DEPARTMENT OF GEOGRAPHY
List of VOC Papers for 4th, 5th and 6th semester w.e.f. 2025-26

MCC-M5 (V)			
Session: 2025-26			
Part A – Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Elementary Aerial Photography		
Course Code	GEO-25/M-405 (V)		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC-M5 (V)		
Level of the course (As per Annexure-I	100-199		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the basics of aerial photography. 2. enrich skills about technique of remote sensing. 3. understand the various satellite systems of India. 4. acquire knowledge about interpretation of images. 5* attain skills in solving various practical problem associated with aerial photography and remote sensing.		
Credits	Theory	Practical	Total
	02	02	04
Contact Hours	02	04	06
Max. Marks: 100 **Internal Assessment Marks: 15+15 = 30** **End Term Exam Marks: 35+35 = 70**		**Time: 03 Hours**	

Part B- Contents of the Course		
Instructions for Paper-Setter Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one marks for each sub part). There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	**Topics**	**Contact Hours**
I	1. Aerial Photography: History, advantage, and limitations. 2. Types of Aerial photograph.	11
II	3. Scales of Aerial Photograph 4. Elements of Aerial Photo Interpretation	11
III	5. Geometry of Aerial Photographs 6. Introduction to Pocket and Mirror Stereoscope	11
IV	7. Application of Aerial photographs in Natural Resource Management. 8. Application of Aerial Photographs in Land use land cover studies.	12
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 15 marks File record = 10 marks Viva-Voce = 10 marks Practical Record: A project file consisting of 10 exercises on the below mentioned themes: - 1. Identification and mapping of Fiducial Marks (1 exercise) 2. Locating Principal and conjugate principal point (2 exercise). 3. Determination of Flight line and Flight direction (2 exercise) 4. Calculation of Scale of Aerial Photographs (3 exercise) 5. Interpretation and mapping of landuse from Aerial photograph (2 exercise)	30

Suggested Evaluation Methods	
Internal Assessment: ➢ **Theory** • Class Participation: **04 marks** • Seminar/presentation/assignment/quiz/class test etc.: **04 marks** • Mid-Term Exam: **07 marks** ➢ **Practicum** • Class Participation: **05**	**End-Term Examination:** **35 Marks** **35 Marks**

• Seminar/Demonstration/Viva-voce/Lab records etc.:**10 Marks** • Mid-Term Exam: **NIL**	

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Bhatta, B. (2010) Remote Sensing and GIS, Oxford University Publications.
2. Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda PustakBhawan, Allahabad
3. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
4. Singh, G (2005) Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi
5. Singh, L.R and Singh, R (1973) Map work and practical geography, Central Book Allahabad
6. Singh, R.L (2005) Elements of Practical Geography. Kalyani Publishers, New Delhi. India.

*Applicable for courses having practical components.

CC-M6 (V)			
Session: 2025-26			
Part A – Introduction			
Subject	Geography		
Semester	V		
Name of the Course	Application of GIS		
Course Code	GEO-25/M-506 (V)		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC-M6		
Level of the course (As per Annexure-I	100-199		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the basics of Geographic Information System. 2. enrich skills about functioning of GIS. 3. understand the tools used in GIS. 4. acquire knowledge about application of GIS. 5* attain skills in solving various geographical problems using GIS.		
Credits	Theory	Practical	Total
	02	02	04
Contact Hours	02	04	06
Max. Marks: 100 **Internal Assessment Marks: 15 + 15 = 30** **End-Term Exam Marks: 35 + 35 = 70**		**Time:3 hours**	

Part B- Contents of the Course		
Instructions for Paper-Setter Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one marks for each sub part). There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	**Topics**	**Contact Hours**
I	1. GIS: Definition, scope and development. 2. Components and elements of GIS	11
II	3. Type of data: spatial and non-spatial. 4. Models in GIS: Raster and vector.	11
III	5. Application of GIS in Natural Resource Management 6. Application of GIS in Water Resource Management	11
IV	7. Application of GIS in Agriculture Management 8. Application of GIS in Forest Conservation	12
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 15 marks File record = 10 marks Viva-Voce = 10 marks Practical Record: A project file consisting of 10 exercises on the below mentioned themes: - 1. Components of interface of QGIS (1 exercises). 2. Making Point, Line and Polygon shape files in QGIS (3 exercises). 3. Digitization Point, Line and Polygons in QGIS (3 exercises). 4. Map composition with Point, Line and Polygon features (3 exercise)	30

Suggested Evaluation Methods	
Internal Assessment: ➢ **Theory** • Class Participation: **04 marks** • Seminar/presentation/assignment/quiz/class test etc.: **04 marks** • Mid-Term Exam: **07 marks** ➢ **Practicum** • Class Participation: **05** • Seminar/Demonstration/Viva-voce/Lab records etc.:**10 Marks** • Mid-Term Exam: **NIL**	**End-Term Examination:** **35 Marks** **35 Marks**

Part C-Learning Resources
Recommended Books/e-resources/LMS: 1. Bhatta, B. (2010) Remote Sensing and GIS, Oxford University Publications. 2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press 3. Chauniyal, D.D. (2010) SudurSamvedanevamBhogolikSuchanaPranali, Sharda PustakBhawan, Allahabad 4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Infromation system. Prentice Hall. 5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept. 6. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.

*Applicable for courses having practical components.

CC-M8 (V)			
Session: 2025-26			
Part A – Introduction			
Subject	Geography		
Semester	VI		
Name of the Course	Maps and Scales		
Course Code	GEO-25/M-608 (V)		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC-M8 (V)		
Level of the course (As per Annexure-I	100-199		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. familiarization with the cartographic techniques 2. understand the elements of map 3. acquaintance with types of maps 4. provide awareness of the uses of maps in geographical studies 5* attain skills in solving practical problems associated with mapping.		
Credits	Theory	Practical	Total
	02	02	04
Contact Hours	02	04	06
Max. Marks: 100 **Internal Assessment Marks: 15 + 15 = 30** **End-Term Exam Marks: 35 + 35 = 70**		**Time:3 hours**	

Part B- Contents of the Course

Instructions for Paper-Setter

Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one marks for each sub part). There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Elements of Maps. 2. Bases of classification of Maps.	11
II	3. Qualitative and Quantitative Maps. 4. Dot Maps and rules to prepare dot maps.	11
III	5. Topographical Maps and their types. 6. Scale: types and their characteristics.	11
IV	7. Plain and Comparative scale 8. Diagonal, Pace and Revolution Scale	12
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 15 marks File record = 10 marks Viva-Voce = 10 marks Practical Record: A project file consisting of 10 exercises on the below mentioned themes: - 1. Plain, Comparative, Diagonal, Pace and Revolution scale (5 exercises). 2. Topographic sheet: Concept of Million, One Degree and Quarter Degree Sheets (3 exercises). 3. Dots and Choropleth maps- distribution and density of population (2 exercises).	30

Suggested Evaluation Methods

Internal Assessment: ➢ **Theory** • Class Participation: **04 marks** • Seminar/presentation/assignment/quiz/class test etc.: **04 marks** • Mid-Term Exam: **07 marks** ➢ **Practicum** • Class Participation: **05** • Seminar/Demonstration/Viva-voce/Lab records etc.:**10 Marks** • Mid-Term Exam: **NIL**	**End-Term Examination:** **35 Marks** **35 Marks**

Part C-Learning Resources
Recommended Books/e-resources/LMS: 1. F.J Monkhouse and H.R. Wilkinson (1972) Maps and Diagrams, Mothuen and Co. Ltd., London 2. L.R. Singh and Raghuvander Singh (1973), Map Work and Practical Geography, Central Book Depot, Allahabad. 3. R.I. Singh and P.K. Dutt (1968), Elements of Practical Geography, Students Friends, Allahabad. 4. Singh Gopal (2004) 4th edition, Map work and Practical Geography, Viksa Publication House.

*Applicable for courses having practical components.