly explain the concept of base level
19. Define a compass clinometer. How does a clinometer compass differ from an ordinary compass?

PART - C

Answer *anyone* question.

Each question carries **Ten** marks.

20. What is Ground water? Describe the various erosional and depositional features of ground water.
21. Discuss the geological work of wind in respect of erosion, transportation and deposition.

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Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester Integrated M.Sc. Geology Degree Examination, November 2022

GL03A11 - Biodiversity – Scope and Relevance

(2020 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

(Draw neat sketches, wherever necessary)

PART – A

Answer all questions.

Each question carries Two mark.

Ceiling -25 Marks

1. How biodiversity is linked to our daily life?
2. What is Hotspot in Biodiversity?
3. Write about ecosystem biodiversity.
4. What is Bioprospecting?
5. What is endemic species?
6. Write about the magnitude of fungal and bacterial diversity.
7. Discuss loss of agrobiodiversity.
8. Write about minimum four components of biodiversity values.
9. What is called inventorying of biodiversity?
10. Why wild relatives of cultivated plants and domesticated animals are important?
11. What is gene bank?
12. What are the steps involved in Bioprospecting?
13. What is indicator species?
14. What is species abundance and species richness?
15. What is keystone species?

PART – B

Answer *all* questions.

Each question carries Five marks.

Ceiling -35 Marks

16. Write a short note on Genetic Biodiversity.
17. Write about the process responsible for species extinction.
18. Briefly write about Ex-situ conservation of Biodiversity.
19. How climate change affect different ecosystem.
20. Why monitoring and inventorying needed?
21. What are the applications of Bioprospecting?
22. Briefly explain the measurement techniques of genetic biodiversity.
23. Write a short note on Species Biodiversity.

PART - C

Answer any *two* questions.

Each question carries Ten marks.

24. Discuss about the Animal Diversity.
25. Why India is a mega biodiversity nation?
26. How the IUCN Red List classifies the species?
27. Write about the methods of conservation of Biodiversity.

2 x 10 = 20 Marks