देवी अहिल्या विश्वविद्यालय, इन्दौर

विश्वविद्यालय भवन
इन्दौर 452001

क.शैक्ष./पाठ्य/अधि./2024/2884 दिनांक 30 DEC 2024

//अधिसूचना//

एतद्द्वारा सर्व सम्बन्धितों की सूचनार्थ यह अधिसूचित किया जाता है, कि दिनांक 08/11/2024 को सम्पन्न भु–गर्भशास्त्र अध्ययन मण्डल की बैठक में एम.एस.सी. भु–गर्भशास्त्र का प्रथम सेमेस्टर से चतुर्थ सेमेस्टर तक के पाठ्यक्रम तैयार किये गये है। जिसे दिनांक 19/11/2024 को सम्पन्न विज्ञान संकाय एवं दिनांक 16/12/2024 को सम्पन्न स्थाई समिति की बैठक में अनुमोदित एवं मान्य किये गये है। पाठ्यक्रम विश्वविद्यालय की वेबसाइट पर अपलोड कर दियें गये है, कृपया उसे डाउनलोड कर उसी अनुसार अध्ययन अध्यापन सुनिश्चित किया जावें ।

आदेशानुसार

कुलसचिव

क./पृष्ठां/शैक्ष./अधि./2024/ इन्दौर,दिनांक

प्रतिलिपि :–

1. प्राचार्य/प्राचार्या समस्त संबंधित महाविद्यालय, दे.अ.वि.वि.इन्दौर।
2. विभागाध्यक्ष, आय.टी. सेन्टर की ओर इस निवेदन के साथ की वे इस अधिसूचना को देवी अहिल्या विश्वविद्यालय की वेबसाइट पर अपलोड करें ।
3. परीक्षा नियंत्रक, दे.अ.वि.वि. इन्दौर ।
4. उपकुलसचिव/सहायक कुलसचिव (परीक्षा/गोपनीय)
5. कुलपति के सचिव / कुलसचिव के निज सहायक ।
6. सम्बन्धित सहायक संकाय (परीक्षा/गोपनीय)
7. निदेशक,महाविद्यालयीन विकास परिषद दे.अ.वि.वि. इन्दौर ।
8. डीन, छात्र कल्याण दे.अ.वि.वि. इन्दौर ।

सहायक–कुलसचिव
(शैक्षणिक)

Devi Ahilya Vishwavidyalaya INDORE (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER-I (Session-2024-25)

Syllabus opted by the Board of Studies in Geology DAVV in the meeting held on 08/11/2024

Semester	Course	Title of papers	Max. Marks Th. + CCE	Max. Mark Practical Exam + Sessional	Minimum Passing Marks Theory/CCE and Practical	Total Marks
First	Paper-I	Geodynamics	85 + 15	-	28/5	100
	Paper-11	Structural Geology	85 + 15	-	28/5	100
	Paper-Ill ,	Geomorphology	85 + 15	-	28/5	100
	Paper-IV	Mineralogy and Geochemistry	85 + 15	-	28/5	100
	Practical-I	Structural Geology and Geomorphology	-	50	17	50
	Practical-2	Mineralogy	-	50	17	50
TOTAL						**500**

The **scheme of examination and the allotment of marks shall be as under**

Sections/Part	Questions Type	Marks Distribution	Remark
Section -A	Objective Type Questions (At least one question to be set from each unit)	1x5=05 Marks	
Section —B	Short Answer Type Question (Three questions to be set from each unit and two from each unit to be attempted)	5x6=30 Marks	
Section —C	Long Answer Type Question (Two questions to be set from each unit and one from each unit to be attempted)	5x10=50 Marks	
	Total	**85 Marks**	

Board of Studies:

1. Chairman- Dr. Vishnu Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - I (Session-2024-25)

M.Sc. Geology

SEMESTER - I

Paper – I

Geodynamics

MM - 85

Unit-1 Earth's surface features. Seismology: seismic waves and their propagation in different media, intensity and isoseismic lines, earthquake belts, Earthquake zones of India, Seismograph, causes of Earthquake. Internal structure of the Earth.

Unit-2 Volcanism: Types and causes of volcanic eruptions. World distribution of volcanoes, Migration of volcanoes. Volcanic landforms. Palaeomagnetism. Andesite Line.

Unit-3 Isostasy: Development of the concept, Isostatic anomalies, Isostatic models, Evidence. Geosynclines: Classification and evolution of Geosynclines, causes of subsidence and upliftment.

Unit-4 Continental drift: Development of the concept, Taylor's and Wegner's theories of continental drift. Evidences of continental drift and polar wandering. Sea floor spreading. Morphological features of ocean floor. Island Arc, Ring of fire

Unit-5 Concept of plate tectonics. Types of plate boundaries, features of convergent and divergent boundaries. Ophiolite suites, Arc-Trench system, volcanic mountain chain. Triple junctions and their stability. Causes of plate motion. Origin of the Himalaya.

Suggested Readings:

1. Condi K C: Plate Tectonics and Crustal Evolution.
2. Davies, Geoffrey F. 1999: Dynamic Earth. 1e Cambridge Univ Press Gerald
3. Gutenberg Beno: Internal Constitution of the Earth. Dover
4. Hodgson, J H: Earthquake and Earth's Structures. Prentice Hall
5. Holmes, Doris L and Arthur: Holmes' Principles of Physical Geology. Wiley
6. Martin H P Butt, 1982: The Interior of the Earth. Edward Arnold

8/11/24 8/11/24 8/11/24

7. Schubert Donald L. Turcotte, 2002: Geodynamics. 2e, Cambridge Univ Press
8. Strahler, A N, 1971: Earth Sciences. Harper and Row
9. Wyllie, Peter J: The Dynamic Earth. Wiley
10. Wyllie, Peter J: The Way the Earth Works. Wiley

Board of Studies:

1. Chairman- Dr. V. Gadgil — 8/11/24
2. Dr. R.S. Raghuvanshi — 8/11/24
3. Dr. Shailesh Chaure — 8/11/24
4. Dr. Poonam Bhatnagar — 8/11/24

(H)

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - I (Session-2024-25)

M.Sc. Geology

Semester - I

PAPER - II

Structural Geology

MM - 85

Unit-1: Rock failure: Mechanical principles of rock deformation, factors controlling behavior of material. Concept of stress and strain analyses in two and three dimensions. Mohr circles. Progressive deformation.

Unit-2: Geometry of fold surfaces: Single and multi-layered. Super-imposed folding. Geometric and Genetic Classification of folds. Types of folds. Recognition of folds. Effects of folds on outcrops. Mechanics of folding.

Unit-3: Geometry of faults. Classification and types of faults. Slips, Separation, Recognition of faults. Causes of faulting. Mechanics of faulting.

Unit-4: Origin, kinds and their relation to other structures. Fractures and joints, Lineation, Foliations, rock cleavages.

Unit-5: Types and recognition of unconformities. Tectonic fabrics and symmetry concept in deformation. Magma tectonics- emplacement of plutons, origin of ring dykes and cone sheets. Structures in various Rocks. Tectonic framework of India with reference to Peninsula, Himalaya, and Indo-Gangetic Plains.

Suggested Readings:

1. Badgley P C, 1959: Structural Geology for the Exploration Geology. Harper and Bro
2. Bayly B 1992: Mechanics in Structural Geology. Springer-Verlag
3. Billings, M.P.: Structural Geology. 3e.
4. Davis G H 1984: Structural Geology of Rocks and Region. John Wiley
5. Fairhurst, C, 1963: Rock Mechanics: Proceeding. Pergamen Press

8/11/24 8/11/24 8/11/24

6. Fossen, H, 2016: Structural Geology. Cambridge
7. Ghosh S K 1995: Structural Geology Fundamentals of Modern Developments.
8. Hobbs, Means and Williams, 1973: An Outline of Structural Geology.Wiley
9. Hubert MK 1972: Structural Geology. Hafner Publication Co. New York
10. Moore E and Twiss RJ 1995: Tectonics. Freeman Pergamon Press
11. Park, R G, 1988: Foundations of Structural Geology. 2e Blackie Academy
12. Price NJ and Cosgrove JW 1990: Analysis of Geological Structure. Cambridge Univ. P
13. Whitten E H T, 1966: Structural Geology of Folded Rocks. Chicago IL

Board of Studies:

1. Chairman - Dr. V. Gadgil 8/11/24

2. Dr. R.S. Raghuvanshi 8/11/24

3. Dr. Shailesh Chaure 8/11/24

4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - I (Session-2024-25)

M.Sc. Geology

SEMESTER - I

Paper – III

Geomorphology

MM - 85

Unit-1 Concept of Geomorphology principles and their significance. Cycle of erosion, Davis' and Planck's cycle of erosion. Slope forming processes: Landslides, soil creep and solifluction.

Unit-2 Fluvial agency: Types of rivers, valley development — base level and its varieties, graded streams, cross profiles of valleys. Classifications of valleys. Drainage patterns and their significance. Erosional and depositional landforms of streams.

Unit-3 Glaciers: Types of glaciers, regimen of glaciers, nourishment of glaciers, wastage of glaciers. Major features resulting from glacial erosion and deposition. Glacio-fluvial features.

Aeolian agency, Topographic effects of wind erosion. Landforms of Aeolian deposition. Piedmonts and piedmont problems. Arid cycle of erosion.

Unit-4 Karst topography: Important areas of karst. Conditions essential for development of karst, feature characteristics of karst region. Origin of limestone caverns. Karst geomorphic cycle. Marine erosion. Topographic feature resulting from marine erosion and marine depositions. Classification of coasts. Characteristics of emergence and submergence of coastline. Coastal landforms.

Unit-5 Morphometric Analysis of Terrain and its significance. Morphometric analysis of drainage basin and its significance. Statistical correlation methods for interpretation. The generation of drainage system.

Suggested Readings:

1. David Lang: The Earth System. Brown Publishers.
2. Halis, J R: Applied Geomorphology.

8/11/24 8/11/24 8/11/24

3. Mathew Fontaine Maury: The Physical Geography of the Sea.
4. Oscar Diedrich von Engeln, 1953: Geomorphology. Small, R J, 1970: Study of Landforms. Cambridge.
5. Thornbury, W D 1968: Principles of Geomorphology. Wiley
6. Savinder Singh, 1998: Geomorphology, Prayag Pustak Bhawan.
7. Oscar diedrich von engeln, 1953: Geomorphology, systematic and Regional.

Board of Studies:

1. Chairman - Dr. V. Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya INDORE (M.P)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER-I (Session-2024-25)

CLASS : M. Sc.
SEMESTER : FIRST
SUBJECT : GEOLOGY
PAPER NO. : FOURTH
TITLE : MINERALOGY AND GEOCHEMISTRY
MAX MARKS : 85

Unit 1

Atomic Structure, Mineralogical properties and mode of occurrence of the Following

i.) Sulfides, Oxide, ii.) Sulfates (anhydrous and hydrous)

iii) Carbonate (Calcite, aragonite, and dolomite groups),

Classification of silicate structure Isomorphism, Polymorphism, Exsolutions

Unit 2

Atomic structures, Chemistry, Physical and optical properties of following Rock forming mineral groups. Olivine, pyroxene, Amphibole, Feldspar, Feldspathoidal, Mica, Zeolite, Garnet.

Unit 3

Atomic structures, Chemistry, Physical and optical properties of following Rock forming mineral groups. Quartz and its varieties, Chlorite, Alum inosilicates, Precious and Semi- Precious stones.

Unit 4

Principles of optics, Double refraction, Optical classification of minerals, Birefringence, Determination of Refractive Index, Uniaxial and Biaxial indicatrix, Determination of pleochroic scheme, interference colours, interference figures, and Optic Sign of minerals.

Unit 5

Geochemical classification of elements, Radioactive decay scheme of U-Pb, Rb-Sr, K-Ar & Sm-Nb, Laws of Thermodynamics, Concept of geochemical cycle, Principles of ionic substitutions in mineral (Parthite and Anti perthite), Composition of the Earth.

Suggested Readings : -

1. Dana, E.S. and Ford, W.E. 2002: A textbook of Mineralogy (Reprint).
2. Deer, WA; Howie, RA and Zussman, J 1996: Rock forming minerals. Longman
3. Gribble, CD.1993: Rutley's Elements of Mineralogy.
4. Kerr, P.F. 1977: Optical Mineralogy, McGraw Hill.
5. Klein, C and Huarlbut, CS. 1993: Manual of mineralogy. John Willey.
6. Krauskopf, K.B. 1967: Introduction to Geochemistry, McGraw Hill.
7. Mason, B. and Moore, C.B. 1991: Introduction to Geochemistry, Wiley Eastern.
8. Moorhouse, W.W. (1951): Optical Mineralogy, Harper and Row
9. Perkins, D. 1998: Mineralogy, Prentice Hall.
10. Phillips, WR and Griffin DT; 1986: Optical mineralogy. CBS 11. Winchell, E.N. (1951): Elements of Optical Mineralogy, Wiley Eastern.

Board of Studies:

1. Chairman - Dr. V. Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER-I (Session-2024-25)

Syllabus opted by the Board of Studies in Geology DAVV in the meeting held on 08/11/2024

Practical Examinations:

Practical – 01: Structural Geology

Max. Marks: 50

1. Geometric methods to solve the problems related to Dip, Strike and Fault attitudes.
2. Completion of outcrops on the geological maps.
3. Drawing of Geological cross sections along given section lines on the geological maps.
4. Study of three-dimensional models showing various structural features.

Practical – 02: Mineralogy

Max. Marks: 50

1. Megascopic and microscopic study of common rock-forming minerals with emphasis on association and genesis.
2. Determination of Pleochroic scheme and Order of Interference colours

BoardofStudies:

1. Chairman-Dr.V.Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUSOFM.Sc.GEOLOGYSEMESTERSYSTEM

SEMESTER-II(Session-2024-25)

Syllabus opted by theBoard of Studies inGeology DAVV inthe meeting held on 08/11/2024

Semester	Course	Titleofpapers	Max.Marks Th.+CCE	Max.Mark Practical Exam + Sessional	Minimum Passing Marks Theory/CCE and Practical	Total Marks
Second	Paper-I	Igneous & Metamorphic Petrology	85+15		28/5	100
	Paper- II	Sedimentology	85+15	-	28/5	100
	Paper-III	Stratigraphy of India	85+15	-	28/5	100
	Paper – IV	Paleobiology	85+15		28/5	100
	Practical – I	Petrology	-	50	17	50
	Practical – II	Paleontology& Stratigraphy	-	50	17	50
					TOTAL	**500**

Theschemeofexaminationandtheallotment ofmarksshallbeasunder

Sections/Part	QuestionsType	Marks Distribution	Remark
Section– A	ObjectiveTypeQuestions(Atleastonequestion tobesetfromeachunit)	1 X5=05 Marks	
Section- B	Short Answer Type Question (Three questions to Be set from each unit and two from each unit to Be attempted)	5 X6=30Marks	
Section- C	LongAnswerTypeQuestion(Two questions to be set from each unit and one from each unit to be attempted)	5 X10=50Marks	
	Total	**85Marks**	

BoardofStudies:

1. Chairman-Dr.V.Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar 8/11/24

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUSOFM.Sc.GEOLOGYSEMESTERSYSTEM

SEMESTER-II(Session-2024-25)

CLASS : M.Sc.
SEMESTER : SECOND
SUBJECT : GEOLOGY
PAPER NO. : FIRST
TITLE : IGNEOUS & METAMORPHIC PETROLOGY
MAX MARKS: 85

Unit-I Origin of Magma. factors affecting Magma composition. Evolution of Magma by Differentiation and Assimilation. Phase Equilibria of Monary (Silica), Binary (Mixed and Eutectic) and Ternary (Ab-An-Di), (Fo-Fa-Silica) Silicate Systems.

Unit-II Classification of igneous rocks including IUGS system. Bowen Reaction Series. Textures of igneous rocks and interpretation of crystallization history. Layered igneous structures.

Unit-III Origin of Granite: Magmatic and granitization processes. Petrogenesis, Petrography and Indian occurrences of Basalt, Dunite, Andesite, Carbonatite, Alkaline rocks and Kimberlite, Gabbro,

Unit-IV Agents of metamorphism. Kinds of metamorphism. Metamorphic differentiation, Structures and Textures of metamorphic rocks. Concept of metamorphic zones, Depth zones and Barrovian zones.

Unit-V Metamorphic grades, facies of contact and regional metamorphism. Elementary idea of facies classification, Metasomatism and their types. Origin and types of Migmatites,Charnockites,and Khondalites, Banded Gniess, Schist, Slate, Marble &metabasic.

REFERENCES:

1. Best, M.O.1986. Igneous and Metamorphic Petrology, CBS Pub. Bose, M.K. 1997, World Press.
2. Bucher, K. & Frey, M. 1991. Petrogenesis of Metamorphic Rocks, Springer
3. Verlag Kretz, R. 1994 Metamorphic crystallization, Johs Wilry.
4. Mc Bimey, A. R. 199) Igneous Petrology, Jones and Bartlet Pub.
5. Phillipott. A 1992 igneous and Metamorphic Petrology, Prentice Hall Turner FJ 1980
6. Metamorphic Petrology. Me Graw
7. Yardley BW 1989 An Introduction to Metamorphoc Petrology, Longman
8. Winkler, Petrogenetin of Metamorphic Rocks, Springer Vertag
9. Miyashiro Metamorphism and Metamorphic Rocks George Allen and Unwin
10. Wylhe, PJ Ultramafic Rocks
11. Hetler haily, Introduction to Petrology. Prentice Hall

BoardofStudies:

1. Chairman-Dr.V.Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUSOFM.Sc.GEOLOGYSEMESTERSYSTEM

SEMESTER-II(Session-2024-25)

CLASS : M.Sc.
SEMESTER : SECOND
SUBJECT : GEOLOGY
PAPER : SECOND
TITLE : SEDIMENTOLOGY
MAXMARKS : 85

Unis-I Processes of Sedimentation. Fluid flow, origin of sediments. Modes of transport of sediments. Stoke's and Impact Laws of sediment settling Classification and nomenclature of the common sediments (rudites, arenites and argillites). Classification of sedimentary rocks.

Unit-II Origin, classification and significance of primary, secondary and organic sedimentary structures. Classification of sandstone and limestone. Dolomite Significance of Sedimentary Structures in Paleocurrent studies.

Unit-III Textures of sedimentary rocks and their genetic significance. Granulometric analyses of elastic particles, statistical measure and interpretation of nature of sediments. Diagenesis.

Unit-IV Elements and types of depositional environments: Continental (Fluvial, lacustrine, Aeolian and glacial). Transitional and marine environments, Evaporates andVolcano-clastic sediments.

Unit-V Provenance and mineral stability. Concept and types of sedimentary provenance. Heavy minerals: their separation and utility in the provenance analyses. Tectonic frameworkof sedimentation (Kay's classification of tectonic elements). Cyclothem.

REFERENCES:

- Allen, P.1997: Earth surface Processes. Blackwell
- Davis, R.A, 1992: Depositional Systems. Prentice hall Einsels, G 1992: Sedimentary Basins. Springer Verlag
- Miall AD, 2000: Principles of Sedimentary Basin Analysis. Springer Verlag
- Nichols, G. 1999: Sedimentology and Stratigraphy. Black well Reading H G. 1996: Sedimentary Environments. Black well
- Sengupta, S 1997: Introductions of Sedimentology. Oxford IBH
- Pettijohn, F J: Sedimentary Petrology.
- Thompson and Collison: Sedimentary Structures.
- Pettijohn, Potter and Seiver: Sand and Sandstones.

BoardofStudies:

1. Chairman-Dr.V.Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUSOFM.Sc.GEOLOGYSEMESTERSYSTEM

SEMESTER-II(Session-2024-25)

CLASS : M.Sc.
SEMESTER : SECOND
SUBJECT : GEOLOGY
PAPER : THIRD
TITLE : STRATIGRAHY OF INDIA
MAX.MARKS : 85

Unit-I Criteria for the Stratigraphic classification and correlation. Litho-Bio-and Chrono- stratigraphic units. Geological time-Scale. Orogenic cycles of the Indian Stratigraphy. Tectonic framework of India. Geological Column of the Indian Stratigraphy.

Unit-II Ice-ages in the Indian Stratigraphy: Precambrain, Permo-Carboniferous and Pleistocene ice ages, their evidences. Archaean (Azoic) history of India: Distributions and stratigraphy of the Archaeans of South India, Madhya Pradesh, Rajasthan, Jharkhand and Orissa.

Unit-III Precambrain (Proterozoic) history of India: Distribution and Stratigraphy of the Cuddapah and Vindhyan Super Groups. Palaeozoic history: Distribution and stratigraphy of Salt Range and spiti. Origin and age of Saline Formation. Precambrian Cambrian Boundary problem

Unit-IV Mesozoic history: Distribution and stratigraphy of Triassic of Spiti, Jurassic of Cutch (Kachchh) and Cretaceous of South India. Bagh Beds. Lameta Beds. Deccan Traps. Permo Triassic Boundary problem.

Unit-V Palaeoclimate, Classification, distribution and stratigraphy of the Gondwana Super Group Cenozoic history: Tertiary of Assam, its economic importance. Siwaliks and its vertebrate fossil record, K-T Boundary problem.

REFERENCES:

- Boggs Sam Jr. 1995: Principles of Sedimentary and Stratigraphy. Prentice Hall
- Krishnan, M S: Geology of India and Burma. Higginbothams, Madras
- Ravindra Kumar: Historical Geology and Stratigraphy of India. John Wiley
- Wadia, D N: Geology of India. MacMillan & Co
- Doyle and Brennnet MR 1996: Unlocking the Stratigraphy: Concepts and Application, Prentice

BoardofStudies:

1. Chairman-Dr.V.Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. SH Shailesh Chaun
4. Dr Poonam Bhatnagar

3. Dr. Shailesh Chaure 4. Dr. Poonam Bhatnagar

(5)

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUSOFM.Sc.GEOLOGYSEMESTERSYSTEM

SEMESTER-II(Session-2024-25)

CLASS : M.Sc.
SEMESTER : SECOND
SUBJECT :GEOLOGY
PAPER :FOURTH
TITLE : PALAEOBIOLOGY
MAX.MARKS :85

Unit-I Modes of fossilization, uses of fossils, Classification, evolution, geologicalhistory of Trilobites, Graptolites, Echinoids and Corals.

Unit-II Classification, evolution, geological history of the following; BrachiopodGastropod, Lamellibranchs and Cephalopoda.

Unit-III Succession of the Vertebrate Life through the geological time. Evolutionary history of Human, Elephant and Horse.

Unit-IV Micropaleontology: Classification, separation of microfossils. Application microfossils in fossil fuel exploration, Morphology and geological history foraminifera.

Unit-V Concept of Paleobotany and Palynology, Plant life through ages. Characteristic features of Lower Gondwana flora. Characteristic features of Upper Gondwana flora.

REFERENCES:

1. Moore, Lalihsr and Fischer: Invertebrate Palaeontology.
2. Woods, Henry: Invertebrate Palaeontology
3. Clarkeson ENK 1998: Invertebrate Palaeontology and Evolution, Blackwell
4. Stearn CW and Carrol RL 1989: Palaeontology- the Record of Life, John Wiley
5. Smith AB 1998. Bringing Fossil to Life. An Introduction of Palaeobiology, McGraw
6. Anantharaman and Jain: Text book of Palaeontology. Banner FT and Lord A R: Aspects of Micropalaeontology
7. Roger A S: Vertebrate Palaeontology
8. Jones DJ: Microfossils
9. Glassner M P: Principles of Micropalaeontology
10. Haq BU and Boersma A: Introduction to Marine Micropalaeontology
11. Andrew: Palaeontology

BoardofStudies:

1. Chairman-Dr.V.Gadgil 8/11/24 2. Dr. R.S. Raghuvanshi

3. Dr. Shailesh Chaure 8/11/24 4. Dr. Poonam Bhatnagar 8/11/24

Devi Ahilya Vishwavidyalaya Indore (M.P.)

(6)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER-II (Session-2024-25)

Syllabus opted by the Board of Studies in Geology DAVV in the meeting held on 08/11/2024

Practical Examinations:

Practical –01**: Petrology**
Max. Marks: 50

1. Identification of Igneous, Sedimentary and Metamorphic :ock by Megascopic studies
2. Microscopic studies of Igneous, Sedimentary and Metamorphic rock with emphasis on textural and genetic aspects.
3. Graphical representation of Sedimentary rocks and their Interpretation.
4. Distribution of Rocks in India.

Practical –02: **Paleontology and Stratigraphy**

Max. Marks: 50

1. Plotting of various Stratigraphic formations on Outline Map of India.
2. Megascopic study of Stratigraphic rocks of India.
3. Study and preparation of Palaeogeographical maps of various Supergroups and Groups
4. Megascopic study and Geological distribution of Important Invertebrate and Plant fossils.

Board of Studies:

1. Chairman-Dr.V.Gadgil 8/11/24

2. Dr. R.S. Raghuvanshi 8/11/24

3. Dr. Shailesh Chaure 8/11/24

4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - III (Session-2024-25)

Syllabus opted by the Board of Studies in Geology in the meeting held on 08/11/2024

Semester	Course	Title of papers	Max. Marks Th. + CCE	Max. Mark Practical Exam + Sessional	Minimum Passing Marks Theory/CCE and Practical	Total Marks
Third	Paper-I	ORE GEOLOGY	85 + 15		28/5	100
	Paper-II	MINERAL EXPLORATION	85 + 15	-	28/5	100
	Paper-III	PHOTO GEOLOGY AND REMOTE SENSING	85 + 15	-	28/5	100
	Paper-IV	ENGINEERING GEOLOGY	85 + 15		28/5	100
	Practical-I	ORE GEOLOGY AND MINERAL EXPLORATION		50	17	50
	Practical-II	PHOTO GEOLOGY AND ENGINEERING GEOLOGY		50	17	50
					TOTAL	**500**

The scheme of examination and the allotment of marks shall be as under

Sections/Part	Questions Type	Marks Distribution	Remark
Section -A	Objective Type Questions (At least one question to be set from each unit)	1x5=05 Marks	
Section —B	Short Answer Type Question (Three questions to be set from each unit and two from each unit to be attempted)	5x6=30 Marks	
Section —C	Long Answer Type Question (Two questions to be set from each unit and one from each unit to be attempted)	5x10=50 Marks	
	Total	**85 Marks**	

Board of Studies:

1. Chairman- Dr. V. Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - III (Session-2024-25)

CLASS : M. Sc.
SEMESTER : THIRD
SUBJECT : GEOLOGY
PAPER NO. : FIRST
TITLE : ORE GEOLOGY
MAX MARKS : 85

UNIT-I Relation of magma to mineral deposits. Geological thermometers. Ore genesis. Control of ore deposits. Paragenesis and zoning in mineral deposits. Classification of mineral forming processing.

UNIT-II Processes of Mineral deposits: Magmatic concentration, Hydrothermal and Volcano-genetic deposits. metasomatism

UNIT-III Processes of Mineral Deposits -sublimation, pegmatite, contact metamorphism, metasomatism, Hydrothermal carbonatite Sedimentary, Placer and Residual. Oxidation and Supergene Enrichment. Ore Microscopy: Textures and Structures of Ore.

UNIT-IV origin, mode of occurrence, association, uses and Indian occurrences of the ores of Iron, Manganese, Chromium, Copper, Lead, Zinc, Aluminium and Gold, tin tungsten, Titanium beryllium molybdenum, & silver.

UNIT-V Origin, Mode of Occurrence, Association, Specification and Grade for users in Industries and India distribution for non-metallic minerals uses in Industries. Minerals used in Fertilizers and Cement Industries. Mica, asbestos barite, graphite. Mineral resources of MP and conservation of minerals.

SUGGESTED READINGS:

1. Bateman, 1981: Economic Mineral Deposits, Wiley.
2. Deb, S. Industrial Minerals.
3. Evans, J.M. 1993: Ore Geology and Industrial Minerals, Blackwell.
4. Krishnaswamy: Mineral Resource of India.
5. Lamey, Carl, A: Ashok, 2000: Ore Genesis - a holistic approach, Allied P.
6. Mukherjee, 1999: Ore Petrology, McGraw Hills
7. Ummeshwar Prasad, 2000: Economic Geology, CBS

Board of Studies:

1. Chairman- Dr. V. Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - III (Session-2024-25)

CLASS : M.Sc.
SEMESTER : THIRD
SUBJECT : GEOLOGY
PAPER NO. : SECOND
TITLE : MINERAL EXPLORATION
MAX MARKS : 85

UNIT-1 Geological exploration, mode of occurrence of commercial grade deposit of ore, Geological criteria, Ore Guides for mineral prospecting. Methods of geological: exploratory grids, pits, trenches. Well logging in evaluation of deposits.

UNIT-II Sampling methods and Assaying by channel sampling methods, placer sampling, under ground mining sampling Calculation of ore reserve and classification of ore deposits

UNIT-III Classification and principles of geophysical methods: Electrical methods, instrument used in electrical prospecting. Application in mineral prospecting, magnetic method, magnetic properties of rock and minerals, magnetometer. Type of electromagnetic radiation/Spectrum (EMR) Energy used in remote sensing Sensor plat form, Energy interaction with earth surface and atmosphere

Unit-IV Gravity methods: Earth's gravity fields, regional and local gravity anomalies. Pendulumtorsion balance of gravimeters, Interpretation of gravity anomalies for mineral deposits. Seismic methods: Elastic properties of rocks, types of elastic waves (P, S, and L waves), Refraction and reflection methods, time-distance relation for horizontal interface, seismic instruments- geophones.

Unit – V Geochemical Exploration: Geochemical cycle mobility of elements, path finder elements, mode of occurrence of trace elements, primary dispersion patterns of deep seated origin, syngenetic and epigenetic diffusion. Sampling technique for geochemical exploration.

SUGGESTED READINGS:

1. Arogyaswamy, R.N.P., 1996: Courses in Mining Geology. IV ed, Oxford/IBH.
2. Dobrin, M.B. 1976: Introduction to Geophysical Prospecting, Pergamon London.
3. Ginzburg, 1.1.: Principles of Geochemical Prospecting, Pergamon London. Hawkes, H. and Wobb, J.S.: Geochemical in Mineral Exploration, Harper NY
4. Holson, G.D. and Tiratsoo, E.N., 1985 Introduction to Peroleum Geology, GulfPubl.
5. Howel C.H.: Introduction to Geophysics.
6. Milton and Dobrin: Introduction to Geophysical Prospecting McGraw Hill
7. Parasia, D.S.: Principles of Applied Geophysics.

Board of Studies:

1. Chairman- Dr. V. Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - III (Session-2024-25)

CLASS : M. Sc.
SEMESTER : THIRD
SUBJECT : GEOLOGY
PAPER NO. : THIRD
TITLE : PHOTO GEOLOGY AND REMOTE SENSING
MAX MARKS : 85

UNIT - I Introduction to aerial photography. Types of aerial photos. Geometric principles of photographs- relief and tilt displacement, Vertical Exaggeration and distortions. Measurements form Aerial Photographs: Scales, Distance, Area and Height.

UNIT- II Preparation of Photo-geologic Maps. Mosaic controlling factors of aerial photograph, scale flight plan, area, purpose, time and season of photography. Introduction to overlap, sidelap, drift, crab, fiducial marks. Elements of interpretation of aerial photographs. Back ground knowledge, factor affecting aerial photography.

UNIT-III Types of Electro-Magnetic Spectrum. Space platforms. Reflectance of Minerals, vegetation, rocks and water. Elementary idea about active passive sensors Introduction to IRS mission.

UNIT-IV Multi Spectral Scanner(MSS), SLAR, SAR, LISS, camera, Thermal infrared line scanner (TIRLs), near infrared (NIR), microwave (Radar) Imagery. Introduction to image processing, continuous image processing, discrete image processing system.

UNIT-V Application of Photo Geology and Remote Sensing, in the study of Geomorphology, Lithology and Structural Features and Hydrogeologic studies.

SUGGESTED READINGS:

1. Curra, P.J., 1985: Principles of Remote Sensing, ELBS/Longman
2. Drury, S.A., 1987: Image Interpretation in Geology, Allen and Unwin.
3. Lend, D.R.: Principles and Interpretation of Aerial Photographs.
4. Miller, V.C., 1961 Photo Geology, McGraw
5. Pandey, S.N., 2001: Principles and Applications of Photo Geology, New Age.
6. Parry S. Seigal and Alan R: Remote Sensing in Geology.
7. Patel, A.N. and Surendra Singh: Principle of Remote Sensing, Scientific Publisters
8. Pratt, V.K.: Digital Image Processing.
9. Tripathi and Bajpai ed. 2000: Remote Sensing in Geosciences.
10. Wolf: Introduction to Photogrammetry.
11. Jenson: Environmental Remote Sensing

Board of Studies:

1. Chairman- Dr. V. Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - III (Session-2024-25)

(5)

CLASS : M. Sc.
SEMESTER : THIRD
SUBJECT : GEOLOGY
PAPER NO. : FOURTH
TITLE : ENGINEERING GEOLOGY
MAX MARKS : 85

UNIT-I Importance of geology in civil engineering, Merits and Demerits of civil engineering in folds, faults and joints affected area. Engineering properties of rocks.

UNIT-II engineering properties test, of rocks, used as foundation site Building stone, aggregates and ballast.

UNIT-III Dam and its Parts. Types of dam. Geological consideration for the selection of dam site and Reservoir. Related to failure of Dams. Grouting, water tightness and influencing factors, silting, desilting of Reservoir. Major dams of India. Geological consideration in major engineering projects.

UNIT-IV Bridge: Types and Geological considerations. canals: Geological considerations and lining. Tunnel: Terminology and Types, Geological Considerations for Tunnelling in different Grounds. Lining of Tunnels. Highways Geological considerations for construction of highways.

UNIT-V Landslide: Causes, Effects and Prevention. Consideration of civil engineering in seismic areas. Geo-hazards: Mitigation and Management.

SUGGESTED READINGS:

1. Bell, F.G., 1999: Geological Hazards, Rout ledge.
2. Blyth, F.C.H.: Geology for Engineers, Arnold Ltd.
3. Kesavulu, N.C.: Text Book of Engineering Geology, McMillan.
4. Khurmi, R.S.: Fundamental of Engineering Geology, Dhanpat Rai & Sons.
5. Krynine and Judd, W.R.: Principles of Engineering Geology andj Geotechnics, McGraw
6. Parbin Singh: Engineering and General Geology, Katson Publ House.
7. Ramnathan, R.M.: Engineering Geology, Anuradha Agency, T.N.
8. Richey, J.E.: Elements of Engineering Geology, Sir Issac Pitman & Sons.
9. Sumit, K. 1992: Environmental Hazards, Rout ledge. Trefe the, N.C.: T.B. of Geology and Engineering Geology, McMillan.

Board of Studies:

1. Chairman- Dr. V. Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - IV (Session-2024-25)

Syllabus opted by the Board of Studies in Geology in the meeting held on 08/11/2024

Semester	Course	Title of papers	Max. Marks Th. + CCE	Max. Mark Practical Exam + Sessional	Minimum Passing Marks Theory/CCE and Practical	Total Marks
Fourth	Paper-I	FUL GEOLOGY	85 + 15		28/5	100
	Paper-II	MINING AND MINERAL DRESSUNG	85 + 15	-	28/5	100
	Paper-III	HYDROGEOLOGY	85 + 15	-	28/5	100
	Paper-IV	ENVIRONMENTAL GEOLGUY	85 + 15		28/5	100
	Practical-I	FUELGELOGY, MINING AND MIRERAL DRESSING	-	50	17	50
	Practical-II	HYDROGEOLOGY AND ENVIRONMENTAL GEOLGOY	-	50	17	50
		GEOLOGICAL FIELD STUDIES PROJECT REPORT	-	-	-	100
					TOTAL	**600**

The scheme of examination and the allotment of marks shall be as under

Sections/Part	Questions Type	Marks Distribution	Remark
Section -A	Objective Type Questions (At least one question to be set from each unit).	1x5=05 Marks	
Section —B	Short Answer Type Question (Three questions to be set from each unit and two from each unit to be attempted).	5x6=30 Marks	
Section —C	Long Answer Type Question (Two questions to be set from each unit and one from each unit to be attempted).	5x10=50 Marks	
	Total	**85 Marks**	

Board of Studies:

1. Chairman- Dr. V. Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - IV (Session-2024-25)

CLASS : M.Sc.
SEMESTER : FOURTH
SUBJECT : GEOLOGY
PAPER NO. : FIRST
TITLE : FUEL GEOLOGY
MAX MARKS : 85

Unit-1 Origin of Coal. Physico-Chemical Characterization: Proximate and Ultimate Analysis. Rank and Varieties of Coal. Macroscopic Ingredients and Microscopic Constituents.

Unit –II Classification of Coal. Preparation of Coal for Washing, Carbonization, Gasification and Hydrogenation, Briquette of Coal.

Unit – III Geological features of the productive coal fields of India. Methods of Coal Prospecting. Estimation of Coal Reserve. Elementary idea about Coal Mining Methods. Coal Bed Methane.

Unit – IV Origin, Migration and Accumulation (oil-traps) of Petroleum and Natural Gas. Kerozene. Geology of the Productive Oil Fields of India. Status of Oil and Natural Gas in India.

Unit – V Atomic minerals mode of occurrence, association and distribution in India. Methods of Prospecting, Productive Horizons in India, Nuclear Power Stations of the Country and Future Prospects.

SUGGESTED READINGS:

1. Dahlkamp, F.J., 1993: Uranium Ore Deposits. Springer Verlag
2. Durance, E.M., 1986: Radioactivity in Geology: Principles and Applications.
3. Ellis H. Holson GD and Tiratsoo, E.N., 1985: Introduction of petroleum Geology. Gulf Pub
4. Nettleton L.L.: Geophysical Prospecting for Oil
5. North F.K., 1985: Petroleum Geology. Allen and Unwin
6. Selley, R.C., 1998: Elements of Petroleum Geology. Academic Press Singh, M.P.1998: Coal and Organic Petrology. Hindustan Publications ND
7. Tissot, B.P. and Welt, D.H., 1984: Petroleum Formation and Occurrence. Springer Verlag

Board of Studies:

1. Chairman- Dr. V. Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi 8/11/24
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar

(3)

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - IV (Session-2024-25)

CLASS : M.Sc.
SEMESTER : FOURTH
SUBJECT : GEOLOGY
PAPER NO. : SECOND
TITLE : MINING AND MINERAL DRESSING
MAX MARKS : 85

Unit – I Mining terminology, mine supports, subsidence, shaft and shaft sinking. Breaking of rocks. Percussion and Rotary drilling methods. Classification of mining methods.

Unit – II Alluvial mining. Open-cast mining & Underground mining (other than coal mining): Stoping methods-open stopes, timbered stopes, shrinkage stopes, slicing system and caving. Mine atmosphere: mine ventilation, pumping of mine water.

Unit – III Coal mining methods: Board and Pillar methods, Long Wall methods, Strip mining. Haulage and winding.

Unit – IV Mineral Dressing: Physical properties of minerals utilized in mineral dressing. Crushers: Primary and Secondary crushers. Grinding mills. Rod mills, ball mills.

Unit – V Industrial screening Types of screens. Gravity separation. Heavy medium separation. Magnetic separation. Froth Floatation technique.

SUGGESTED READINGS:

1. Arogyaswamy RNP: Courses of Mining Geology, Oxford & IBH
2. Gaudin: Principles of Mineral Dressing, Mc Graw Hill
3. Lewis: Elements of Mining
4. Mc Kinstry HE: Mining Geology, Prentice Hall.
5. Richards and Looke: Text Book of Ore Dressing, Mc Graw Hill
6. Roberts· Elements of Ore Dressing.
7. Taggart: Mineral Dressing.
8. Young: Elements of Mining Geology.

Board of Studies:

1. Chairman- Dr. V. Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - IV (Session-2024-25)

CLASS : M.Sc.
SEMESTER : FOURTH
SUBJECT : GEOLOGY
PAPER NO. : THIRD
TITLE : HYDROGEOLOGY
MAX MARKS : 85

Unit – I Hydrometeorological Parameters: Precipitation and Infiltration. Ground water: Origin, Importance, Occurrences and Distribution of water.

Unit – II Hydrological properties of formations: Porosity, Permeability, Specific yield, Specific retention, Hydraulic conductivity, Storage coefficient and their determination in laboratory. Aquifers and their classification. Water table contour maps.

Unit – III Groundwater flow confined, unconfined, steady, unsteady and radial flow. Darcy's Law and its range of validity. Water level fluctuations. Methods of pumping test and analysis of test data.

Unit – IV Ground Water Quality: Physical Characteristics. Chemical characters. Biological characters. Water contaminants and pollutants. Methods of plotting of chemical data of water samples. Ground Water Pollution.

Unit – V Salt water intrusion in coastal aquifers, remedial measures. Radio isotopes in hydrogeological studies. Water logging, causes and remedial measures. Consumptive and Conjunctive use of surface and ground water. Concept of water management in rural and urban areas. Water harvesting, Natural and artificial recharge of ground water.

SUGGESTED READINGS:

1. Davis S.N. and De Wiest R.J.M., 1966: Hydrogeology, John Wiley
2. Felter, C.W., 1990: Applied Hydrogeology, Merrill.
3. Freeze, R.A. and Cherry, J.A., 1979: Ground Water, Prentice Hall.
4. Gautam Mahajan: Groundwater survey and Investigation.
5. Gulman: Hydrogeology and Wetland Conservation.
6. Karanth, K.R. 1987: Ground Water Assessment - Development and Management,
7. Raghunath, N.M., 1982: Ground Water, Wiley Eastern.
8. Subramaniam, V. 2000: Water. Kingston Publ. London, Tata McGraw Hill
9. Todd, D.K. 1980: Ground Water Hydrology, John Wiley.
10. Tollman: Ground Water.

Board of Studies:

1. Chairman- Dr. V. Gadgil
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure
4. Dr. Poonam Bhatnagar

Devi Ahilya Vishwavidyalaya Indore (M.P.)

SYLLABUS OF M.Sc. GEOLOGY SEMESTER SYSTEM

SEMESTER - IV (Session-2024-25)

CLASS : M.Sc.
SEMESTER : FOURTH
SUBJECT : GEOLOGY
PAPER NO. : FOURTH
TITLE : ENVIRONMENTAL GEOLOGY
MAX MARKS : 85

Unit – I Concept of Environmental geology. Ecological perspective of the environment. Global warming and its impact. Impact of mining activity on environment.

Unit – II Impact assessment of degradation and contamination of surface water and ground water quality due to industrialization and urbanization. Soil profiles, types and soil quality degradation due to irrigation, use of fertilizer and pesticides. Environmental problems related to dam and reservoirs.

Unit – III Nuclear hazards: Introduction, radiation hazard and hazard from radioactive waste. Erosion causes and control. Landslide causes and controls. Landslide prone area of India. Desertification and degradation of land. Anti-desertification measures.

Unit – IV Earth's natural hazardous processes and its impact on environment: Causes of flood, flood hazard and management. Effects of earthquake. Seismic hazards and management. Volcanic activity. Coastal hazards.

Unit – V Application of remote sensing in environmental studies. The geologic aspects of Environmental health Introduction, geological factors. Trace elements and health. Chronic disease and geologic environment. Disaster management: - Introduction, impacts and contingency disaster management plants.

SUGGESTED READINGS:

1. Bell, F.G., 1999: Geological hazards. Rout Ledge, London.
2. Hsai - Yang Fang, 1997: Introduction to Environmental Geotechnology, CRC Press.
3. Patwardhan, A.M., 1999: The Dynamic Earth System, Prentice Hall
4. Smith, K., 1992: Geological Hazards, Rout Ledge, London. Subramanium, V. 2001: Textbook in Environmental Science, Narosa International Narosa International T.E. Graedal & P.J. Crutzen, 1993.
5. Atmospheric change, Freeman and Co Valdiya, K.S., 1987. Environmental Geology- Indian Context. Tata Mc Graw.
6. People and Environmental - ISS 310, Michigan State University.

Board of Studies:

1. Chairman- Dr. V. Gadgil 8/11/24
2. Dr. R.S. Raghuvanshi
3. Dr. Shailesh Chaure 8/11/24
4. Dr. Poonam Bhatnagar 8/11/24