

GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION

ALTO BETIM GOA 403521

PATTERN AND DESIGN OF THEORY QUESTION PAPERS(2016-2017 ONWARDS)

CLASS:- XI
SCIENCE

NAME OF THE
SUBJECT:-
GEOLOGY

| FIRST TERM | | | | | SECOND TERM | | |
|-------------------------|---|---|----------------------------------|---------------|-------------|--|---|
| TIME IN MINS/Hrs | 60/ONE HOUR | 150/Two and Half Hours | 120/Two Hours | | | 150/Two and Half Hours | 120/Two Hours |
| MAX. MARKS | 20(THEORY) | 55(THEORY) | 20(Practical) | 10 Assignment | 20 Project | 55(THEORY) | 20(Practical) |
| NO OF QUESTIONS | 2 | 5 | | | | 5 | |
| WEIGHTAGE TO OBJECTIVES | Knowledge:25% Understanding and Skill:50% Application:25% | Knowledge:25% Understanding and Skill:50% Application:25% | | | | Knowledge:25% Understanding and Skill:50% Application:25% | |
| WEIGHTAGE TO CONTENTS | 1.Introduction to the science of Geology(2) | 1.Earth as a planet(8) | 1.Identification of minerals(10) | | | 1.CORE CONTENT- crystallography(6) Internal structure of Earth(5) | 1.Drawing of contours and cross section of various landforms(5) |
| | 2. Introduction to Crystallography(6) | 2. Internal structure of earth(8) | 2. Study of crystal models(8) | | | 2. Mass movement(6) | 2. Identification of rocks(12) |
| | 3. Study of physical properties of Minerals(6) | 3. Weathering & erosion(6) | Viva(2) | | | 3. Building stones(2) | Journal(1) |
| | 4. Rock forming Minerals(6) | 4. Soil(4) | | | | 4. Geological work of running water (6) | Viva(2) |
| | | 5. Geological action of wind(8) | | | | 5. Geological work of Ground water (6) | |
| | | 6. Geological action of Glaciers(8) | | | | 6. Igneous rocks(8) | |
| | | 7. Bearings(3) | | | | 7. Sedimentary rocks(8) | |

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|--|---------------------|----------------------|---------------------|--|--|-------------------------|---------------------|
| | | 8. Slope analyses(3) | | | | 8. Metamorphic rocks(8) | |
| | | 9. Contours(4) | | | | | |
| | | 10. Map Reading(3) | | | | | |
| | | | | | | | |
| | TOTAL MARKS:- 20 | TOTAL MARKS:- 55 | TOTAL MARKS:- 20 | | | TOTAL MARKS:- 55 | TOTAL MARKS:- 20 |

THEORY MARKS:-

FIRST MID TERM
TEST- 20 MARKS
FIRST TERM
EXAM- 55 MARKS
SECOND TERM
TEST- 55 MARKS
ASSIGNMENT- 10 MARKS
TOTAL- 140 MARKS

PRACTICAL MARKS:-

FIRST TERM - 20 MARKS
SECOND TERM - 20 MARKS
PROJECT- 20 MARKS
TOTAL- 60 MARKS
AVERAGE TOTAL- 140 MARKS

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MODEL QUESTION PAPER FOR 2016-17 onwards

First Mid Term Test

STD: XI

Subject:-Geology(Theory)Science

TIME: One Hour Maximum Marks:20

Instructions:

- i. All questions are compulsory.
- ii. Answer each question on a fresh page.
- iii. Draw neat labeled diagrams wherever necessary.
- iv. Figures to the right indicate full marks.
- v. Answers to the questions carrying 1 mark should be written in 1 to 10 words.
- vi. Answers to the questions carrying 2 marks should be written in about 30-40 words.
- vii. Answers to the questions carrying 3 marks should be written in about 50-70 words.
- viii. Answers to the questions carrying 4 marks should be written in 100 words.

Q.1 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

The streak exhibited by mineral chromite is _____

1. Brown
2. Red
3. Black
4. Steel Grey

(B) Write a brief note on importance of Geology. [2]

3. Explain the concept of "Cleavage" in minerals. [2]
4. Differentiate between Feldspar and Amphibole group of Minerals [2]
5. Write a brief note on Moh's hardness scale. [3]

Q.2 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

The cryptocrySTALLINE variety of quartz from the following is _____

1. Amethyst
2. Chalcedony
3. Orthoclase
4. Biolite

(B) Explain the concept of Crystal face and form. [2]

3. Write a brief note on mica group of minerals. [3]
4. Explain tetragonal system with reference to Axial diagram and normal class [4]

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MODEL QUESTION PAPER FOR 2016-17 onwards

First Term Examination

STD: XI

Subject:-Geology(Theory)Science

TIME: Two and Half Hour

Maximum Marks:55

Instructions:

- i. All questions are compulsory.
- ii. Answer each question on a fresh page.
- iii. Draw neat labeled diagrams wherever necessary.
- iv. Figures to the right indicate full marks.
- v. Answer to the question of multiple choice by choosing alternative given below the statement and rewrite the complete sentence.
- vi. Answers to the questions carrying 1 mark should be written in 1 to 10 words.
- vii. Answers to the questions carrying 2 marks should be written in about 30-40 words.
- viii. Answers to the questions carrying 3 marks should be written in about 50-60 words.
- ix. Answers to the questions carrying 4 marks should be written in 100 words.

Q.1 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

The Earth's 'Inner core' is encountered at a depth of _____

1. 2900Kms
2. 5100Kms
3. 650Kms
4. 4200Kms

(B) Explain the concept of "Seismic discontinuity" [2]

3. Write a brief note on the composition of the Earth's crust. [2]
4. Explain 'Shadow zone' with reference to Earth's interior. [3]
5. Draw a neat labeled diagram of various sub-marine relief features. [3]

Q.2 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

Hard resistant rock masses found in deserts are termed as _____

1. Venifacets
2. Hamada
3. Barachans
4. Attrition

(B) What do you understand by 'Load in creep'? [1]

3. How is radioactivity used to determine age of the Earth? [2]
4. Explain the factors governing wind abrasion. [2]
5. How are 'Pedestral' rocks formed? [2]
6. Write a brief note on the nebular hypothesis for the origin of Earth. [3]

Q.3 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

The elevation above sea level upto which glaciers melt is termed _____

5. Fault line
6. Joint line
7. Ice sheet
8. Snow line

(B) Draw a neat labeled diagram and explain 'Barakans'. [2]

3. Write a brief note on importance of studying Glaciers. [2]
4. Explain different features of Glacial erosion. [3]
5. Explain the Glacial morphology. [3]

Q.4 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

Anhydrite to Gypsum takes place due to _____

1. Hydration
2. Carbonation
3. Solution
4. Oxidation

(B) Define 'soil'. [1]

3. Explain the process of frost wedging. [2]
4. Illustrate and explain soil profile. [3]
5. Explain various factors governing weathering. [4]

OR

5. Explain the chemical weathering [4]

Q.5 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

The height difference between contours is termed as _____

1. Index contour
2. Contour interval
3. Bedding plane
4. Master contour

(B) Explain the concept of Bearing. [2]

3. With suitable example explain the different types of bearings. [2]
4. Illustrate and explain different types of slopes. [3]
5. Draw contours and explain 1.Asymmetrical hill 2.Basin 3.Ridge [3]

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MODEL QUESTION PAPER FOR 2016-17 onwards

Second Term Examination

STD: XI

Subject:-Geology(Theory)Science

TIME: Two and Half Hour Maximum Marks:55

Instructions:

- i. All questions are compulsory.
- ii. Answer each question on a fresh page.
- iii. Draw neat labeled diagrams wherever necessary.
- iv. Figures to the right indicate full marks.
- v. Answer to the question of multiple choice by choosing alternative given below the statement and rewrite the complete sentence.
- vi. Answers to the questions carrying 1 mark should be written in 1 to 10 words.
- vii. Answers to the questions carrying 2 marks should be written in about 30-40 words.
- viii. Answers to the questions carrying 3 marks should be written in about 50-60 words.
- ix. Answers to the questions carrying 4 marks should be written in 100 words.

Q.1 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

Mineral calcite belong to _____

1. Tetragonal system
2. Orthorhombic system
3. Triagonal system
4. Hexagonal system

(B) What do you understand by 'Moho'? [1]

3. Explain normal class of tetragonal system. [2]
4. Write a brief note on composition of Earth's mantle. [2]
5. Differentiate between P and S type of seismic waves. [2]
6. Explain the concept of Axis of symmetry. [3]

Q.2 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

Volcanic equivalent of rock Gabbro is _____

1. Basalt
2. Trachyte
3. Diorite
4. Dunite

(B) Explain the evolution of 'Dome Mountains'. [2]

3. Differentiate between Marble and Dolerite. [2]
4. Explain grain size classification of sedimentary rocks. [3]
5. Illustrate and explain different types of discordant igneous bodies. [3]

Q.3 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

Metamorphism brought about by faulting is _____

5. Cataclastic Metamorphism
6. Regional Metamorphism
7. Dynamic Metamorphism
8. Burial Metamorphism

(B) What is 'Contact Aureole'? [1]

3. Explain 'Ferruginous Sandstone'. [2]
4. Write a brief note on the evolution of chemical sedimentary rocks. [3]
5. Explain different types of Foliations. [4]

OR

5. Explain 'Regional metamorphism' [4]

Q.4 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

An impermeable layer in hydrogeology is termed as _____

1. Aquifer
2. Aquitard
3. Aquiclude
4. Aquifuge

(B) Explain the pressure temperature conditions for the process of metamorphism. [2]

3. Explain the concept of a 'Perched Aquifer'. [2]
4. How do human activities lead to lowering of water table? [3]
5. Explain any three types of drainage patterns. [3]

Q.5 (A) Complete the following statement by choosing the alternative given below the statement and write the completed statement: - [1]

The slowest kind of mass movement from the following is _____

1. Fall
2. Creep
3. Flow
4. Slide

(B) Explain different factors to be considered while selecting a building stone. [2]

3. How does Geological structure influence slope stability? [2]
4. Write a brief note on importance of studying mass movements. [3]
5. Explain features of river erosion. [3]