M.Sc. (Honours) in Geology
Under the Framework of Honours School System
## COURSE STRUCTURE

<table>
<thead>
<tr>
<th>SEMESTER I</th>
<th>SEMESTER II</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM1 GEO-CM1: Micropalaeontology</td>
<td>CM4 GEO-CM4: Vertebrate Diversity and Evolution</td>
</tr>
<tr>
<td>CM2 GEO-CM2: Neotectonics and Earthquakes</td>
<td>CM5 GEO-CM5: Sedimentology</td>
</tr>
<tr>
<td>CM3 GEO-CM3: Isotope Geochemistry</td>
<td>CM6 GEO-CM6: Chemical Petrology and Crustal Evolution</td>
</tr>
<tr>
<td>DSEM1 Geological Field Work</td>
<td>DSEM2 Geological Field Report &amp; Viva Voce</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEMESTER III</th>
<th>SEMESTER IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM7 GEO-CM7: Mineral Resources and Mineral Economics</td>
<td>CM10 GEO-CM10: Environmental Geology</td>
</tr>
<tr>
<td>CM9 GEO-CM9: Exploration Geology</td>
<td>DSEM4 Project Oriented Field Report</td>
</tr>
<tr>
<td>DSEM3 Project Oriented Geological Field Work</td>
<td></td>
</tr>
</tbody>
</table>

**Pattern of End-Semester question paper**

The theory question paper for the end-semester examination will have nine questions, with 20 marks reserved for first question, which is compulsory. Further, the latter would comprise of 10 short answer questions, without any choice, covering the whole syllabus. The remaining 4 questions of subjective type carrying 15 marks each, are to be attempted from the 4 Units. Each unit would comprise of two questions.

**Pattern of Mid-Term question paper**

The question paper for the mid-term examination will have two questions, each being comprised of four parts with equal marks. Five parts have to be attempted, selecting at least two parts from each question.
M.Sc. (Hons.) Course in Geology

II Year

Semester III and IV
Outlines of Tests, Syllabi and Courses of Reading for M.Sc. (Honours: under the Framework of Honours School System) II Year in Geology (Choice Based Credit System) Examinations 2020-21, 2021-22 and 2022-23

I Semester Examination

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
<th>Mid-Semester Test</th>
<th>End-Semester Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEO-CM7</td>
<td>Mineral Resources and Mineral Economics</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM8</td>
<td>Petroleum Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM9</td>
<td>Exploration Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

Practical: Core Course

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
<th>Mid-Semester Test</th>
<th>End-Semester Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEO-CM7P</td>
<td>Mineral Resources and Mineral Economics</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-CM8P</td>
<td>Petroleum Geology</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-CM9P</td>
<td>Exploration Geology</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

Discipline Specific Elective

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
<th>Mid-Semester Test</th>
<th>End-Semester Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEO-DSEM3</td>
<td>Project Oriented Geological Field Work</td>
<td>2</td>
<td></td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

Total Credits & Marks

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
<th>Mid-Semester Test</th>
<th>End-Semester Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEO-CM7</td>
<td>Mineral Resources and Mineral Economics</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM8</td>
<td>Petroleum Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM9</td>
<td>Exploration Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM7P</td>
<td>Mineral Resources and Mineral Economics</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-CM8P</td>
<td>Petroleum Geology</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-CM9P</td>
<td>Exploration Geology</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-DSEM3</td>
<td>Project Oriented Geological Field Work</td>
<td>2</td>
<td></td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

Total Credits & Marks

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
<th>Mid-Semester Test</th>
<th>End-Semester Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEO-CM7</td>
<td>Mineral Resources and Mineral Economics</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM8</td>
<td>Petroleum Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM9</td>
<td>Exploration Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM7P</td>
<td>Mineral Resources and Mineral Economics</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-CM8P</td>
<td>Petroleum Geology</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-CM9P</td>
<td>Exploration Geology</td>
<td>2</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>GEO-DSEM3</td>
<td>Project Oriented Geological Field Work</td>
<td>2</td>
<td></td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

* Continuous Assessment: Seminar (5 marks) and Sessional (5 marks).

Paper I: MINERAL RESOURCES AND MINERAL ECONOMICS - (Course No. GEO-CM7)

Total Marks: [100 (Mid-Semester Test M.M. 20, End-Semester Exam. M.M. 80)]

Total Lectures: 60

Credits: 4

Objective: The main objectives of this course are to comprehend the processes of ore deposit formation in various geologic environments with emphasis on various global ore deposit models, and also to familiarise students with issues related to mineral economic.

UNIT 1: Mineral Deposits in a Broader Geological Framework

Relationship between plate tectonics and metallogeny; Mineral deposits associated with convergent and divergent plate boundaries; Distribution of mineral deposits in space and time.
UNIT 2: Orthomagmatic and Magmatic/Metamorphic-Hydrothermal Ore Deposits

General characteristics and distribution of magmatic ore deposits: chromite deposits, Ti-V magnetite deposits, PGE sulfide deposits, Ni-Cu sulphide deposits, diamond deposits associated with kimberlites and lamproites; Classification of hydrothermal deposits; General characteristics and distribution of: porphyry Cu-Mo-Au deposits, Sn greisens, base metal skarn and carbonate-replacement deposits, volcanic-hosted massive sulfide deposits (VHMS/VAMS/VMS) and black smokers.

UNIT 3: Sedimentary-Hydrothermal and Sedimentary Ore Deposits

General characteristics and distribution of Mississippi Valley-type (MVT) Pb-Zn deposits, SEDEX Pb-Zn-Ag deposits, and Kuperschiefer or red-bed copper deposits. Ore deposits formed by chemical precipitation from surface waters and clastic sedimentation - Iron and manganese deposits and placer and pale placer deposits (Witwatersrand deposit). Ore deposits formed by supergene processes -supergene/secondary deposits, residual deposits-bauxite (Central Indian bauxite deposits), limonite and Ni laterites (New Caledonia).

UNIT 4: Mineral Economics

Classification of ore minerals, industrial minerals and building stones; Resources and reserves, concepts of strategic, critical and essential minerals; Concept of heritage stones and their relevance; Importance of minerals in national economy; National Mineral Policy; United Nations framework classification, law of the sea, and marine mineral resources.

SUGGESTED READING


Paper II: PETROLEUM GEOLOGY - (Course No. GEO-CM8)

Total Marks: [100 (Mid-Semester Test M.M. 20, End-Semester Exam. M.M. 80)]

Total Lectures: 60 Credits: 4

Objective: This course intends to impart technical and detailed aspects of hydrocarbon and its reservoirs and exploration in petrolierous basin.

UNIT 1: Composition, Origin and Accumulation of Hydrocarbon

Composition of hydrocarbon (petroleum and gas), kerogen and its type and geochemical signature; Mechanism of hydrocarbon generation; Migration, types and geological conditions; Migration pathway; Accumulation of hydrocarbons and types of traps (structural, stratigraphic and combination) and trapping mechanism; Isopach maps of traps.
UNIT 2: Petroleum System and Reservoir

Petroleum system and hydrocarbon play concept, source rocks and geochemical techniques of its evaluation; pyrolysis: techniques, hydrogen and oxygen indices; production indeces, vitrinite reflectance, thermal alteration and conodont alteration index and respective interpretations (maturation of hydrocarbons); Carrier beds and petro-physical properties of source rock, carrier beds, trap, and cap rocks; Reservoir morphology and characteristics of sandstones and carbonate reservoirs, reservoir management, petroleum system of Indian petroliferous basins.

UNIT 3: Sequence-Seismic Stratigraphy and Hydrocarbon Plays

Concepts of sequence stratigraphy, sequence, parasequences, bed, system tracts, sequence boundaries, flooding surfaces, condensed sections, applications of sequence stratigraphy in hydrocarbon exploration; Facies maps; Sea level curves and role in hydrocarbon exploration; Basin analysis; Concept, terminology and applications of seismic stratigraphy in hydrocarbon exploration.

UNIT 4: Exploration, Production and Environmental Impact

Outline of production techniques in the petroleum industry; Principles related to evaluating potential reservoirs and the environmental and economical impact of the utilisation of the hydrocarbons.

SUGGESTED READING


Paper III: EXPLORATION GEOLOGY - (Course No. GEO-CM9)

Total Marks: [100 (Mid-Semester Test M.M. 20, End-Semester Exam. M.M. 80)]

Total Lectures: 60

Objective: The course will address heat flow, gravity, magnetic, seismic and GPR exploration methodology for understanding the Earth and its resources. It also emphasises on data collection through different drilling techniques, handling and interpretation. It combines both physical samples and borehole geophysical logs to build an interpretation of the subsurface, as well as analysis and interpretation of data and reserve estimation.
UNIT 1: Earth’s Gravity, Magnetic and Heat Flow

Concept of scale and unit in Geophysics; Signal and noise; Data acquisition and reduction; Concept of geophysical modelling; normal and reverse. Importance of geophysics in Industrial application; Gravity fields of the Earth: gravity potential, normal-gravity field; Shape of the Earth; Large scale gravity and isostasy; Isostatic rebound, Bouguer and isostatic anomalies, isostatic models for local and regional compensation, gravimeters: stable and unstable (Lacoste' and Ramberg gravimeter, Worden gravimeter), data acquisition and corrections; Regional and residual separation; Interpretation of anomalies for simple geometric bodies, e.g. single pole, horizontal cylinder, sheet, dyke and fault; Magnetism of the Earth; Geomagnetic field, inclination and declination; Latitudinal variation; Secular and transient variations in magnetism; Magnetic induction and residual magnetism; Magnetic potential and Poisson's equation, magnetometers; Rock/mineral magnetism (DRM, TRM), palaeomagnetism, reconstruction of paleopole position; Apparent Polar wandering curves and continental drift; Heat flow, error function and its application.

UNIT 2: Seismic and Electromagnetic techniques

Seismic wave and its propagation; Seismic impedence, seismic refraction (2 layer, 3 layer), seismic reflection, NMO, stacking; Seismology: elements of earthquake seismology; Focal mechanism and fault plane solutions; Plate boundaries and seismicity. Seismic gaps; Seismotectonics and structure of the Earth; Himalayan and stable continental region earthquakes, reservoir induced seismicity; Seismic hazards; Basic electrical quantities; Electromagnetic field techniques and interpretation; GPR utility mapping and applications.

UNIT 3: Subsurface Geophysics-Well logging

Basic formation evaluation concepts, borehole environment, principles of resistivity, radiation, thermal and elastic wave measurements and measuring tools; Lithology plots; Saturation, irreducible saturation and porosity studies from well logs; Shale sand analysis; Integration of core, log, well test and seismic data evaluation; Well logging and borehole geophysics in mineral exploration and groundwater exploration.

UNIT 4: Drilling Techniques, Mineral Exploration and Reserves Estimation

Drilling techniques; Geological aspects of site selection for drilling operations; Planning of drilling operations; Borehole surveys; Correction of deviated boreholes and directional drilling, core-sampling; Definition and terminology of mining geology; Classification of mining methods: open cast mining (quarrying), underground mining; Coal mining method: board-and-pillar, longwall and room-and-pillar methods; An introduction to prospecting and exploration of mineral deposits.

SUGGESTED READING


**Practical I: MINERAL RESOURCES AND MINERAL ECONOMICS - (Course No. GEO-CM7P)**

Total Marks: [50 (Continuous Assessment M.M. 10, End-Semester Exam. M.M. 40)]

Total Lectures: 60  
Credits: 2

1. Megascopic study and identification of metallic minerals.
2. Megascopic study and identification of non-metallic (industrial) minerals.
3. Hand specimens and thin sections studies of important building and heritage stones.
4. Spatial distribution of various ore deposits in India and world.

**Practical II: PETROLEUM GEOLOGY - (Course No. GEO-CM8P)**

Total Marks: [50 (Continuous Assessment M.M. 10, End-Semester Exam. M.M. 40)]

Total Lectures: 60  
Credits: 2

1. Practical exercise on sequence stratigraphy: identification of retrogradational /progradational parasequences; tidal flat parasequences; shallow marine parasequences including deltaic, demarcation of system tracts, sequence boundaries, and flooding surfaces (TS, MFS).
2. Seismic profile reading and demarcation of seismic reflectors (seismic stratigraphic surfaces): top lap, on lap, down lap, off lap, identification of deltaic, marine and non-marine deposits; and determination of shoreline and sea-level curves.

**Practical III: EXPLORATION GEOLOGY - (Course No. GEO-CM9P)**

Total Marks: [50 (Continuous Assessment M.M. 10, End-Semester Exam. M.M. 40)]

Total Lectures: 60  
Credits: 2

1. GPR data collection and processing.
2. Gravity forward and inversion problems.
5. Magnetism problems
6. Calculation of in-situ reserves from borehole data.
7. Calculation of blocked reserves.
8. Introduction to geostatistical estimation of reserves.
9. Reserve estimation using UNFC, JORC (Joint ore reserves estimate codes), Australia and CIM (Canadian Institute of Mining) methods.
Discipline Specific Elective: PROJECT ORIENTED GEOLOGICAL FIELD WORK - (Course No. GEO-DSEM3)

Total Marks: 50

Credits: 2

Students will have an option, according to their merit, to opt for project oriented field work in igneous & metamorphic petrology/sedimentary petrology/palaeontology/structural geology/neotectonics/environmental geology/hydrology, etc. Each candidate will carry out an independent field study, which should include sampling and recording of field observations/data. The marks for Field Work will be awarded by teacher(s) who conduct the field work.

A candidate, who does not attend the field work or fails to get pass marks in it, will have to do the field work by joining the field tour of the same class (M.Sc. Hons. II Year) in a subsequent year as per University rules. There shall not be any grace marks for this paper.

II Semester Examination

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
<th>Mid-Semester Test</th>
<th>End-Semester Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory: Core Course</td>
<td>GEO-CM10</td>
<td>Environmental Geology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>GEO-CM11</td>
<td>Advanced Groundwater Hydrology</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

Practical: Core Course

|       | GEO-CM10P | Environmental Geology             | 2      | 10                | 40                       | 50          |
|       | GEO-CM11P | Advanced Groundwater Hydrology    | 2      | 10                | 40                       | 50          |

Discipline Specific Elective

<table>
<thead>
<tr>
<th></th>
<th>GEO-DSEM4</th>
<th>Project Oriented Field Report</th>
<th>8</th>
<th>Lab work:</th>
<th>Field Report:</th>
<th>Presentation</th>
<th>Viva Voce:</th>
<th>Total Credit &amp; Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>75</td>
<td>50</td>
<td>50</td>
<td>25</td>
<td>20</td>
</tr>
</tbody>
</table>

Total Credits & Marks: 20

500

* Continuous Assessment: Seminar (5 marks) and Sessional (5 marks).
Paper I: ENVIRONMENTAL GEOLOGY - (Course No. GEO-CM10)

Total Marks: [100 (Mid-Semester Test M.M. 20, End-Semester Exam. M.M. 80)]

Total Lectures: 60 Credits: 4

Objective: The main objective of this course is to understand earth’s environment and geological processes associated with each environment. Knowledge on all fields of geology will be integrated using principles of physics, chemistry, biology and mathematics to study their impact on nature so that environmental impact of each subfields of geology can be envisaged together with interaction among lithosphere-hydrosphere-biosphere-atmosphere.

UNIT 1: Earth and Environment

Fundamentals; Earth in space and time; population growth and environment; natural hazards-causes and effects; risk assessment.

UNIT 2: Hazardous Earth Processes

Earthquakes- earthquake origin and distribution, hazards, predictions, control; Volcanoes- magma and plate tectonics, environmental hazards, forecasting and risk assessment; Tsunami- causes, effect, risk and forecasting; Rivers and flooding- stream discharge, erosion and deposition, flood plains, flooding causes, effects and reducing flood hazards; Coastal environment- coastlines and sea level, major processes, hazards and mitigation; Landslides and mass movement- slope stability and types of mass wasting, consequences and preventive majors; Glacial and arid environment-types and movement of glaciers, ice ages, wind erosion, dunes and loess, desertification.

UNIT 3: Earth Resources and Environment

Water resources- hydrologic cycle, traditional freshwater sources and alternatives, groundwater withdrawal; Energy resources- petroleum, coal and natural gas, nonconventional and renewable energy resources; Mineral and rock resources- geology of mineral resources, mining and processing of minerals, environmental impacts and mitigation; Soil resources- formation, property and classification of soil, human activities and soil.

UNIT 4: Environmental Management

Waste management- municipality, toxic and radioactive wastes disposal, sewage treatment; Water pollution- point and non-point sources, industrial and agricultural wastes, pollution control-surface/groundwater; Air pollution and control; Environmental law and policy- resources law- water, minerals, fuels and geologic hazards, international resource disputes, pollutions and its control.

SUGGESTED READING

M.Sc. (Hons.) Geology

Paper II: ADVANCED GROUNDWATER HYDROLOGY - (Course No. GEO-CM11)

Total Marks: [100 (Mid-Semester Test M.M. 20, End-Semester Exam. M.M. 80)]

Total Lectures: 60                                                                 Credtis: 4

Objective: This course aims to discuss the occurrence, distribution and movement of ground water along with analytical techniques to solve groundwater problems. It also introduces the emerging tools used in water resources investigations, such as remote sensing and isotope hydrology. Besides, the course examines the physical, chemical and biological processes influencing water quality and imparts knowledge on the potential role of models in water quality management.

UNIT 1: Groundwater Exploration and Water Well Construction

Geologic and hydrogeologic methods of exploration; Role of remote sensing in groundwater exploration; Surface geophysical methods — seismic, gravity, geo-electrical and magnetic methods; Types of water wells and methods of construction; Design, development, and maintenance of wells; Sub-surface geophysical methods; Yield characteristics of wells; Pumping tests- methods, data analysis and interpretation.

UNIT 2: Groundwater Quality

Physical and chemical properties of water; Quality criteria for different uses; Graphical presentation of groundwater quality data; Groundwater quality in different provinces in India; Groundwater contamination; natural (Geogenic) and anthropogenic contaminants; Saline water intrusion; Radio-isotopes in hydrogeological studies. Organic and inorganic pollutants in water.

UNIT 3: Isotope Applications in Groundwater Hydrology

Water balance: groundwater inflow and outflow estimates; Dating of groundwater; Percolation tank hydrology; Determination of groundwater velocity in saturated zone; Identification of recharge/discharge processes; Pollution migration studies; Isotope techniques for water resource management.

UNIT 4: Groundwater Development and Management

Assessment of Groundwater resources- dynamic and static resources; Concept of sustainable development of groundwater resources; Groundwater management —supply side and demand side management; Artificial recharge of groundwater- Concept of artificial recharge – recharge methods, relative merits, applications of remote sensing in artificial recharge of groundwater; Conjunctive use of surface and groundwater; Groundwater legislation.

SUGGESTED READING

Practical I: ENVIRONMENTAL GEOLOGY - (Course No. GEO-CM4P)

Total Marks: [50 (Continuous Assessment M.M. 10, End-Semester Exam. M.M. 40)]

Total Lectures: 60 Credits: 2

1. Geological evolution with time-events and life, natural hazards zonation of India.
2. Seismic gaps and earthquake prediction, earthquake maps of India.
3. World volcanic belts and hot spots and their relationship to plate boundaries.
4. Tsunami and risk distribution.
5. Hydrographs, magnitude and intensity of floods, flood prone regions of India, recurrence intervals of flood.
6. Rivers and river basins of India.
7. Factor of safety of landslides, landslides zonation of India.
9. Beach budget, hurricane and cyclone hazard maps of India and world.
11. Energy source distribution in India and world.
12. Soil textures and soil distribution in India.
13. Air circulation and world arid maps.
14. Elemental study of water and soil- lab work.

Practical II: ADVANCED GROUNDWATER HYDROLOGY - (Course No. GEO-CM5P)

Total Marks: [50 (Continuous Assessment M.M. 10, End-Semester Exam. M.M. 40)]

Total Lectures: 60 Credits: 2

1. Water level trend analysis
2. Groundwater resources estimation- rainfall infiltration and fluctuation methods.
4. Delineation of aquifer- analysis of drilling cutting, litholog plotting and potential zone demarcation.
5. Pumping test data analysis, hydrochemical maps and facies diagrams.

Discipline Specific Elective: PROJECT ORIENTED REPORT - (Course No. GEO-DSEM4)


Each candidate will submit a project-oriented geological field report based on his/her own field and laboratory work:

It will have three components:
(a) Field observations/data recorded by the candidate,
(b) Laboratory investigation carried out by the candidate, and
(c) Synthesis of (a) and (b).

The marks of laboratory work will be awarded by the teacher(s) who supervised the laboratory investigations. A board of examiners will evaluate the field report, and would consist of the three faculty members appointed by the B.O.C. The latter would evaluate the field report and submit the marks independently to the Chairman. An average value of these marks will be considered as the final marks.
The students will also make a presentation of their project report/work (minimum time: 15 minutes) as a part of defense of their work conducted. The viva-voce examination will be conducted after the presentation. The board of examiners would award the marks of presentation and viva-voce independently. In both the cases, i.e. marks of presentation and viva-voce, an average value will be considered as the final marks.

A candidate, who does not submit the field report and/or does not attend the viva-voce examination or fails to get pass marks in it, will have to resubmit the report or attend the viva-voce examination as the case may be of the same class (M.Sc. Hons. II Year) in a subsequent year as per University rules. There shall not be any grace marks for this paper.