

1M1N21120

(Pages : 2)

Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester Integrated M.Sc Geology Degree Examination, November 2021

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. What do you mean by trace fossil, mold and cast?
2. Differentiate between *petrogenesis* and *petrography*
3. Define angular unconformity.
4. What is meant by symmetrical folds??
5. Define dip and strike of an outcrop
6. Explain plutonic and hypabyssal igneous rocks.
7. Describe the different types of moraines.
8. What are Isoseismal lines, focus and epicentre?
9. Describe the Moh's scale of Hardness.
10. Distinguish the Jovian planets and Terrestrial planets.
11. What do you meant by Foliation?
12. Describe the *Conard*, *Reppetti*, *Guttenberg-Weichert* and *Mohrovicdiscontinuities*?

PART – B

Answer all questions.

Each question carries Five marks.

Ceiling -30 Marks

13. Briefly explain the classification of mountains.
14. Describe the different plate boundaries
15. Write brief explanatory note on Nebular hypothesis and planetesimal hypothesis
16. Describe the classification of Igneous Rocks based on *chemical composition* and *mode of occurrence*.
17. Write a note on the different types of radiometric dating methods
18. Discuss the origin and effects of Tsunami
19. Give an account of Richter and Mercalli's scales

PART - C

Answer any one question.

Each question carries Ten marks.

20. What is a mineral? List out the various physical properties of minerals.
21. What are Volcanoes and how are they produced? Explain the classification, components and effects of volcanoes.

(1 x 10 = 10 Marks)

1B1N21123

Pages (2)

Reg. No:

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First semester MSc. Integrated Geology Examination, November 2021

CHE11C01: GENERAL CHEMISTRY

(2020 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

PART- A

Answer all questions

Each question carries Two marks

Ceiling- 25 Marks

1. Name two indicators used in acid-base titrations. Indicate the pH range over which they change colour.
2. Define molarity of a solution.
3. What is meant by a standard solution?
4. State and explain Pauli's exclusion principle.
5. Predict the shape of BeF_2 and BCl_3 molecules on the basis of VSEPR theory.
6. State the de Broglie relation.
7. What are electrophiles? Give two examples.
8. Explain the term isolated system with a suitable example.
9. State and explain the Third Law of thermodynamics.
10. What is the kinetic gas equation? Explain the terms.
11. State Henry's law.
12. What are isotonic solutions?
13. Differentiate between electronic and electrolytic conduction.
14. Define cell constant.
15. Explain electrochemical series.

PART- B

Answer all questions

Each question carries Five marks

Ceiling- 35 Marks

16. Write a short note on
 - (a) Standard Hydrogen electrode
 - (b) Fuel cell
17. Discuss the atomic spectrum of hydrogen.
18. Explain the shape of PCl_5 and SF_6 molecules on the basis of hybridization.
19. Write a short note on
 - (a) Spontaneous process
 - (b) Entropy and its significances
20. Derive Bragg equation for X-ray diffraction
21. Explain the following with suitable examples:
 - (a) Colligative properties
 - (b) Semipermeable membrane.
22. State and explain Ostwald's dilution law.
23. Distinguish between inductive effect and electrometric effect.

PART- C

Answer any two questions

Each question carries Ten marks

24. Explain the paramagnetic nature of oxygen molecules from the MO energy level diagram
25. (a) What are solubility product and common ion effect
 - (b) Microanalysis and its advantageous
26. Explain
 - (a) Kohlrausch's law
 - (b) Effect of dilution on specific conductance and molar conductance
27. Write Note on
 - (a) Calomel electrodes
 - (b) Buffer solutions

2 x 10= 20 Marks