SEMESTER – IV
PRACTICALS – IV
S.Y.B.A.
PRACTICALS IN CARTOGRAPHIC TECHNIQUES

UNIT NO.	COURSE CONTENT	MARKS WEIGHTAGE		TEACHING PERIODS
I	Sampling Techniques: Significance in Research & Data collection vs Census method, Types: i) Random Sampling ii) Systematic Sampling iii) Stratified sampling iv) Cluster Sampling v) Purpose in Sampling.	10		6
II	Statistical Techniques: Calculation of Mean, Median & Mode, Absolute Measures: Range, Quartile Deviation, Mean Deviation, Standard Deviation & Variance.	10		6
III	Field survey: Socio-economic (a report of the field survey to be attached with the journals)	5		

Weightage: 25

INSTRUCTION

1.Every candidate shall complete the laboratory course prescribed by the University entering all the experiment exercises in the laboratory journal, which shall be produced at the time of Practical Examination along with a certificate signed both by the course Teacher and the Head of the Department of Geography of the concerned college to the effect that he/she has completed the prescribed course in a satisfactory manner.
2. A batch shall consist of not more than 20 students.
3.Workload - one lab session of 2 hrs (i.e. 3 lectures per week per batch).
4.The duration of practical exam: 3 hrs carrying 50 marks.
5.Practical examination is to be conducted at the end of Semester prior to the Theory (exam)

REFERENCE

i Gopal Singh : Map works and practical Geography
ii Singh and Kanaujia : Elements of Practical Geography
iii Monkhouse F. J. : Maps and Diagrams
iv Raise: Principles of Cartography
v Mishra R. P. and Ramesh : Fundamentals of Cartography

SEMESTER V

GP: 07: PRACTICALS-V: MAP ANALYSIS, REMOTE SENSING & AERIAL PHOTOGRAPHY

UNIT NO.	COURSE CONTENT	MARKS WEIGHTAGE		No. of Practical
I	A) Topographical Sheets: Introduction/comparison with respect to types, scales, grid reference, signs and symbols and colour schemes of SOI, Ordinal maps of UK / United States Geological Survey Maps (USGS). B) Topographical map interpretation Study and interpretation of Indian topographical maps of survey of India (Series - 1: 50000 or 1: 25000), Four maps of coastal plateau Mountainous and plain or desert landscapes, (detail study of topography, drainage, vegetation, landuse pattern, settlements, transport and communication and other aspects).	40		20
II	A)Basics of Remote Sensing - Definition, nature and scope of remote sensing, Evolution of remote sensing, Application of remote sensing, B)Aerial photography and its components scale, Resolution, stereo model and mosaic, Angle of photograph, Interpretation of Aerial photographs-landuse study (2 photographs to be interpreted).	20 20		20
III	Field work /field trip, Visit to NCAOR, IMD,DST & NIO	20		05

Weightage: Total= 100.

INSTRUCTION

1. Every candidate shall complete the laboratory course prescribed by the University entering all the experiment exercises in the laboratory journal, which shall be produced at the time of Practical Examination along with a certificate signed both by the course Teacher and the Head of the Department of Geography of the concerned college to the effect that he/she has completed the prescribed course in a satisfactory manner.
2. A batch shall consist of not more than 20 students.
3. Workload - one lab session of 2 hrs (i.e. 3 lectures per week per batch).
4. The duration of practical exam: 4 hrs carrying 100 marks.
5. Practical examination is to be conducted at the end of Semester prior to the Theory (exam).

SEMESTER –VI

GP: 10: PRACTICALS-VI: WEATHER MAP INTREPRETATION, SATELLITE IMAGERIES & GIS

UNIT NO.	COURSE CONTENT	MARKS WEIGHTAGE	No. of Practical
I	Weather maps interpretation Study and interpretation of Indian daily weather report, Weather report of four seasons i) Summer seasons ii) S.W Monsoons iii) Retreating Monsoons iv) Winter Season. v) Weather forecasting-Practical aspect. Preparation of weather Station Model.	40	15
II	A) Satellite imageries - Components of EMR-Electro Magnetic Radiation and remote sensing systems, types of satellites. B) Introduction to GIS-definition & development of GIS, Application of GIS, Components of GIS, Hardware & Software. Elements of GIS, Data Models.	20 20	15
III	Study tour, Journal & Viva	20	20

Weightage: 100

INSTRUCTION

1.Every candidate shall complete the laboratory course prescribed by the University entering all the experiment exercises in the laboratory journal, which shall be produced at the time of Practical Examination along with a certificate signed both by the course Teacher and the Head of the Department of Geography of the concerned college to the effect that he/she has completed the prescribed course in a satisfactory manner.

2. A batch shall consist of not more than 20 students.

3.Workload - one lab session of 2 hrs (i.e. 3 lectures per week per batch).

4. The duration of practical exam: 4 hrs carrying 100 marks.

5.Practical examination is to be conducted at the end of Semester prior to the Theory (exam).

6. Duration of Local trip is not more than two days for FY/SY B.A.B.Sc

Duration for long tour for TYBA/B.Sc will be between 3 to 12 days.

The Deputed faculty members will be entitled for the T.A/D.A

References:

1. Ian Haywood, Sarah Cornelius and Steve Carver (2000), An introduction to Geographical Information System, Addision Wesley Longman Ltd., New York.

2. Arnoff, S. (1991), Geographic Information Systems - A management perspective, WDL Publications, Ottawa, Canada.

3. Kang Tsung Chang (2002), Introduction to Geographical Introduction Systems, Tata McGraw Hill Publishing Co. Ltd., New Delhi.

4. Star, J. and J.E. Estes, (1990), Geographical Introduction Systems: An introduction, New Jersey, Prentice Hall.

5. David J. Maguire, Michael F. Goodchild and David W. Rhind ed. (1991), Geographical Introduction Systems, Longman Scientific and Technical Co. Published in the USA with John Wiley and Sons, Inc., New York

6. Pail J. Gibson, (2000), Introductory Remote Sensing, Routledge, New York.

7. Lillesand, T. and Keifer (2000), Introduction to Remote Sensing and Image Interpretation, John Wiley and Sons, Inc., New York.

8. Avery, T.E. and G. L. Berlin (1992), Fundamentals of Remote Sensing and Air Photo Interpretation, McMillan Publishing Co., New York.

9. James B. Campbell (1996), Introduction to Remote Sensing, Taylor & Francis, London.

10. Rampal, K.K. (1999), Handbook of Aerial photography and interpretation, Concept Publishing Co., New Delhi.

11. Jensen, J.R. (2003), Remote Sensing of the Environment, Pearson Education Ltd., Delhi.

12. Joseph, G. (2003), Fundamentals of Remote Sensing, Universities Press, Hyderabad.