



UNIVERSITY OF JAMMU

(NAAC ACCREDITED 'A' GRADE UNIVERSITY)
Baba Sahib Ambedkar Road, Jammu-180006 (J&K)

Academic Section

Email: academicsectionju14@gmail.com

NOTIFICATION

(23/May/Adp./23)

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Academic Council, is pleased to authorize the adoption of the Syllabi and Courses of Study in the subject of **Geography** of Semesters **IIIrd** and **IVth** for **Four Year Under Graduate Programme** under the **Choice Based Credit System** as per **NEP-2020** (as given in the annexure) for the examinations to be held in the years as per the details given below:

| Subject | Semester | for the examination to be held in the years |
|-----------|--------------|---|
| Geography | Semester-III | December 2023, 2024 and 2025 |
| | Semester-IV | May 2024, 2025 and 2026 |

The Syllabi of the courses is available on the University website: www.jammuuniversity.ac.in

Sd/-
DEAN ACADEMIC AFFAIRS

No. F. Acd/II/23/2959-2970

Dated: 16-5-2023

Copy for information and necessary action to:

1. Dean, Faculty of Science
2. Convener, Board of Studies in Geography
3. Sr. P.A. to the Controller of Examinations
4. All members of the Board of Studies
5. Confidential Assistant to the Controller of Examinations
6. I/C Director, Computer Centre, University of Jammu
7. Deputy Registrar/Asst. Registrar (Conf. /Exams. UG/Eval Non-Prof)
- ✓ 8. Incharge, University Website for Uploading of the notification.

Sumit Sharma
Deputy Registrar (Academic)
15/5/23

SS
14/5/23

CS
12/5

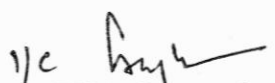
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Semester-III

| S. No. | Course Type | Course No. | Course Title | Credits | Marks | | | | Total Marks |
|--------|--------------------|------------|--|---------|------------------------|----------------------------|--------------------------------|----------------------|-------------|
| | | | | | Theory | | Practical/Tutorial | | |
| | | | | | Mid.Sem 15 marks | End Exam 60 marks | Assess- ment 10 marks | Exam. 15 marks | |
| 1 | Major | UMJGOT301 | Geomorphology | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 2 | Major | UMJGOT302 | Climatology | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 3 | Minor | UMIGOT303 | Climatology | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 4 | Multi-disciplinary | UMDGOT304 | Geography of Jammu, Kashmir and Ladakh | 3 | 15 | 60 | - | - | 75 |
| 5 | Skill Enhancement | USEGOT305 | Surveyor | 2 | 10 | 40 | - | - | 50 |

Semester-IV

| S. No. | Course Type | Course No. | Course Title | Credits | Marks | | | | Total Marks |
|--------|-------------|------------|--|---------|------------------------|----------------------------|--------------------------------|----------------------|-------------|
| | | | | | Theory | | Practical/Tutorial | | |
| | | | | | Mid.Sem 15 marks | End Exam 60 marks | Assess- ment 10 marks | Exam. 15 marks | |
| 1 | Major | UMJGOT401 | Oceanography | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 2 | Major | UMJGOT402 | Resource Geography of Union territory of Jammu and Kashmir | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 3 | Major | UMJGOT403 | Geography of Resources | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 4 | Major | UMJGOT404 | Geography of Agriculture | 3Th+1P | 15 | 60 | 10 | 15 | 100 |
| 5 | Minor | UMIGOT405 | Geography of Union territory of Jammu and Kashmir | 3Th+1P | 15 | 60 | 10 | 15 | 100 |


HOD Geography

University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Major Course

| | |
|------------------------------------|--|
| Course Code: | UMJGOT301 |
| Course Title: | Geomorphology |
| Credits: | 4 (3Th +1P) |
| Total No. of Lecturers (Theory) | 45 |
| Total No. of Lecturers (Practical) | 30 |
| Duration of Exam (Theory) | 3 Hours |
| Duration of Exam (Practical) | 1 ½ Hours |
| Total Marks: | 100 |
| Theory | 75 Marks End Exam: 60 Marks Mid Semester Assessment Test: 15 Marks |
| Practical | 25 Marks Continuous Assessment: 10 Marks Final Examination: 15 Marks |

PART – 1: THEORY

Note: The objective of this course is to introduce the students with the latest concepts in Geomorphology

Unit- I

- 1.1 Definition, nature and scope of Geomorphology
- 1.2 Fundamental concepts of Geomorphology
- 1.3 System Concept in Geomorphology
- 1.4. Methods and approaches to the study of Landforms

Unit- II

- 2.1: Concept of uniformitarianism
- 2.2 Concept of Geological Structure
- 2.3 Geomorphological processes: Concept and types
- 2.4. Geological Time Scale

Unit- III

- 3.1. Tetrahedral Hypothesis
- 3.2 Plate Tectonic Theory
- 3.3 Theory of Isostasy
- 3.4. Theory of Mountain building: Geosyncline theory of Kober

Unit- IV

- 4.1. Fluvial Cycle and Landforms
- 4.2. Glacial Process and Landforms
- 4.3. Karst Process and Landforms
- 4.4. Aeolian Landform and Process

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University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Major Course

Course Code: UMJGOT301

Course Title: Geomorphology

NOTE FOR PAPER SETTING:

End Examination

There will be two sections in the end examination. Section "A" shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all the questions. Each question shall be of three (3) marks. Section "B" shall consist of Eight (8) long answer questions having two questions from each unit. The students are required to attempt four (4) questions selecting one question from each unit. Each question shall carry 12 Marks.

Internal Assessment

Internal Assessment test will be conducted after the completion of fifty percent course of syllabi of theory part. There will be two sections A and B. Section A shall comprises of two questions from first two units and students are required to attempt any one question. Each question shall carry five marks. Section B shall consist of five questions of two marks each and students are required to attempt all the five questions.

Books Recommended

1. Barry R.G AND Chorley R.J, "Atmosphere, Weather and Climate" Routedge, 1998.
2. Critchfield J. Howard, "General Climatology", Pearson Education, Singapore, Fourth Edition.
3. Hyman Andrew, "Climatology: An Atmospheric Science", Callisto Reference, 2016.
4. Lal D.S, "Climatology", Sharda Pustak Bhawan, Allahabad, 2011.
5. Singh Savindra, "Physical Geography", Pravalika Publications, Allahabad, 2013.
6. Trewartha G.T, "An Introduction to Climate", International Students Edition, McGraw Hill, New York, 1980.

PART – 2: PRACTICALS: Representation of Relief Features

Unit – I: Methods for drawing of Relief features

- 1.2. Contour, Hachure, Layer tinting.
- 1.3. Spot height, Bench mark, form lines.

Unit- II: - Representation of Relief Features

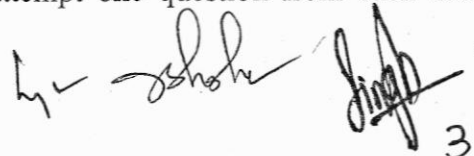
- 2.1. Contour, Hachure, Layer tinting, Spot height, Bench mark, form lines.
- 2.2. Representation of Relief Features with the help of Contours: –V shaped valley, U shaped valley, Conical Hill and Plateau.

NOTE FOR PAPER SETTER:

Practical Examination/ Evaluation

- a. Daily Performance: 05 Marks
- b. Attendance: 05 marks
- c. Written Test: 10 Marks
- d. Practical Record and Viva: 5 Marks

Practical test will be conducted in one session. Question paper will be set from two units. Two questions from each unit will be asked and students are required to attempt one question from each unit. Each question carries 5 marks.


3

University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Major Course

Course Code: UMJGOT301

Course Title: Geomorphology

Books Recommended

1. Mishra R.P. and Romesh A, Fundamentals of Cartography. Mc Millan Co. New Delhi, 1986.
2. Pal, S.K., Statistics for Geoscientists -Techniques and Concept Publishing, New Delhi, 1998.
3. Robinson, A. H. et.al: Elements of Cartography, John Wiley& Sons USA.1995.
4. Sarkar, A., Practical Geography: A Systematic Approach' Logman, Calcutta, 1997.
5. Singh R.L. and Dutt R.K., Element of Practical Geography. Kalyani Publishers, New Delhi, 1979.

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A. S. Shrivastava

University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Major Course

| | |
|------------------------------------|--|
| Course Code: | UMJGOT 302 |
| Course Title: | Climatology |
| Credits: | 4 (3Th +1P) |
| Total No. of Lecturers (Theory) | 45 |
| Total No. of Lecturers (Practical) | 30 |
| Duration of Exam (Theory) | 3 Hours |
| Duration of Exam (Practical) | 1 ½ Hours |
| Total Marks: | 100 |
| Theory | 75 Marks End Exam: 60 Marks Mid Semester Assessment Test: 15 Marks |
| Practical | 25 Marks Continuous Assessment: 10 Marks Final Examination: 15 Marks |

PART – 1: THEORY

Note: The objective of this course is to introduce the latest concepts of Climatology

Unit- I

- 1.1 Climatology: Definition and Elements of Weather and Climate.
- 1.2 Composition and Structure of Atmosphere.
- 1.3 Factors affecting Distribution of Insolation.
- 1.4. Global Heat Budget.

Unit- II

- 2.1 Atmospheric Temperature and Pressure: Vertical and Horizontal Distribution
- 2.2 Winds: Causes and Types of Winds.
- 2.3 Humidity: Concept and Types
- 2.4. Precipitation and formation of Clouds.

Unit- III

- 3.1 Air Masses: Meaning, Characteristics and Classification.
- 3.2 Fronts: Meaning, types and Classification
- 3.3 Tropical Cyclones: Causes and Distribution
- 3.4. Temperate Cyclone: Causes and Distribution

Unit- IV

- 4.1. Basis of Climatic Classification.
- 4.2. Koppen's Climatic Classification.
- 4.3. Thornthwaite's Climatic Classification
- 4.4. Trewartha's Climatic Classification

University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Major Course

Course Code: UMJGOT 302

Course Title: Climatology

NOTE FOR PAPER SETTING:

End Examination

There will be two sections in the end examination. Section "A" shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all the questions. Each question shall be of three (3) marks. Section "B" shall consist of Eight (8) long answer questions having two questions from each unit. The students are required to attempt four (4) questions selecting one question from each unit. Each question shall carry 12 Marks.

Internal Assessment

Internal Assessment test will be conducted after the completion of fifty percent course of syllabi of theory part. There will be two sections A and B. Section A shall comprises of two questions from first two units and students are required to attempt any one question. Each question shall carry five marks. Section B shall consist of five questions of two marks each and students are required to attempt all the five questions.

Books Recommended

1. Barry R.G AND Chorley R.J, "Atmosphere, Weather and Climate" Routedge, 1998.
2. Critchfield J. Howard, "General Climatology", Pearson Education, Singapore, Fourth Edition.
3. Hyman Andrew, "Climatology: An Atmospheric Science", Callisto Reference, 2016.
4. Lal D.S, "Climatology", Sharda Pustak Bhawan, Allahabad, 2011.
5. Singh Savindra, "Physical Geography", Pravalika Publications, Allahabad, 2013.
6. Trewartha G.T, "An Introduction to Climate", International Students Edition, McGraw Hill, New York, 1980.

PART – 2: PRACTICALS: Representation of Climatic Data

Unit – I: Introduction to Climatic Data

- 1.1. Source and types of climatic Data
- 1.2. Difference between Graph, Diagram and Map

Unit- II: - Representation of Climatic Data

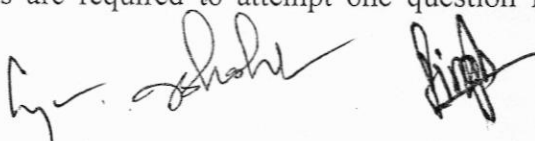
- 2.1. **Line graph:** simple line graph, polygraph or multiple line graph, and combined line graph or bar graph
- 2.2. Climograph and Hythergraph

NOTE FOR PAPER SETTER:

Practical Examination/ Evaluation

- | | |
|-------------------------------|----------|
| a. Daily Performance: | 05 Marks |
| b. Attendance: | 05 marks |
| c. Written Test: | 10 Marks |
| d. Practical record and Viva: | 5 Marks |

Practical test will be conducted in one session. Question paper will be set from two units. Two questions from each unit will be asked and students are required to attempt one question from each unit. Each question carries 5 marks.



University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Major Course

Course Code: UMJGOT 302

Course Title: Climatology

Books Recommended

1. Mishra R.P. and Romesh A, Fundamentals of Cartography. Mc Millan Co. New Delhi, 1986.
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3. Robinson, A.H. et.al: Elements of Cartography, John Wiley & Sons USA. 1995.
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University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Minor Course

| | |
|------------------------------------|--|
| Course Code: | UMJGOT 303 |
| Course Title: | Climatology |
| Credits: | 4 (3Th +1P) |
| Total No. of Lecturers (Theory) | 45 |
| Total No. of Lecturers (Practical) | 30 |
| Duration of Exam (Theory) | 3 Hours |
| Duration of Exam (Practical) | 1 ½ Hours |
| Total Marks: | 100 |
| Theory | 75 Marks End Exam: 60 Marks Mid Semester Assessment Test: 15 Marks |
| Practical | 25 Marks Continuous Assessment: 10 Marks Final Examination: 15 Marks |

PART – 1: THEORY

Note: The objective of this course is to introduce the latest concepts of Climatology

Unit- I

- 1.1 Climatology: Definition and Elements of Weather and Climate.
- 1.2 Composition and Structure of Atmosphere.
- 1.3 Factors affecting Distribution of Insolation.
- 1.4. Global Heat Budget.

Unit- II

- 2.1 Atmospheric Temperature and Pressure: Vertical and Horizontal Distribution
- 2.2 Winds: Causes and Types of Winds.
- 2.3 Humidity: Concept and Types
- 2.4. Precipitation and formation of Clouds.

Unit- III

- 3.1 Air Masses: Meaning, Characteristics and Classification.
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- 3.3 Tropical Cyclones: Causes and Distribution
- 3.4. Temperate Cyclone: Causes and Distribution

Unit- IV

- 4.1. Basis of Climatic Classification.
- 4.2. Koppen's Climatic Classification.
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- 4.4. Trewartha's Climatic Classification

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University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Minor Course

Course Code: UMJGOT 303

Course Title: Climatology

NOTE FOR PAPER SETTING:

End Examination

There will be two sections in the end examination. Section "A" shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all the questions. Each question shall be of three (3) marks. Section "B" shall consist of Eight (8) long answer questions having two questions from each unit. The students are required to attempt four (4) questions selecting one question from each unit. Each question shall carry 12 Marks.

Internal Assessment

Internal Assessment test will be conducted after the completion of fifty percent course of syllabi of theory part. There will be two sections A and B. Section A shall comprises of two questions from first two units and students are required to attempt any one question. Each question shall carry five marks. Section B shall consist of five questions of two marks each and students are required to attempt all the five questions.

Books Recommended

1. Barry R.G AND Chorley R.J, "Atmosphere, Weather and Climate" Routedge, 1998.
2. Critchfield J. Howard, "General Climatology", Pearson Education, Singapore, Fourth Edition.
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6. Trewartha G.T, "An Introduction to Climate", International Students Edition, McGraw Hill, New York, 1980.

PART – 2: PRACTICALS: Representation of Climatic Data

Unit - I: Introduction to Climatic Data

- 1.1. Source and types of climatic Data
- 1.2. Different between Graph, Diagram and Map

Unit- II: - Representation of Climatic Data

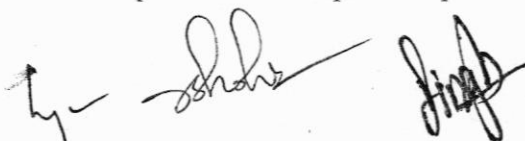
- 2.1. **Line graph:** simple line graph, polygraph or multiple line graph, and combined line graph or bar graph
- 2.2. Climograph and Hythergraph

NOTE FOR PAPER SETTER:

Practical Examination/ Evaluation

- | | |
|-------------------------------|----------|
| a. Daily Performance: | 05 Marks |
| b. Attendance: | 05 marks |
| c. Written Test: | 10 Marks |
| d. Practical record and Viva: | 5 Marks |

Practical test will be conducted in one session. Question paper will be set from two units. Two questions from each unit will be asked and students are required to attempt one question from each unit. Each question carries 5 marks.



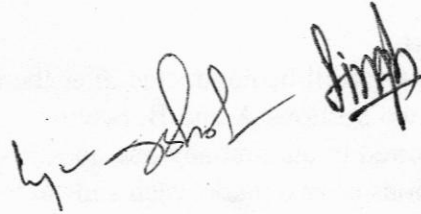
University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024, 25)
Minor Course

Course Title: Climatology

Course Code: UMJGOT 303

Books Recommended

1. Mishra R.P. and Romesh A, Fundamentals of Cartography. Mc Millan Co. New Delhi, 1986.
2. Pal, S.K., Statistics for Geoscientists -Techniques and Concept Publishing, New Delhi, 1998.
3. Robinson,A.H. et.al: Elements of Cartography, John Wiley& Sons USA.1995.
4. Sarkar, A., Practical Geography: A Systematic Approach' Logman, Calcutta, 1997.
5. Singh R.L. and Dutt R.K., Element of Practical Geography. Kalyani Publishers, New Delhi, 1979.



University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024 and 2025)
Multidisciplinary Course

| | |
|-----------------------------|--|
| Course Code: | UMDGOT304 |
| Title: | Geography of Jammu, Kashmir and Ladakh |
| Credits: | 3 |
| Total No. of Lecturers | 45 |
| Duration of Exam (Theory): | 3 Hours |
| Total Marks: | 75 |
| End Semester Exam (Theory): | End Exam: 60 Marks Mid Semester Assessment Test: 15 Marks |

Note: The objective of this course is to introduce the students with the Geography of Jammu, Kashmir and Ladakh

Unit – I

- 1.1. J&K in the context of India.
- 1.2. Physical Divisions.
- 1.3. Climate.
- 1.4. Drainage

Unit – II

- 2.1. Natural Vegetation and Soils.
- 2.2. Production of Distribution of Wheat, Rice, Maize.
- 2.3. Horticulture and Sericulture.
- 2.4. Livestock and Fisheries.

Unit - III

- 3.1. Mineral Resources – Coal and Gypsum.
- 3.2. Hydel Power Resources.
- 3.3. Forest Based, and Agro Based Industries.
- 3.4. Handicraft and Handlooms.

Unit - IV

- 4.1. Population – Growth, Distribution and Density.
- 4.2. Sex Ratio and Literacy.
- 4.3. Migration and Transhumanship and Urbanization .
- 4.4. Major Ethnic Groups.

NOTE FOR PAPER SETTING:

End Examination

There will be two sections in the end examination. Section “A” shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all the questions. Each question shall be of three (3) marks. Section “B” shall consist of Eight (8) long answer questions having two questions from each unit. The students are required to attempt four (4) questions selecting one question from each unit. Each question shall carry 12 Marks.



University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III

(Examination to be held in December 2023, 2024 and 2025)

Multidisciplinary Course

Course Code: UMDGOT304

Title: Geography of Jammu, Kashmir and Ladakh

Internal Assessment

Internal Assessment test will be conducted after the completion of fifty percent course of syllabi of theory part. There will be two sections A and B. Section A shall comprises of two questions from first two units and students are required to attempt any one question. Each question shall carry five marks. Section B shall consist of five questions of two marks each and students are required to attempt all the five questions.

Books Recommended

1. Dhar Vidya: Jammu and Kashmir Past and Present' Saksham Jammu 2005.
2. Drew Frederic, 1971: Jammu & Kashmir Territories: Geographical Account, Oriental Publishers, Delhi.
3. Frank Young husband: Sir Kashmir, London.
4. G. B. Singh: Encyclopedia of Jammu.
5. Itoo J (2004) Jammu and Kashmir at Glance.
6. Jasbir Singh: The Economy of Jammu & Kashmir, R.K. Anand Co. Jammu, 2004.
7. K. Warikoo (1976), Jammu, Kashmir & Ladakh: A Classified Bibliography.
8. M.A. Steln (1982), Kalhana's Raj Tarangani, The First chronic Kashmir Bombay.
9. Maiid Hussain, A Geography of Jammu & Kashmir. Publishing House New Delhi, 1985.
10. Rayaz, Khalid: 2011: Resource Geography of Jammu and Kashmir: Saksham Books International, Jammu.
11. Somnath Dhar (1977), Jammu & Kashmir, NBT, Srinagar' Publishers.



University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III
(Examination to be held in December 2023, 2024 and 25)
Skill Enhancement Course

| | |
|----------------------------|---|
| Course Code: | USEGOT305 |
| Course Title: | Surveyor |
| Credits: | 2 |
| Total numbers of lecturers | 30 |
| Total Marks: | 50 |
| Duration End Semester Exam | 2 ^{1/2} Hours |
| End Semester Exam | 50 Marks End Exam: 40 Marks Mid Semester Assessment Test : 10 Marks |

Unit-I

- 1.1. Definition of Survey and Surveying.
- 1.2. Need and importance of Survey in Geography.
- 1.3. Classification of Survey.
- 1.4. Methods of Survey.

Unit-II

- 2.1. Methods and principal of chain and tape Survey.
- 2.2. Essential requirement for chain and tape Survey.
- 2.3. Techniques for preparation of field book for chain and tape Survey.
- 2.4. Survey and its depiction on flat sheet of paper.

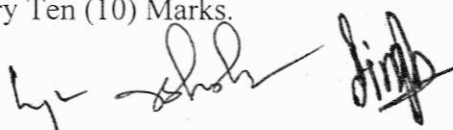
Unit-III

- 3.1. Methods and principal of Plain Table Survey.
- 3.2. Essential requirement for Plain Table Survey.
- 3.3. Techniques for preparation of field book for Plain Table Survey.
- 3.4. Survey and its depiction on flat sheet of paper

NOTE FOR PAPER SETTING/ MODE OF EXAMINATION:

End Examination

There will be two sections in the end examination. Section "A" shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all the questions. Each question shall be of two and half (2^{1/2}) marks. Section "B" shall consist of Six (6) long answer questions having two questions from each unit. The students are required to attempt Three (3) questions selecting one question from each unit. Each question shall carry Ten (10) Marks.



University of Jammu
Syllabi of Geography at FYUGP under CBCS as per NEP – 2020
Semester- III

(Examination to be held in December 2023, 2024 and 25)

Skill Enhancement Course

Course Code: USEGOT305

Course Title: Surveyor

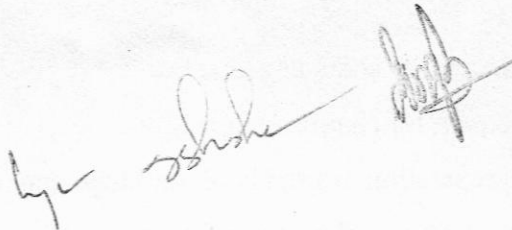
Internal Assessment Test

Internal Assessment test will be conducted after the completion of fifty percent course of syllabi of theory part. The question paper for internal assessment test shall consist of five questions of two marks each and students are required to attempt all the five questions.

Books Recommended

1. Gupta K.K. and Tyagi, V. C., 1992: *Working with Map*, Survey of India, DST, New Delhi.
2. Mishra R.P. and Ramesh, A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
3. Robinson A. H., 2009: *Elements of Cartography*, John Wiley and Sons, New York.

Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.



University of Jammu
Syllabus of Geography at FYUGP under CBCS as per NEP – 2020
Semester- IV
(Examination to be held in May/June 2024, 2025 and 2026)
Major Course

| | |
|------------------------------------|--|
| Course Code: | UMJGOT401 |
| Course Title: | Oceanography |
| Credits: | 4 (3Th +1P) |
| Total No. of Lecturers (Theory) | 45 |
| Total No. of Lecturers (Practical) | 30 |
| Duration of Exam (Theory) | 3 Hours |
| Duration of Exam (Practical) | 1 ½ Hours |
| Total Marks: | 100 |
| Theory | 75 Marks End Exam: 60 Marks Mid Semester Assessment Test: 15 Marks |
| Practical | 25 Marks Continuous Assessment: 10 Marks Final Examination: 15 Marks |

Note: The objective of this course is to introduce the students with the latest concepts in the field of oceanography

PART – 1: THEORY

Unit- I

- 1.1. Definitions and scope of Oceanography.
- 1.2. Development of Oceanography.
- 1.3. Topography of the Ocean Basins.
- 1.4. Temperature of the Oceans: Vertical and Horizontal

Unit- II

- 2.1. Salinity - causes and distribution salinity in ocean
- 2.2. Waves - definition, origin and types
- 2.3. Tsunami waves: causes and impact
- 2.4. Tides - definition, origin and types

Unit- III

- 3.1. Theories of ocean tides
- 3.2. Ocean current: definition and causes
- 3.3. Indian ocean currents: Types and Circulation
- 3.4. Atlantic ocean currents: Types and Circulation

Unit- IV

- 4.1. Oceans as resource.
- 4.2. Coral reefs: origin and type coral reefs.
- 4.3. Theories of origin of coral reefs and atolls.
- 4.4. Ocean deposits: Types and Classification.

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Major Course

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Course Title: Oceanography

NOTE FOR PAPER SETTING

End Examination

There will be two sections in the end examination. Section "A" shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all the questions. Each question shall be of three (3) marks. Section "B" shall consist of Eight (8) long answer questions having two questions from each unit. The students are required to attempt four (4) questions selecting one question from each unit. Each question shall carry 12 Marks.

Internal Assessment

Internal Assessment test will be conducted after the completion of fifty percent course of syllabi of theory part. There will be two sections A and B. Section A shall comprises of two questions from first two units and students are required to attempt any one question. Each question shall carry five marks. Section B shall consist of five questions of two marks each and students are required to attempt all the five questions.

Books Recommended

1. Lal, D.S. 'Oceanography', Sharda Pustak Bhawan, Allahabad, U.P, 2007.
2. Pinet, P.R. 'Invitation to Oceanography', Jones and Barlett Publishers, USA, 2000.
3. Sharma, R.C and Vatal, M. 'Oceanography of Geographers', Chaitanya Publishing House, Allahabad, U.P, 2001
4. Sidharta, K. 'Oceanography', Kalyana Publications, New Delhi, 1999.
5. Singh, Savindra. 'Oceanography', Pravalika Publications, Allahabad, U.P, 2019.
6. Singh, Savindra. 'Physical Geography', Pravalika Publications, Allahabad, U.P, 2021.

PART – 2: PRACTICALS: Methods of Map Making

Unit- I

- 1.1. Meaning, definition and Essential Components of Maps.
- 1.2. Classification and Uses of Maps

Unit- II

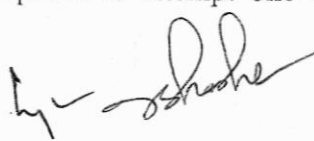

- 2.1. Types of Cartographic Symbols: - Point, Line & Area Symbols (with examples).
- 2.2. Cartographic Diagrams:-Pie-diagram, Proportional Circle, Concentric circle, Sphere and Pyramid.

NOTE FOR PAPER SETTER:

Practical Examination/ Evaluation

- | | |
|-------------------------------|----------|
| e. Daily Performance: | 05 Marks |
| f. Attendance: | 05 marks |
| g. Written Test: | 10 Marks |
| h. Practical record and Viva: | 5 Marks |

Practical test will be conducted in one session. Question paper will be set from two units. Two questions from each unit will be asked and students are required to attempt one question from each unit. Each question carries 5 marks.

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Course Code: UMJGOT401

Course Title: Oceanography

Books Recommended

1. Mishra R.P. and Romesh A, Fundamentals of Cartography. Mc Millan Co. New Delhi, 1986.
2. Pal, S.K., Statistics for Geoscientists -Techniques and Concept Publishing, New Delhi, 1998.
3. Robinson,A.H. et.al: Elements of Cartography, John Wiley& Sons USA.1995.
4. Sarkar, A., Practical Geography: A Systematic Approach Longman, Calcutta, 1997.
5. Singh R.L. and Dutt R.K., Element of Practical Geography. Kalyani Publishers, New Delhi, 1979.

Dr. R. L. Singh

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Semester- IV
(Examination to be held in May/June 2024, 2025 and 2026)
Major Course

| | |
|------------------------------------|--|
| Course Code: | UMJGOT402 |
| Course Title: | Resource Geography of Union territory of Jammu and Kashmir |
| Credits: | 4 (3Th +1P) |
| Total No. of Lecturers (Theory) | 45 |
| Total No. of Lecturers (Practical) | 30 |
| Duration of Exam (Theory) | 3 Hours |
| Duration of Exam (Practical) | 1 ½ Hours |
| Total Marks: | 100 |
| Theory | 75 Marks End Exam: 60 Marks Mid Semester Assessment Test: 15 Marks |
| Practical | 25 Marks Continuous Assessment: 10 Marks Final Examination: 15 Marks |

Note: The objective of this course is to provide the knowledge of resource potential of union territory of Jammu and Kashmir.

Unit – I

- 1.5. J&K in the context of India.
- 1.6. Physical Divisions.
- 1.7. Climate.
- 1.8. Drainage.

Unit – II

- 2.1. Natural Vegetation and Soils.
- 2.2. Production of Distribution of Wheat, Rice, Maize.
- 2.3. Horticulture and Sericulture.
- 2.4. Livestock and Fisheries

Unit - III

- 3.1. Mineral Resources – Coal and Gypsum.
- 3.2. Hydel Power Resources.
- 3.3. Forest Based, and Agro Based Industries.
- 3.4. Handicraft and Handlooms

Unit - IV

- 4.1. Population – Growth, Distribution and Density.
- 4.2. Sex Ratio and Literacy.
- 4.3. Migration and Transhumanship and Urbanization.
- 4.4. Major Ethnic Groups of JKUT

