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Geography (Hons)-Paper-CT13-6th Semester

Geography in the 21st Century

Questions

1. Which factors are responsible for the changed nature of geographical study and research?
(Marks-5)
2. Why is the geographical study and research of 21st century considered as multiparadigm and multidisciplinary?
(Marks-5)
3. Why is the 21st century of geographical study and research known as century for spatial information?
(Marks-5)
4. What do you mean by choroinformatics?
(Marks-5)
5. What is cognitive geography?
(Marks-5)
6. Evaluate how geography of 21st century is adjusting itself with the changed scenario?
(Marks-10)

Geography in the 21st Century.

In the context of rapid worldwide change in economic, social, political, technical and cultural environment, diversities and difference were prominent in geographical thought. Differences at even individual level, and pluralism were accepted as result of post-structuralism and post-modernism. Spatial science approach was still relevant in geographical research. One could experience the presence of variety of approaches, fragmentation, conflicts and inter-specialisation, artificial boundaries within the discipline. The remnants of earlier disciplinary matrices continued forward along with the addition of the new exemplars. Geography, at present, shows the multiparadigm situation characterised by the competition between disciplinary matrices.

Recently a system of ranking and evaluation is introduced for funding the university departments. This has restructured disciplinary matrix in order to achieve some coherence in the disciplinary operations of the discipline. Professional training and acculturation for normalizing thoughts and behaviour for creating the correctly disciplined subject of a particular line of thought via personal surveillance and methodological instruction are followed for such coherence in teaching-learning and education in geography to achieve ranking and reputation. The departments of highest ranks become the symbol of good or bad practice within the community.

21st century is the century for spatial information. The integration of communication technology and computer technology leads to the explosion of Geo-Spatial information. GIS has set a new

dimension and created or endless opportunity for geographers. Geography students are to be trained in technical skills sufficient to address the need for applied geography.

Gould (1999) believed that in 21st century geography will be revitalized with its applied role in society by using geo-spatial technology.

However, David Smith (1984) and Robson (1984) appreciated dynamic and anarchist character of geography. They observed that every geographer is random variable contributing and responding to various themes randomly. There lies uncertainty about the future of geography. Johnston and Sidaway (2004) identified such uncertain nature of geography where no one can clearly predict the trend.

Koutsopoulos (2011) found that –“we find ourselves in the period of choroinformatics,” where information technology and tools of Geoinformatics are used to study integrated dimensions of geographic space. Investigation into geographic space may include all the social, environmental, economic, politico-cultural, attributes that creates speciality or identity of a space or place. Thus a multidisciplinary and sustainable approach is developed in geographic enquiry that could address the need for unified methodology in the context of acute diversity, difference and fragmentation.

Methodology:

For the study and research of geography in 21st century there should be conceptual and methodological integration of geographical studies. Prof. Sunil Kumar Munsi argued for the integrated study of physical and social attributes in an aim to understand the interworking of all these factors together through holistic and cognitive approach.

In the 21st century, Geography must be turned into '*cognitive geography*'-a science endowed with a true understanding or clear insight into the working of phenomena, which now characterises the writing of humanistic geography contrasted with positivism-cognitive geography will possibly include not only studying natural phenomena but also the study of manifestations of man's activity comprising the physical and biotic environment together with those phenomena altered and created by human endeavour.

Contemporary crisis of geography and solutions:

Since late 1970s, as a result of global economic recession, higher education funding specially that in social sciences was seriously cut. In 1996, US House of Representatives voted to end funding for the social sciences divisions of the National Science Foundation. Before that in June 1981, the Board of Regents of the University of Michigan decided to terminate Department of Geography by the end of academic session 1981-82.

Haigh (1992) found that by late 1970s geography teaching has been stopped in 32 universities. Homes (2002) found that in Australia, almost all of the University department of geography have

been merged into larger units and thus are losing separate identity. Cooke (2002) observed similar events in U.K. where 10 per cent of existing Geography departments were disappeared by either merging into larger units due to significant reduction of the numbers of secondary school students taking geography.

In this circumstances in the *Newsletter* (December, 1981) of *Association of American Geographers* a significant a significant article was published on “A *survival package for geography and other endangered discipline.*” In such circumstances it is recommended for ‘skill-oriented **curriculum**, efficient teaching to address the need to attract students in a competitive market and present ‘our wares in a stimulating and excellent way involving the virtues of applied geography.’”

Association of American Geographers newsletters of April, 1992 advocated for the promotion of geography as applied discipline and to give emphasis on corporation activities, state and local government projects, Federal Government activities, activities by United Nations and other international agencies.

Emerging Scope of Applied Geography in 21st Century:

According to Gould (1999) “21st century would be essentially a spatial century. In the twenty-first century, applied geographic research will help push the discipline of geography well beyond its current boundaries. In the first two decades of 21st century the growth of geo-spatial technology in every sphere ranging from public policy to daily life indicated the upward trajectory of applied geography in the coming years.

Integration of Geo-spatial technology and web-based technology-An Endless possibility of Applied Geography:

In the last few decades improvement in Geo-spatial technology enabled us to generate, store and disseminate spatial and location based information using GPS, GIS, Remote Sensing, radio-frequency identification technology etc. Web-based technology and location-aware computational environment has enabled geographic information to be stored, accessed and shared by different platforms ranging from cell phones, iPods to computer in the form of spatial contents of wikis, photos, videos, blogs, postings in social media, geotags and similar user generated spatial information. Thus entire web is fast becoming a source of spatial data that can be mapped, analysed and synthesised. The new ubiquitous spatial and location aware computing environment offers applied geography not only new sources of data, but also endless possibilities for application from genetic to global levels, limited only by our imaginations.

Spatial information generated by users and volunteered contribution:

General users having limited formal training produce huge geographical data through varied form of user-generated content and geotags. For example, Open Street Maps, an effort to

integrate patchworks of voluntary contributors, wikimapia, thousands of Google Earth mashups developed by users, GeoNames and Wikipedia, entries etc. are generated and used in massive scale by neo-geographers or citizen scientists voluntarily for their amusement and own interest.

Gould (1999) inferred that, “there is a geographer in most people” and in this connection Lee and Sui (2015) argued that, “We are pleased to notice that these geographers inside everybody are mostly applied geographers.”

Recently space has emerged as an integrating theme of social science, mathematics, engineering, planning, ecologists and computer science through increased interests in spatial modeling and complex network analysis. They have adopted GIS and Geo-spatial analysis as an integral part of research methodology. Paul Robin Krugman was awarded Nobel Prize in Economic Sciences for his contributions to New Trade Theory and **New Economic Geography**. Scholars across the humanities are adopting GIS in geo-spatial analysis as an integral part of research methodology. Geographical knowledge of synthesis and interpretation of working factors in spatial scale are required across the disciplines.

Place Based Public Policies:

Policy makers are paying increasing importance on place and space in understanding the complexity of world's problems in order to find out best solutions. World Bank framed World Development Report (2009) from geographical perspective and inferred that world's poverty problem could be better addressed by re-shaping world's economic geography. Fiscal policy (2011) of USA was framed based on geography of locality and places. Useful geographical lessons were considered important in U.S. foreign policy. Geographic factors and local conditions are presently incorporated in framing policy and government decisions.

University Grants Commission (UGC), India issued a notification in 2016 to encourage geography students in local area research and taking part actively in local area planning.

Lack of academic training of the geographers is the main cause of absence of geographers in policy-making. In an attempt to establish geography as a social science we lost our habit of rigorous scientific pursuits rather we are relying more on subjective understanding that pushed our discipline back to pre-scientific stage.

In the last two decades, the development of geo-spatial technology specially 'GIS' are new dimension and brought an endless opportunity to geo-spatial technologies, specially the geographers.

Gould (1997) predicted that “the spatial century (21st century) has revitalised the role of geography in society.”

In the context of geo-spatial technological explosion, public participation, government interest and dependency on geo-spatial information, new concepts, policies, and educational need, “we believe that we are witnessing the renaissance of applied geography in 21st century.
