KARNATAK UNIVERSITY, DHARWAD
ACADEMIC (S&T) SECTION
ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಧಾರವಾಡ
ವಿದ್ಯಾಮಂಡಳ (ಎಸ್&ಟಿ) ವಿಭಾಗ

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NAAC Accredited
'A' Grade 2014

website: kud.ac.in

No.KU/Aca(S&T)/RPH-394A/2021-22/1155 Date: 29 OCT 2021

ಅಧಿಸೂಚನೆ

ವಿಷಯ: 2021–22ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಎಲ್ಲ ಸ್ನಾತಕ ಕೋರ್ಸಗಳಿಗೆ 1 ಮತ್ತು 2ನೇ ಸೆಮೆಸ್ಟರ್ NEP-2020 ಮಾದರಿಯ ಪಠ್ಯಕ್ರಮವನ್ನು ಅಳವಡಿಸಿರುವ ಕುರಿತು.

ಉಲ್ಲೇಖ: 1. ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿಗಳು(ವಿಶ್ವವಿದ್ಯಾಲಯ 1) ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ ಇವರ ಆದೇಶ ಸಂಖ್ಯೆ: ಇಡಿ 260 ಯುಎನ್ಇ 2019(ಭಾಗ–1), ದಿ:7.8.2021.
2. ವಿಶೇಷ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ನಿರ್ಣಯ ದಿನಾಂಕ: 19.08.2021
3. ಈ ಕಚೇರಿ ಸುತ್ತೋಲೆ ಸಂ.No. KU/Aca(S&T)/RPH-394A/2021-22/18 ದಿ:21.08.2021.
4. ಸರ್ಕಾರಿ ಆದೇಶ ಸಂ ಇಡಿ 260 ಯುಎನ್ಇ 2019(ಭಾಗ–1),ಬೆಂಗಳೂರು ದಿ. 15.9.2021.
5. ಎಲ್ಲ ಅಭ್ಯಾಸಸೂಚಿ ಮಂಡಳಿ ಸಭೆಗಳ ನಡವಳಿಗಳು
6. ಎಲ್ಲ ನಿಖಾಯಗಳ ಸಭೆಗಳು ಜರುಗಿದ ದಿನಾಂಕ: 24,25–09–2021.
7. ವಿಶೇಷ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ನಿರ್ಣಯ ಸಂಖ್ಯೆ: 01 ದಿನಾಂಕ: 28.9.2021.
8. ಈ ಕಚೇರಿ ಸುತ್ತೋಲೆ ಸಂ.No. KU/Aca(S&T)/RPH-394A/2021-22/954 ದಿ:30.09.2021.
9. ಎಲ್ಲ ನಿಖಾಯದ ಡೀನರು / ಸಂಪನ್ಮೂಲ ತಜ್ಞರ ಸಭೆ ದಿನಾಂಕ 21.10.2021.
10. ಎಲ್ಲ ಸ್ನಾತಕ ಅಭ್ಯಾಸಸೂಚಿ ಮಂಡಳಿ ಅಧ್ಯಕ್ಷರುಗಳ ಸಭೆ ದಿನಾಂಕ 22.10.2021.
11. ವಿಶೇಷ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ನಿರ್ಣಯ ಸಂಖ್ಯೆ: 01 ದಿನಾಂಕ: 27.10.2021.
12. ಮಾನ್ಯ ಕುಲಪತಿಗಳ ಆದೇಶ ದಿನಾಂಕ: 29-10-2021

ಮೇಲ್ಕಾಣಿಸಿದ ವಿಷಯ ಹಾಗೂ ಉಲ್ಲೇಖಗಳನ್ವಯ ಮಾನ್ಯ ಕುಲಪತಿಗಳ ಆದೇಶದ ಮೇರೆಗೆ, 2021–22ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಅನ್ವಯವಾಗುವಂತೆ, ಎಲ್ಲ B.A./ BPA (Music)/BVA/ BTTM/ BSW/ B.Sc./B.Sc. Pulp & Paper Science/ B.Sc. (H.M)/ BCA/ B.A.S.L.P./ B.Com/ B.Com (CS)/ & BBA ಸ್ನಾತಕ ಕೋರ್ಸಗಳ 1 ಮತ್ತು 2ನೇ ಸೆಮೆಸ್ಟರ್‌ಗಳಿಗೆ NEP-2020 ರಂತೆ ವಿಶೇಷ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ಅನುಮೊದಿತ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಈಗಾಗಲೇ ಪ್ರಕಟಪಡಿಸಿದ್ದು, ಮುಂದೆ ದಿನಾಂಕ 04.10.2021 ವರೆಗೆ ಸರಕಾರವು ಕಾಲಕಾಲಕ್ಕೆ ನೀಡಿದ ನಿರ್ದೇಶನಗಳನ್ನು ಅಳವಡಿಸಿಕೊಂಡು ದಿನಾಂಕ 27.10.2021 ರಂದು ಜರುಗಿದ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯಲ್ಲಿ ಅನುಮೊದನೆ ಪಡೆದು ಕ.ವಿ.ವಿ. ಅಂತರ್ಜಾಲ www.kud.ac.in ದಲ್ಲಿ ಭಿತ್ತರಿಸಲಾಗಿದೆ. ಸದರ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಕ.ವಿ.ವಿ. ಅಂತರ್ಜಾಲದಿಂದ ಡೌನಲೋಡ ಮಾಡಿಕೊಳ್ಳಲು ಸೂಚಿಸುತ್ತ ವಿದ್ಯಾರ್ಥಿಗಳ ಹಾಗೂ ಸಂಬಂಧಿಸಿದ ಎಲ್ಲ ಬೋಧಕರ ಗಮನಕ್ಕೆ ತಂದು ಅದರಂತೆ ಕಾರ್ಯಪ್ರವೃತ್ತರಾಗಲು ಕವಿವಿ ಅಧೀನದ/ಸಂಲಗ್ನ ಮಹಾವಿದ್ಯಾಲಯಗಳ ಪ್ರಾಚಾರ್ಯರುಗಳಿಗೆ ಸೂಚಿಸಲಾಗಿದೆ.

29/10/21
ಕುಲಸಚಿವರು.

ಅಡಕ: ಮೇಲಿನಂತೆ

ಗೆ,

ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯದ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಬರುವ ಎಲ್ಲ ಅಧೀನ ಹಾಗೂ ಸಂಲಗ್ನ ಮಹಾವಿದ್ಯಾಲಯಗಳ ಪ್ರಾಚಾರ್ಯರುಗಳಿಗೆ. (ಕ.ವಿ.ವಿ. ಅಂತರ್ಜಾಲ ಹಾಗೂ ಮಿಂಚಂಚೆ ಮೂಲಕ ಬಿತ್ತರಿಸಲಾಗುವುದು)

ಪ್ರತಿ:

1. ಕುಲಪತಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
2. ಕುಲಸಚಿವರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
3. ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ) ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
4. ಅಧೀಕ್ಷಕರು, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ / ಗೌಪ್ಯ / ಜಿ.ಎ.ಡಿ. / ವಿದ್ಯಾಂಡಳ (ಪಿ.ಜಿ.ಪಿಎಚ್.ಡಿ) ವಿಭಾಗ, ಸಂಬಂಧಿಸಿದ ಕೋರ್ಸುಗಳ ವಿಭಾಗಗಳು ಪರೀಕ್ಷಾ ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
5. ನಿರ್ದೇಶಕರು, ಕಾಲೇಜು ಅಭಿವೃದ್ಧಿ / ವಿದ್ಯಾರ್ಥಿ ಕಲ್ಯಾಣ ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.

Practical Subject

KARNATAK UNIVERSITY, DHARWAD

04 - Year B.A./B.Sc. (Hons.) Program

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SYLLABUS

Subject: GEOGRAPHY

[Effective from 2021-22]

DISCIPLINE SPECIFIC CORE COURSE (DSCC) FOR SEM I & II,

OPEN ELECTIVE COURSE (OEC) FOR SEM I & II and

SKILL ENHANCEMENT COURSE (SEC) FOR SEM I

AS PER N E P - 2020

Karnatak University, Dharwad

Four Years Under Graduate Program in Geography for B.A / B.Sc. (Hons.)

Effective from 2021-22

Sem	Type of Course	Theory/ Practical	Instruction hour per week	Total hours of Syllabus / Sem	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks	Credits
I	DSCC 1	Theory	04hrs	56	02 hrs	40	60	100	04
		Practical	04 hrs	52	03 hrs	25	25	50	02
	OEC-1	Theory	03 hrs	42	02 hrs	40	60	100	03
	*SEC-1	Practical	03 hrs	30	02 hrs	25	25	50	02
II	DSCC2	Theory	04 hrs	56	02 hrs	40	60	100	04
		Practical	04 hrs	52	03 hrs	25	25	50	02
	OEC-2	Theory	03 hrs	42	02 hrs	40	60	100	03
	Details of the other Semesters will be given later								

*** Student can opt digital fluency as SEC or the SEC of his/ her any one DSCC selected**

Name of Course (Subject): Geography

Programme Specific Outcome (PSO):

On completion of the 03/ 04 years Degree in Geography students will be able to:

PSO 1 : Enrich the knowledge of understanding the relevant terms and concept of geography including definitions.

PSO 2 : Enhanced the capability to explain the relevant principles, theories and models in geography.

PSO 3 : Conceptual clarity about the relationship between the man and environment to understand the process, factors and impact.

PSO 4 : Know the complex and interactive nature of physical and human environments and changing Process.

PSO 5 : Enhance the skills in Map Making and Cartographical Principles.

PSO 6 : Use of Geographical data to identify the trends and patterns and demonstrate through the maps of spatio-temporal changes.

PSO 7 : Demonstrate the skill of analysis of geographical information, evidences and cause and effects.

PSO 8 : Trace the trends and process of changes of physical and cultural aspects.

PSO 9 : Develop the consciousness of relevance of geography to understand and solving the contemporary environmental issues.

PSO 10: Exposer in the handling the spatial and non-spatial data through Remote Sensing and GIS.

B.A / B.Sc. Semester – I

Subject: Geography
Discipline Specific Course (DSC)

The course of B.A/ B. Sc in I semester has two papers (Theory Paper –I for 04 credits & Practical Paper -II for 2 credits) for 06 credits: Both the papers are compulsory. Details of the courses are as under.

Course No.-1 (Theory)

Course No.	Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
Course-01	DSCC	Theory	04	04	56 hrs	2hrs	40	60	100

Course No.1 (Theory): Title of the Course (Theory): Principles of Geomorphology

Course Outcome (CO):

After completion of course (Theory), students will be able to:

CO 1 : To Define the Geomorphology and to explain the essential principles of it.

CO 2 : To outline the mechanism of dynamic nature of the Earth's surface and interior of the Earth.

CO 3 : To illustrate and explain the forces affecting the crust of the earth and its effect on it.

CO 4 : To understand the conceptual and dynamic aspects of landform development

CO 5 : To understand the principles of geomorphology thoroughly and explain them**.**

Syllabus- Course 1(Theory): Title : Principles of Geomorphology	**Total Hrs: 56**
Unit-I : Introduction of Geomorphology	**14 hrs**
Introduction to geography: physical and human geography. Introduction to Geomorphology: meaning, nature, development and scope. Principles of Geomorphology and Geological Time Scale. Distribution of continents and oceans.	
Unit-II : Systems and Cycles of the Solid Earth	**14 hrs**
Internal structure of the earth. Alfred Wegener's Continental Drift. Theory of Isostacy: Views of Pratt and Airy Convectional Current Theory and Concept of Sea floor Spreading. Theory of Plate Tectonics: plate boundary, subduction. Case Studies: Volcano, Earthquake: reporting of latest incidents.	

Unit-III: The Dynamics of Earth	**14 hrs**
Earth's Movements: Endogenetic and Exogenetic forces,Sudden and Diastrophic movements- Epeirogenetic and Orogenetic Movements- Process of folding and faulting. Vulcanicity and earthquake Rocks: Characteristics, types, importance and rock cycle. Weathering: meaning, types and controlling factors. Mass Movement: meaning, controlling factors, types-landslides and rock-falls.	
Unit-IV: Evolution of Landforms	**14 hrs**
Landforms: meaning, types and factors controlling landforms development Slope development: concept and types. Concept of Cycle of Erosion–W.M. Davis and W. Penck. Agents of Denudation: river; drainage patterns, groundwater, Sea waves, Wind and Glaciers and resultant landforms. Application of geomorphology: in India and Karnataka (Regional planning, Urban planning and transportation, Mining, Hazard management, Agriculture and Environmental management).	

Books recommended:

Text Books:

1. Ahmed E. (1985) Geomorphology, Kalyani Publishers, New Delhi.
2. Bloom A.L. (1978) Geomorphology: A Systematic Analysis of Late Cenozoic Landforms Prentice – Hall of India, New Delhi.
3. P Mallappa, Physical Geography (Kannada Version)
4. Ranganath Principles of Physical Geography (Kannada Version)
5. Nanjannavar S S: Physical Geography (Kannada Version)
6. Hugar M R Physical Geography part-1(Kannada Version)
7. Goudar M B, Physical Geography (Kannada Version)
8. Kolhapure and S S Nanjan, Physical Geography (Kannada Version)

References:

9. Brunsden D. (1985) Geomorphology in the Service of Man: The Future of Geography, Methnen, U.K.
10. Chorley, R.J., Schumm, S. A. and Sugden, D.E. 1984: Geomorphology, Methuen, London
11. Cooke, R.U. and Warren, 1973: Geomorphology in Deserts, Batsford, London
12. Dayal, P. 1996: Textbook of Geomorphology, Shukla Book Depot ,Patna.
13. Goudie Anrew et.al. (1981) Geomorphological Techniques, George Allen &Unwin, London.
14. Homes A. (1965) Principles of Physical Geology, 3rd Edition, ELBSS Edn.
15. Strahler A.N. (1968) The Earth Sciences, Harper & Row Intl. Edn, New York
16. Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley Intl. Edn. & Wiley, 1984.
17. Verstappen H. (1983) Applied Geomorphology, Geomorphological Surveys for Environmental Develop- ment, Elsevier, Amsterdam.

Websites:

https://www.solarviews.com/eng/earth.htm

https://www.moorlandschool.co.uk/earth/tectonic.htm

https://www.usgs.gov/

https://www.ksndmac.org.

B.A / B.Sc. Semester – I

Subject: Geography
Discipline Specific Course (DSC)

Course No.-1 (Practical)

Course No.	Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
Course-01	DSCC	Practical	02	04	52 hrs	3hrs	25	25	50

Course No.1 (Practical): Title of the Course (Practical): **Morphological Analysis**

Course Outcome (CO):

After completion of course (Practical), students will be able to:

CO 1 : To identify the different types of minerals through their characteristics.

CO 2 : To interpret the topographical maps extracted the geomorphic information.

CO 3 : To illustrate the slope analysis and prepare the Hypsometric curve and integral

CO 4 : To delineate the watershed area, stream ordering, drainage density and drainage frequency.

CO 5 : Analyze the morphological analysis of any geographical space.

List of the Experiments for 52 hrs / Semesters

1. Identification of Mineral samples: Iron ore, Bauxite ore and Manganese.
2. Identification of Rock Samples: Granite, Basalt, Lime Stones, Sandstone, quartzite, and marble.
3. Extraction and interpretation of geomorphic information from Topographical maps.
4. Preparation of contour map from Toposheets.
5. Construction of Relief Profiles-serial, Super imposed, Projected and Composite.
6. Slope Maps (Wentworth method),Slope (isotan and isosin) and aspects, maps and Hypsometric curve and integral.
7. Drainage Morphometry: delineation of watershed, stream ordering.
8. Morphometric analysis: mean stream length, drainage density and drainage frequency.

General instructions:

Conduct all exercises with Goal, Procedure, devices, findings and diagram.

Scheme of Practical Examination (distribution of marks): 25 marks for Semester end examination

1. **Interpretation and analysis** **15 Marks (5X3)**
2. **Viva-** **05 Marks**
3. **Journal-** **05Marks**

Total 25 marks

Note: Same Scheme may be used for I A (Formative Assessment) examination

Books recommended:

Text Books:

1. Ahmed E. (1985) Geomorphology, Kalyani Publishers, New Delhi.
2. Bloom A.L. (1978) Geomorphology: A Systematic Analysis of Late Cenozoic Landforms Prentice – Hall of India, New Delhi.

References:

1. Brunsden D. (1985) Geomorphology in the Service of Man: The Future of Geography, Methnen, U.K.
2. Chorley, R.J., Schumm, S. A. and Sugden, D.E. 1984: Geomorphology, Methuen, London
3. Cooke, R.U. and Warren, 1973: Geomorphology in Deserts, Batsford, London
4. Dayal, P. 1996: Textbook of Geomorphology, Shukla Book Depot ,Patna.
5. Goudie Anrew et.al. (1981) Geomorphological Techniques, George Allen &Unwin, London.
6. Homes A. (1965) Principles of Physical Geology, 3rd Edition, ELBSS Edn.
7. Strahler A.N. (1968) The Earth Sciences, Harper & Row Intl. Edn, New York
8. Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley Intl. Edn. & Wiley, 1984.
9. Verstappen H. (1983) Applied Geomorphology, Geomorphological Surveys for Environmental Develop- ment, Elsevier, Amsterdam

Websites:

https://www.solarviews.com/eng/earth.htm

https://www.moorlandschool.co.uk/earth/tectonic.htm

https://www.usgs.gov/

https://www.ksndmac.org.

B.A / B.Sc. Semester – I

Subject: Geography
Open Elective Course (OEC-1)
(OEC for other students)

Course No.	Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
OEC-1	OEC	Theory	03	03	42 hrs	2hrs	40	60	100

OEC-1: Title of the Course: **Introduction to Physical Geography**

Course Outcome (CO):

After completion of course, students will be able to:

CO 1 : To define the Physical Geography, the shape and size of the earth surface.

CO 2 : To identify the different types of rocks and their characteristics and agents of denudation.

CO 3 : To discuss the nature of structure and composition of Atmosphere.

CO 4 : To discuss the ocean floor and marine resources.

CO 5 **:** To analyse the physical geography of any geographical regions.

Syllabus- OEC: Title : Introduction to Physical Geography	**Total Hrs: 42**
Unit-I : Shape ,Structure of the earth Surface, rocks and Agents of denudation.	**14 hrs**
Origin, Shape and Size of the Earth, Movement of the Earth- Rotation and Revolution. Effects of the movement of Earth, Coordinates -Latitude, Longitude and Time and Structure of the Earth. Rocks and their types, significance of rocks. Weathering and its types. Agents of Denudation - River, Glacier, Wind and Under Ground water. Volcanicity, Earthquakes and Tsunamis.	
Unit-II: Structure, Composition of Atmosphere	**14 hrs**
Structure and Composition of Atmosphere. **We**ather and Climate. Atmospheric Temperature, Heat Budget of the atmosphere Atmospheric Pressure, Winds and Precipitation	

Unit-III: Ocean Floor.	**14 hrs**
Distribution of Land and Sea, Submarine Relief of the Ocean, Temperature and Salinity of Sea Water. Ocean Tides, Waves and Deposits, Ocean currents: Atlantic, Pacific and Indian Oceans. Marine Resources: Biotic, mineral and energy resources.	

Books recommended:

1. B.S. Negi (1993) Physical Geography. S.J. Publication, Meerut
2. D.S.Lal (1998) Climatology.Chaitnya publishing house, Allahabad
3. K. Siddhartha (2001) Atmosphere, Weather and Climate.Kisalaya publication, New Delhi
4. R.N.Tikka (2002) Physical Geography. KedarnathRamnath&co, Meerut.
5. P Mallappa, Physical Geography (Kannada Version).
6. Ranganath Principles of Physical Geography (Kannada Version).
7. Nanjannavar S S: Physical Geography (Kannada Version).
8. Hugar M R Physical Geography part-1(Kannada Version).
9. Goudar M B, Physical Geography (Kannada Version).

Websites:

https://oxfordbibilographies.com

https://ncrt.nic.in

https://www.nationalgeographic.org.

https://researchguide.deartmath.edn

https://journals.sagepub.com

B. A / B.Sc. Semester - I

Subject: Geography
SKILL ENHANCEMENT COURSE (SEC)-I

Title of Paper: Geographical Statistics

Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Mode of Examination	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
SEC-I	Theory + Practical	02	03hrs	30	Practical	2hr	25	25	50

Course Outcome (CO):

After completion of Skill Enhancement course, students will be able to:

CO 1 : To define statistics and enable to use for analysis.

CO 2 : To handle the data collection, tabulation and sampling.

CO 3 : To enable the calculations of mean, median and mode.

CO 4 : To enable the calculations of mean, median and mode.

List of the Experiments for 52 hrs / Semesters

1. Methods of data collection, sources of the data and sampling methods.
2. Processing the data, tabulation and formation of frequency.
3. Measures of Central Tendency and its significance.
4. Calculation of Mean for grouped and ungrouped data.
5. Calculation of Median for grouped and ungrouped data.
6. Calculation of Mode for grouped and ungrouped data.
7. Measures of Dispersion and its importance.
8. Calculation of Quartile Deviation for grouped and ungrouped data.
9. Calculation of Mean Deviation for grouped and ungrouped data.
10. Calculation of Standard Deviation for grouped and ungrouped data.

Scheme of Practical Examination (distribution of marks): 25 marks for Semester end examination

1. **Interpretation and Analysis** **15 Marks (5 X 3)**
2. **Viva-** **05 Marks**
3. **Journal-** **05Marks**

Total 25 marks

Note: Same Scheme may be used for I A (Formative Assessment) examination

Note: Same Scheme may be used for IA(Formative Assessment) examination

Books recommended:

1. Haymond and Mccullah (1974), Quantitative techniques in geography, An introduction, Oxford London.
2. Aslam Mohamed (1977): Statistical Methods in Geographical Studies, Rajesh Publiscations, New Delhi.
3. Gupta CB. (1979): An introduction to statistical methods, Vika publishing house pvt. Ltd. New Delhi.
4. Murray R. Spiegal (1972): Theory and problems of statistics, Mc. Grawhill Book co. New York.
5. Singh RL. (2016): elements of Practical Geography, Kalyani Publishers, New Delhi.

Websites:

https://www.statistics.com
https://www.amstat.org
https://quora.com
https://www.statisticsshowto.com

Details of Formative assessment (IA) for DSCC theory/OEC: 40% weight age for total marks

Type of Assessment	Weight age	Duration	Commencement
Written test-1	10%	1 hr	8th Week
Written test-2	10%	1 hr	12th Week
Seminar	10%	10 minutes	--
Case study / Assignment / Field work / Project work/ Activity	10%	------	--
Total	40% of the maximum marks allotted for the paper		

Faculty of Social Science / Science and Technology
04 - Year UG Honors programme: 2021-22
GENERAL PATTERN OF THEORY QUESTION PAPER FOR DSCC/ OEC
(60 marks for semester end Examination with 2 hrs duration)

Part-A

1. Question number 1-06 carries 2 marks each. Answer any 05 questions : 10marks

Part-B

2. Question number 07- 11 carries 05Marks each. Answer any 04 questions : 20 marks

Part-C

3. Question number 12-15 carries 10 Marks each. Answer any 03 questions : 30 marks

(Minimum 1 question from each unit and 10 marks question may have sub questions for 7+3 or 6+4 or 5+5 if necessary) **Total: 60 Marks**

Note: Proportionate weight age shall be given to each unit based on number of hours prescribed.

B.A / B.Sc. Semester – II

Subject: Geography
Discipline Specific Course (DSC)

The course Geography in I semester has two papers (Theory Paper –I for 04 credits & Practical paper-II for 2 credits) for 06 credits: Both the papers are compulsory. Details of the courses are as under.

Course No.-2 (Theory)

Course No.	Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
Course-02	DSCC	Theory	04	04	56 hrs	2hrs	40	60	100

Course No.2 (Theory): Title of the Course (Theory): **Principles of Climatology**

Course Outcome (CO):

After completion of course (Theory), students will be able to:

CO 1 : To define the field of climatology and to understand the atmospheric composition and structure.

CO 2 : To outline the mechanism and process of solar radiation transfer to earth surface and to ex- plain the temperature distribution and variation according to time and space.

CO 3 : To illustrate and explain the air pressure system, wind regulating forces and the formation of the Atmospheric Disturbance.

CO 4 : To understand and compute the air humidity as well as to explain the process of Condensation and formation of precipitation and its types.

CO 5 : To understand the principles of climatology and explain in detail.

Syllabus- Course 2(Theory): Title : Principles of Climatology	**Total Hrs: 56**
Unit-I : Composition and Structure of the Atmosphere	**14 hrs**
Nature and Scope of Climatology, Atmospheric Sciences, Climatology and Meteorology. Origin and structure of the Atmosphere: Troposphere, Stratosphere, Mesosphere, Ionosphere, Exosphere and their characteristics. Composition of the atmosphere Weather and Climate.	
Unit-II : Atmospheric Temperature	**14 hrs**
Insolation: Definition, Mechanism, Solar Constant. Factors affecting the Insolation: Angle of incidence, length of the day, Sunspots, Distance between the earth and the sun, effect of the atmosphere. Heating and cooling process of the atmosphere-Radiation, Conduction, convection and advection. Temperature: meaning and Influencing Factors on the Distribution of Temperature. Distribution of the temperature: Vertical, Horizontal, and Inversion of temperature. Global Enegry Budget: Incoming shortwave solar radiation, Outgoing Longwave Terrestrial radiation, Albedo. Net Radiation and Latitudinal Heat Balances.	

Unit-III : Atmospheric Pressure and Winds	14 hrs
Atmospheric Pressure: Influencing factors on atmospheric pressure. Vertical and Horizontal Distribution of the atmospheric pressure and Pressure Belts, Pressure Gradient. Tri-cellular-Hadley, Ferrel's and Polar Cells.Winds: influencing factors, Types - planetary, seasonal, local winds,Variable winds-Cyclones and anti-cyclones. Air-Masses and Fronts: Definition, Nature, Source Regions and Classification of Air Masses.	
Unit-IV : Atmospheric Moisture	**14 hrs**
Humidity: Sources, influencing factors and types-Absolute, Relative and Specific. Hydrological cycle: process of evaporation, condensation. Clouds and its types. Precipitation and its forms. Climate Change: Causes and consequences, recent issues-floods, drought and global warming.	

Books recommended:

Text Books:

1. Lal, D. S. (1998). Climatology. Allahabad: Chaitanya Publishing House.
2. P Mallappa, Physical Geography (Kannada Version).
3. Ranganath Principles of Physical Geography (Kannada Version).
4. Nanjannavar S S: Physical Geography (Kannada Version).
5. Hugar M R Physical Geography part-1(Kannada Version).
6. Goudar M B, Physical Geography (Kannada Version).
7. Kolhapure and S S Nanjan, Physical Geography (Kannada Version).

Reference:

1. Lutgens, Frederic K. & Tarbuck, Edward J. (2010). The Atmosphere: An Introduction to Meteorology. New Jersey: Pearson Prentice Hall.
2. Oliver, John E. & Hidore, John J. (2003). Climatology: An Atmospheric Science. Delhi: Pearson Education.
3. Singh, S. (2005). Climatology. Allahabad: Prayag Pustak Bhawan.
4. Barry, R.G. and Chorley, R.J. (2003): Atmosphere, Weather and Climate; Psychology Press, Hove; East Sussex.
5. Critchfield, H.J., (1975): general Climatology, Prentice Hall, New Jersey.
6. Mather,J.R.(1974): Climatology: Fundamentals and Applications; Mc Craw Hill Book Co., U.S.A.
7. Rumney, G.R. (1968): Climatology and the World Climates, Macmillan, London.
8. Trewartha, G.T. (1980): An Introduction to Climate; McGraw Hill, New York, 5th edition, (International Student Edition).

Websites:

https://science.jrank.org
https://www.clearias.com
https://www.nationalgeographic
https://www.space.com
https://www.noaa.gov
https://www.climate.nasa.gov
https://www.weather.gov
https://www.cengage.com

B.A / B.Sc. Semester – II

Subject: Geography
Discipline Specific Course (DSC)

Course No.-2 (Practical)

Course No.	Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
Course-02	DSCC	Practical	02	04	52 hrs	3hrs	25	25	50

Course No.2 (Practical): Title of the Course (Practical) : **Weather Analysis**

Course Outcome (CO):

After completion of course (Practical), students will be able to:

CO 1 : To understand the structure and functions of the Indian Meteorological Department.

CO 2 **:** To plot the temperature data using graphical methods.

CO 3 : To handle the instruments to measure the temperature and pressure.

CO 4 **:** To Use the wet and dray Bulb thermometer for measuring humidity.

CO 5 : To interprete the daily weather map seasonally.

List of the Exercises for 52 hrs / Semesters

1. Structure and functions of the Indian Meteorological Department (IMD). Collection of temperature data from IMD website.
2. Plotting of downloaded temperature data using graphical methods-line graph.
3. Centigrade and Fahrenheit thermometer for measuring temperature.
4. Mercurial Barometer and Aneroid Barometer for measuring atmospheric pressure.
5. Wind Vane and cup-anemometer.
6. Wet and Dry bulb thermometer for measuring humidity,
7. Rainguage- Dial type for measuring rainfall and Rainfall Trend Analysis (monthly and annual).
8. Interpretation of Indian Daily Weather charts Seasonally.

General instructions:

1. Conduct all exercises with Goal, Procedure, devices, findings and diagram.
2. Students are expected to download weather charts of the four Seasons.

Scheme of Practical Examination (distribution of marks): 25 marks for Semester end examination

1. **Interpretation and Analysis- 15 Marks (5X3)**
2. **Viva- 05 Marks**
3. **Journal- 05Marks**

Total 25 marks

Note: Same Scheme may be used for I A(Formative Assessment) examination.

Books recommended:

Reference:

1. Lutgens, Frederic K. & Tarbuck, Edward J. (2010). The Atmosphere: An Introduction to Meteorology. New Jersey: Pearson Prentice Hall.
2. Oliver, John E. & Hidore, John J. (2003). Climatology: An Atmospheric Science. Delhi: Pearson Education.
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Websites:

https://science.jrank.org

https://www.clearias.com

https://www.nationalgeographic

https://www.space.com

https://www.noaa.gov

https://www.climate.nasa.gov

https://www.weather.gov

B.A / B.Sc. Semester – II

Subject: Geography
Open Elective Course (OEC-2)
(OEC for other students)

Course No.	Type of Course	Theory / Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours / Semester	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
OEC-2	OEC	Theory	03	03	42 hrs	2hrs	40	60	100

OEC-2: Title of the Course: **Basics of Natural Disasters**

Course Outcome (CO):

After completion of course, students will be able to:

CO 1 : To define the natural disasters related to Lithosphere.

CO 2 : To identify the different types of atmospheric disasters and their impact.

CO 3 : To identify the different types of atmospheric disasters and their impact.

CO 4 : To define the biospheric disasters and their impact.

Syllabus- OEC: Title : Basics of Natural Disasters	**Total Hrs: 42**
Unit-I : Introduction to Natural Disaster	**14 hrs**
Meaning, definition and scope of natural disaster. Lithosphere and Natural Disasters. Earthquakes, volcanoes, Landslides and Avalanches.	
Unit-II : Atmosphere and Hydrosphere Natural Disasters	**14 hrs**
Meaning and importance of Atmosphere causes for natural disaster. Heat wave and wild fire. Cloud burst, hailstorm. Drought and famines. Meaning and importance of hydrosphere and causes of natural disaster. Tsunami, Hurricanes and cyclones. Floods and flash floods.	
Unit-III : Biospher and Natural Disasters	**14 hrs**
Significance of biosphere and causes of natural disasters. Epidemics and pandemics. Covid -19 and its effects. Techniques and technology to mitigate natural disasters.	

Books recommended:

1. 1. Dr. MrinaliniPandey Disaster Management Wiley India Pvt. Ltd.
2. Tushar Bhattacharya Disaster Science and Management McGraw Hill Education (India) Pvt. Ltd.
3. Jagbir Singh Disaster Management : Future Challenges and Opportunities K W Publishers Pvt. Ltd.
4. J. P. Singhal Disaster Management Laxmi Publications.

5. ShaileshShukla, ShamnaHussain Biodiversity, Environment and Disaster Management Unique Publications
6. C. K. Rajan, NavalePandharinath Earth and Atmospheric Disaster Management : Nature and Manmade B S Publication.

Websites:

https://www.naturalgeographic.com
https://www.cdc.gov.
https://www.n-d-a.org
https://askatechteacher.com
https://ndma.gov.in

Details of Formative assessment (IA) for DSCC theory/OEC: 40% weight age for total marks

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Faculty of Science
04 - Year UG Honors programme:2021-22

GENERAL PATTERN OF THEORY QUESTION PAPER FOR DSCC/ OEC
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