SOLAPUR UNIVERSITY, SOLAPUR

FACULTY OF SCIENCE

STRUCTURE & SYLLABUS

M.A./ M.sc. Geography

(Sem. I & II)

Revised Course from June 2010
(Subject to modifications that will be made from time to time)

Submitted By:
Ad-hoc-Board of Studies in Geography
Solapur University, solapur.

Sub.- Geography

M.A./ M.Sc. Part –I ( 1st Year )

Allocation of Periods/ Lectures & Scheme of Examination with title of papers form – June 2006.

Semester-I

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Code No.</th>
<th>Course No.</th>
<th>Title of Paper</th>
<th>Period per Week</th>
<th>Mark</th>
<th>Duration of Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG-1</td>
<td>PG-101</td>
<td></td>
<td>Geomorphology-P-I</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td></td>
<td>PG-102</td>
<td></td>
<td>Climatology –P-I</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td></td>
<td>PG-103</td>
<td></td>
<td>Oceanography &amp; Geohydrology</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td></td>
<td>PG-104</td>
<td></td>
<td>Economic Geography</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td></td>
<td>PG-105</td>
<td></td>
<td>Practical-I Analysis of Socio - Economic data</td>
<td>08 Per Batch</td>
<td>100</td>
<td>5 Hours</td>
</tr>
<tr>
<td></td>
<td>PG-106</td>
<td></td>
<td>Practical –II Analysis of Climatic data</td>
<td>08 Per Batch</td>
<td>100</td>
<td>5 Hours</td>
</tr>
</tbody>
</table>
### Semester- II

<table>
<thead>
<tr>
<th>Paper No. Code No.</th>
<th>Title of Paper</th>
<th>Period per Week</th>
<th>Mark</th>
<th>Duration of Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG-1 PG-107</td>
<td>Geomorphology-P-II</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td>PG-108</td>
<td>Climatology –P-II</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td>PG-109</td>
<td>Regional Geography of India</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td>PG-110</td>
<td>Population Geography</td>
<td>04</td>
<td>100</td>
<td>3 Hours</td>
</tr>
<tr>
<td>PG-111</td>
<td>Practical-III-Study of Landforms, Analysis Techniques</td>
<td>08 Per Batch</td>
<td>100</td>
<td>5 Hours</td>
</tr>
<tr>
<td>PG-112</td>
<td>Practical –II Statistical Techniques</td>
<td>08 Per Batch</td>
<td>100</td>
<td>5 Hours</td>
</tr>
</tbody>
</table>

**Note :**

1. Total Periods/Lectures for each paper shall be 50 per semester.
2. Total Periods/Lectures for each practical paper shall be 128 per semester.
3. Strength of students for each practical batch shall not more than twelve.
4. Submission of certified journal is compulsory without which students will not be allowed to appear practical examination.
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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I ( 1st Year )

Semester –I

Paper -I

Name of the paper : GEOMORPHOLOGY – Paper I

Paper- Code No. – PG-1

Course No.- 101

Lectures/Week-4

Total Lectures-40

Total Marks- 100

Objectives : Help learner to ...

1. It being a course at the interface of geography with the earth, the students have to be sensitized to background knowledge of geology & environmental sciences.

2. To familiarize the students with the need for understanding of Geomorphology with reference to certain fundamental concepts, focusing on the unity of geomorphology in the earth materials & the processes with or without an element of time.

3. A few selected applications of geomorphology to social requirements & quality of environment are dealt with.

Contents of the course:-

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meaning of geomorphology &amp; Development of geomorphic thoughts a brief review. Principles of Uniformitarianism. Contribution of Hutton, Gilbert, Dutton &amp; Davis.</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Constitution of earth’s interior, The theories of isostacy.</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Geosycline- Geosynclinal theory of Kobber. Holms theory of conventional currants.</td>
<td>07</td>
</tr>
</tbody>
</table>

5. Earthquakes, volcanoes & associated features, Distribution effect on Mankind.

References : PG-101 (Geomorphology)

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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –I

Paper -II

Name of the paper : CLIMATOLOGY – Paper I

Paper- Code No. – PG-1 Lectures/Week-4

Course No.- 102 Total Lectures-40

Total Marks- 100

Objectives : Help learner to …

1. Provide an understanding of weather phenomena & dynamics of global climate.

2. Provide information about the generation of climatic information & its applications.

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Atmosphere-Composition &amp; Structure: Insolation &amp; terrestrial heat balance- Distribution of temperature- Vertical- Horizontal.</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Pressure belts &amp; Shifting of them, planetary winds, Mechanism of Monsoon Winds, Local &amp; Variable Winds.</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Humidity &amp; the process of Saturation- Atmospheric Equilibrium, Stability &amp; instability, condensation &amp; precipitation- types.</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Air masses-types-properties, Frontogenesis &amp; Frontolysis, Polar fronts &amp; inter tropical convergence.</td>
<td>08</td>
</tr>
<tr>
<td>5</td>
<td>Atmospheric Disturbances – (i) Tropical cyclones-origin-distribution &amp; weather associated with them (ii) Mid-latitude cyclones- origin, stages of life cycle – Weather associated with them. (iii) Tornadoes, water spouts.</td>
<td>06</td>
</tr>
</tbody>
</table>
References : PG-102 ( Climatology-I )

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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –I

Paper -III

Name of the paper: OCEANOGRAPHY & GEOHYDROLOGY

Paper- Code No. – PG-1

Course No.- 103

Lectures/Week-4

Total Lectures-40

Total Marks- 100

Objectives : Help learner to …

1. To know many facts of oceans such as properties of sea water, water circulation, structure of ocean basin, evolution of oceans, characteristics of marine environments & impact of man on the marine environment.

2. To brought awareness among the students about the finite nature of water. Stress the need for better management of water & conservation of water.

Course contents:

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures / Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ocean basin topography-continental shelf, slope, abyssal plain, ocean deeps, submarine hills, ridges, plateaus, trenches, coral reefs, islands, arcs, ocean deposits.</td>
<td>06</td>
</tr>
<tr>
<td>2.</td>
<td>The heat budget of ocean-Distribution of temperature &amp; salinity</td>
<td>06</td>
</tr>
<tr>
<td>3.</td>
<td>Ocean water- circulation-factors affecting ocean currants, currants in Atlantic, Pacific &amp; Indian Ocean. EL Nino &amp; La Nina.</td>
<td>07</td>
</tr>
<tr>
<td>4.</td>
<td>Man &amp; Oceans: Oceans as a store house of Minerals &amp; Food resources, Hydrological cycle</td>
<td>04</td>
</tr>
</tbody>
</table>

6. Problems related to water use salinity, alkalinity, water logging, water pollution, conservation & planning for development of water resources.

References: PG-103

Solapur University, solapur.

Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –I

Paper-IV

Name of the paper : ECONOMIC GEOGRAPHY

Paper- Code No. – PG-1 Lectures/Week-4
Course No.- 104 Total Lectures-40

Total Marks- 100

Objectives : Help learner to …

1. The economy of the world is changing very fastly in recent times. The changes in primary, secondary & tertiary stage is dynamic in nature. In view of this the objectives of this course are to integrate the various factors of economic development to acquaint the students about dynamic aspects of economic geography.

Course contents :

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Definition &amp; importance of manufacturing- Standard industrial classification- Approaches to industrial geography – Neo classical theory- Behavioral location theory.</td>
<td>08</td>
</tr>
<tr>
<td>4.</td>
<td>Resources- renewable &amp; non renewable- World energy situation- Sources of energy- coal, oil, OPEC-energy</td>
<td>06</td>
</tr>
</tbody>
</table>
5. Models of transportation & transportation cost-
Accessibility & connectivity. Inter regional &
international –Ullman’s tried- complementarily-
intervening opportunity- transferability.

6. Evolution of world trade- Structure & Pattern of trade
after world war second. The trends during post world war
second-Trade organization, GATT, WTO & EEC

References : PG-103

1. Alexander J.W. : (1976) : Economic Geography , Prentice Hall of India,
New Dehli.
India.
India, New Dehli.
Oxford.
7. Redeliff M (1987) : Development of & the environmental crisis, Methuen,
London.
Technical New York.
11. Robinson H & Bamford C. G. ( 1978) : Geography of Transport,
Macdonald & Evans USA.
Solapur University, solapur.

Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –I

GEOGRAPHY-PRACTICAL –I

Name of the paper : ANALYSIS OF SOCIO-ECONOMIC DATA

Paper- Code No. – PG-1

Course No.- 105

Lectures/Batch-5

Total Marks- 100

Objectives : Help learner to …

For understanding various techniques of Analysis of Socio Economic Data.

Course Contents

Techniques for the study of spatial patterns of distribution.

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Practicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Choropleth Maps: Mapping of Socio-economic phenomena.</td>
<td>04</td>
</tr>
<tr>
<td>2.</td>
<td>Dot Method &amp; its relevance to distribution maps.</td>
<td>04</td>
</tr>
<tr>
<td>3.</td>
<td>Flow line charts &amp; maps of transport flow.</td>
<td>03</td>
</tr>
<tr>
<td>4.</td>
<td>Maps with proportional circles</td>
<td>03</td>
</tr>
<tr>
<td>5.</td>
<td>Maps with divided proportional circles.</td>
<td>03</td>
</tr>
<tr>
<td>6.</td>
<td>Maps with proportional spheres.</td>
<td>03</td>
</tr>
<tr>
<td>7.</td>
<td>Compound Pyramids.</td>
<td>04</td>
</tr>
<tr>
<td>8.</td>
<td>Superimposed Pyramids.</td>
<td>04</td>
</tr>
</tbody>
</table>
9. Triangular graph-linear-relationship between three variables 03
10. Cumulative graph. 03
11. Deviational graph 03
12. Scatter diagram 03
13. Journal

Note: 1. Each exercise should be followed by interpretation.
2. For Journal 10 Marks.

References:
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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –I

GEOGRAPHY-PRACTICAL –I

Name of the paper : GEOGRAPHY- PRACTICAL-II

Analysis of Climatic Data

Paper- Code No. – PG-1
Course No.- 106

Total Practical -

Total Marks- 100

Objectives : Help learner to …

1. To understand the method of collection & analysis of the climatic data & interpret the same.

Course Content

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Nature &amp; Sources of climatic data, Indian daily weather reports &amp; their formats. Reproduction of weather details by weather signs &amp; symbols. Reading &amp; interpretation of weather maps of representative seasons. Study of reporting of Weather details from a television. Students are expected to prepare at least two days weather reports from television news. ( each one example ) Analysis of Upper air data- Tephigraph ( tempt-hy-diagram) 2 examples.</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Simple, Compound &amp; Octagonal wind roses (one eg. each) Interpretation of isotherms, isobars &amp; isohyets (1 eg.each), Comfort diagram- Climograph, Hythergraph, Climatograph ( 1 eg. each)</td>
<td>08</td>
</tr>
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</tr>
<tr>
<td>3.</td>
<td>Line graph, presentation of trend graphs, moving averages- semi-averages line, water budget &amp; its graphical analysis (1 eg. each)</td>
<td>08</td>
</tr>
<tr>
<td>4.</td>
<td>Dispersion graphs- Temperature &amp; rainfall dispersion diagram, Central tendency of climatic data, Calculation &amp; Interpretation spatial correlation of climatic variables- Graphical analysis (1 eg. each)</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Ergographs ( crop calender ) 1- example each</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>Journal</td>
<td></td>
</tr>
</tbody>
</table>

Note : For Journal 10 Marks.

**References :**

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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –II

Paper-V

Name of the paper : GEMORPOLOGY –PAPER-II

Paper- Code No. – PG-2    Lectures/Week-4
Course No.- 107       Total Lectures-40

Total Marks- 100

Objectives : Help learner to …

1. Being a course at the interface of Geography with earth, the students have to be sensitized to background knowledge of geology & environmental sciences.

2. Familiarize the students with athe need for understanding of geomorphology with reference to certain fundamental concepts.

3. Few but selected application of Geomorphology to societal requirements & quality of environment are dealt with.

Course Contents

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Evolution of continents &amp; ocean basins continental drift &amp; plate tectonics.</td>
<td>12</td>
</tr>
<tr>
<td>2.</td>
<td>Concept of cycle of erosion by W.M. Devis Dynamic agencies of denudation &amp; their work- Fluvial, Glacial, Marine, Aeolian &amp; Karst.</td>
<td>12</td>
</tr>
<tr>
<td>4.</td>
<td>Slope development- Views of Davis, Penk, Wood &amp; Kings.</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Applied Geomorphology &amp; Recent Trends in Geomorphology, Geomorphic Hazards.</td>
<td>08</td>
</tr>
</tbody>
</table>
References:

Solapur University, solapur.

Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –II

Paper-VI

Name of the paper : CLIMATOLOGY-PAPER-II

Paper- Code No. – PG-2

Course No.- 108

Total Lectures-40

Total Marks- 100

Objectives : Help learner to …

1. Provide understanding weather phenomena, dynamics of global climates & generation of climatic information & their application.

Course contents

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Basis of climatic classification according to Koppen &amp; Thornthwaite- Climatic regions of the world</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Agro climatology- Droughts, Irrigation Scheduling- Agro climatic regions of India.</td>
<td>06</td>
</tr>
<tr>
<td>4.</td>
<td>Paleo Climatology- (i) Climatic changes of the geological past- Causes &amp; effects, (ii) Recent climatic changes – Causes &amp; consequences.</td>
<td>08</td>
</tr>
</tbody>
</table>
References:

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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –II

Paper- VII

Name of the paper : REGIONAL GEOGRAPHY OF INDIA

Paper- Code No. – PG-2 Lectures/Week-4
Course No.- 109 Total Lectures-40

Total Marks- 100

Objectives : Help learner to …

1. Understand India in terms of various regional divisions, their important characteristics. Intra-regional & inter-regional linkages, to analyse the natural & management resource endowments, their conservation & management.

2. Sensitize the students with a development issues & polices & programmes designed for regional development

Course contents

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
</table>
| 1.       | India: A) Location  
B) Physiographic divisions  
C) Climatic types  
D) Drainage system  
E) Types of Nature vegetation  
F) Types of soils & its conservation | 08 |
| 2.       | Agriculture : A) Irrigation – Mode of irrigation (wells, tanks, canals)  
C) Cash crops – sugar cane, cotton.  
D) Agro climatic regions of India | 08 |
| 3.       | Resources & Industries.  
A) Mineral & Power Resources their distribution and production.  
i) Mineral Resources: Iron ore, Bauxite & Manganese  
ii) Power Resources: Coal & Petroleum  
B) Industry: | 08 |
i) Cotton Textile  
ii) Iron & Steel Industry  
iii) Industrial Regions of India

4. Basis of regionalization : geo-political climatic, agro-climatic, physiographic, historical, demographic, socio-economic dimensions of regionalization, case studies

5. Case studies of Meso / Micro level region in detail ( one from each of division )
   A) Natural / Physical: Like suderbans Delta – India – gangatic plain, coastal India.  

References:

1) Center for science & Environment ( 1988 ) state of India’s Environment New Delhi


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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –II

Paper-VIII

Name of the paper : POPULATION GEOGRAPHY

Paper- Code No. – PG-2
Course No.- 110

Lectures/Week-4
Total Lectures-40
Total Marks- 100

Objectives : Help learner to …

1. Understand the complex dimensions of population.
2. Understand & evaluate the association between demographic & socio economic attribute of population & the resultant level of social-well-being & economic development.
3. Understand the rule & relationship between population & environment in an ever changing space time continuum.

Course contents

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
<th>Lectures/Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Population Geography- Definition, Scope &amp; Significance: Source of population data</td>
<td>06</td>
</tr>
<tr>
<td>2.</td>
<td>Factor affecting population distribution &amp; density- Population distribution pattern- World &amp; India. – Population composition- Sex Ratio, Occupation.</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Population problems &amp; policies in India.</td>
<td>06</td>
</tr>
</tbody>
</table>
References:


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Revised Structure of Syllabus

For Class - M.A./ M.Sc. Part –I

Semester –II

Name of the paper : GEOGRAPHY PRACTICAL –III
( STUDY OF LANDFORMS ANALYSIS TECHNIQUES )

Paper- Code No. – PG-2 Lectures/Practical-8
Course No.- 111 Total Marks- 100

Objectives : Help learner to …

1. How to prepare map & how to read the map.
2. How to calculate the slope & analyse them.

Course contents

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
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</thead>
</table>
| 1. | A) Maps- Definitions- Types of maps Indexing of Topographical sheets.  
B) Methods of Representation of Relief:  
  i) pictorial  ii) mathematical. |
| 2. | Identification & mapping of Landforms from Topographical maps ( Each 2 examples )  
  vii) Escarpment,  viii) Cliff,  ix) ‘V’ Shped Valley |
| 3. | A) Indetification & mapping of drainage pattern i) Dendratic,  ii) Trellis,  iii) Radial,  iv) drainage pattern-(2 examples each)  
B) Calculation of Bifurcation Ratio & drainage density. |
| 4. | Identification & mapping of slopes (2examples each) i) Steep,  
| 5. | Profiles (2 examples each) i) Super imposed ii) Projected iii) Composite iv) Transverse v) longitudinal profiles vi) Serial profile. |
Slope- Significance of slopes-determination
A) Gradient- Calculation of gradient (2 examples each)
B) i) Calculation of scale of slope ii) methods of average slope determination.

6. i) G. H. Smith’s Method of Slope Analysis.
ii) Wentworth’s Method
C) Other methods of Slope Analysis.
i) Area height diagram ii) Hypsometric curve

7. Journal

Note: For Journal 10 Marks.

References:

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Revised Structure of Syllabus
For Class - M.A. / M.Sc. Part –I
Semester –II

Name of the paper : GEOGRAPHY-PRACTICAL-IV
(STATISTICAL TECHNIQUES IN GEOGRAPHY)
Paper- Code No. – PG-2 Lectures/Practical-8
Course No.- 112 Total Marks- 100

Objectives : Help learner to …

1. To introduce some basic statistical procedures to the students to be applied to various themes in geography.
2. To indicate the assumptions, limitations & interpretation of these procedures & results.
3. To train the students to handle these statistics towards analyzing the geographical problems.

Course contents

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Definition of statistics; importance &amp; use of statistical techniques in Geography. Frequency Distribution- Histogram, Polygon, Ogive Curve.</td>
</tr>
<tr>
<td>2.</td>
<td>Measures of Central Tendency- Calculation of mean, Median &amp; Mode-Quartile from grouped &amp; ungrouped data.</td>
</tr>
<tr>
<td>3.</td>
<td>Measure of dispersion: Absolute measurements- Mean Deviation, Quartile Deviation &amp; Standard Deviation.</td>
</tr>
<tr>
<td>5.</td>
<td>Correlation Analysis : Kark Pearson’s product moment, co-relation co-efficient Spearman’s rank order.</td>
</tr>
<tr>
<td>6.</td>
<td>Jornal</td>
</tr>
</tbody>
</table>

Note : For Journal 10 Marks.
References:


*************
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FACULTY OF SCIENCE
Nature of Question Paper
M.A./ Msc. Geography

A) Theory

Q.1- Objective type question
One mark each

Q.2.
Q.3.

Q.4. Essay type question any 3 question

Q.5. 20 marks X 3 question

Q.6.

Q.7.- Short Notes ( 4 Notes will be given out of which
Students have to solve any 2 notes.

B) Practical for paper I, II, III, IV, V, VI and VII

3 Question each of 30 marks i.e. 30 marks X 3 question

Journal 10 marks

For Paper VIII scheme of marking is given in the syllabus itself.