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Total Pages = ~~200~~ 52

ENTRANCE EXAMINATION, 2012

M.Phil./Ph.D.
REGIONAL DEVELOPMENT

[Field of Study Code : GEOP
(142)/POPP (141)/ECNP (143)]

Time Allowed : 3 hours

Maximum Marks : 70

INSTRUCTIONS FOR CANDIDATES

- (i) Candidates should answer questions from only one of the three Parts given below, namely, Part—I (Geography : Code GEOP), Part—II (Population Studies : Code POPP) and Part—III (Economics : Code ECNP). They must indicate on cover page of the answer book CODE of the particular Part which they have answered inside. It must conform to the subject code indicated by them in their application form, failing which their answer books would get cancelled.
- (ii) Answer the multiple-choice questions by putting a circle around the letter (a. or b. or c. or d. or e.); for example, (a) representing the correct choice. Any ambiguity in circling (for example, circling more than one alphabet/number or circling the space between two alphabets/numbers) will lead to the answer being marked wrong.
- (iii) All questions must be answered in question paper itself.
- (iv) Calculators are allowed.
- (v) Four pages are attached at the end for Rough Work.

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PART—I

[GEOGRAPHY : Code GEOP (142)]

This Part has two Units. Unit—I comprises 20 multiple-choice questions carrying 1 mark each. The questions in Unit—II carry 5 marks each and are to be answered in the space provided. All questions are compulsory.

UNIT—I

Encircle the correct answer :

1. What is the landform formed in the dry areas by occasional rainstorms?
 - a. Rill
 - b. Gorge
 - c. Wadi
 - d. Canyon

2. The circular reefs that rise from deep water, enclosing a shallow lagoon in which there is no exposed central landmass, are called
 - a. atolls
 - b. platform reefs
 - c. barrier reefs
 - d. coral reefs

3. Which of the following is the largest linguistic group of India?
 - a. Indo-Aryan
 - b. Sino-Tibetan
 - c. Dravidian
 - d. Austric

4. Census of India collects the migration information based on
 - a. last residence over 6 months
 - b. place of birth and current residence
 - c. current workplace
 - d. place enumerated

5. Regur is

- a. lateritic soil
- b. black soil
- c. alluvial soil
- d. red soil

6. Permafrost is

- a. glacial landform
- b. the soil that is subjected to seasonal freezing and thawing
- c. perennially frozen soil
- d. glaciofluvial landform

7. Match the following herders with their areas

- A. Changpas
- B. Bhotiyas
- C. Gaddis
- D. Maldharis

- 1. Gujarat
- 2. Himachal Pradesh
- 3. Uttarakhand
- 4. Ladakh

- a. A B C D
2 4 3 1
- b. A B C D
1 3 2 4
- c. A B C D
4 3 2 1
- d. A B C D
3 2 1 4

8. Which one of the following is the oldest hill in India?

- a. Vindhya
- b. Nilgiri
- c. Jaintia
- d. Aravalli

9. What type of climate occurs on the western part of continents between latitudes 30° N and 45° N?
- China type
 - Mediterranean type
 - British type
 - All of the above
10. Which one of the following States of India has the highest percentage of Scheduled Caste to total population?
- Uttar Pradesh
 - Haryana
 - Punjab
 - Himachal Pradesh
11. In the following table, Column—A gives the name of the languages/dialects spoken in Indian subcontinent and Column—B gives the family of these languages/dialects. Identify the right combination :

<i>Languages/Dialects</i>	<i>Family of the Languages/Dialects</i>
A. Khasi	1. Sino-Tibetan
B. Miri	2. Indo-Aryan
C. Assamese	3. Dravidian
D. Gondi	4. Austric

- | | | | |
|---|---|---|---|
| A | B | C | D |
| 2 | 3 | 4 | 1 |
- | | | | |
|---|---|---|---|
| A | B | C | D |
| 4 | 1 | 2 | 3 |
- | | | | |
|---|---|---|---|
| A | B | C | D |
| 3 | 1 | 2 | 4 |
- | | | | |
|---|---|---|---|
| A | B | C | D |
| 2 | 4 | 3 | 1 |

12. The four stages of demographic transition are different from each other in terms of the natural increase rate (NIR) in population. These stages have been arranged in terms of the declining NIR. Identify the most common trend found in societies passing these stages of demographic transition.
- Stage-IV—Stage-III—Stage-II—Stage-I
 - Stage-IV—Stage-I—Stage-III—Stage-II
 - Stage-II—Stage-III—Stage-I—Stage-IV
 - Stage-IV—Stage-I—Stage-II—Stage-III
13. Which among the following does **not** follow the idiographic approach?
- Empirical Regional Geography
 - 'Areal Differentiation' as proposed by Richard Hartshorne
 - Humanistic Geography
 - Behavioural Geography
14. Who among the following introduced the idea of 'Garden City'?
- Ebenezer Howard
 - Patrick Geddes
 - Robert Owen
 - Le Corbusier
15. Who among the following proposed the trilogy of 'place-work-folk' in Human Geography?
- Vidal de la Blache
 - Frédéric Le Play
 - Patrick Geddes
 - E. Huntington

16. According to Ratzel's theory of State, which one of the following is **not** a law governing spatial growth of States?
- The size of the State increases as its culture develops
 - As a State grows, it strives to occupy some politically valuable locations
 - The initial stimulus for State's growth is external
 - Transition from subsistence to exchange economy is a precondition to State's growth
17. Which of the following is formed when sea arches collapse?
- Sea stack
 - Sea cave
 - Wave-cut bench
 - Wave-cut cliffs
18. Which of the following rivers is an example of antecedent drainage?
- Narmada
 - Sutlej
 - Damodar
 - Godavari
19. Succulents are
- epiphytes
 - hydrophytes
 - photophytes
 - xerophytes
20. In central place theory, hierarchical systems of central places or cities and the order of a city are determined by
- the diversity of goods offered
 - the size of market
 - the size and relative locations of cities
 - the direction of import and export of goods in between small and large cities

UNIT—II

Note : Illustrate your answers with the help of suitable maps and diagrams.

1. "Extensive use of quantitative techniques in geography after World War-II was an evolution rather than a revolution." Comment with suitable examples.
2. Humboldt noted that "in order to comprehend nature in all its vast sublimity, it would be necessary to present it under a two-fold aspect, firstly objectively, as an actual phenomenon, and next as subjectively as it is reflected in the feelings of mankind." Critically evaluate the statement.
3. What are the major differences between ecotourism and heritage tourism? Illustrate your answer with suitable examples from tourism in India.
4. What is surface runoff? Elucidate the role of surface runoff in the initiation and development of channels and drainage network.
5. "Regional development is associated with resource endowment." Critically evaluate the statement citing examples from India.
6. What is the difference between climate variability and climate change? Why is the world worried about climate change?
7. Identify and explain the factors of high concentration of Scheduled Tribe population in the mid-Indian belt.
8. What do you understand by geographical information system (GIS)? What is the role of GIS in geography?
9. What do you mean by the 'present is the key to the past' in landform studies? How do you think this can also become a 'key to the future'?

10. Discuss the relation between rice productivity and fertilizer used per hectare in the following hypothetical regions using appropriate statistical techniques and interpret the results :

<i>Region</i>	<i>Rice productivity (tonnes/ha)</i>	<i>Fertilizer used (kg/ha)</i>
<i>A</i>	1.2	60
<i>B</i>	1.5	75
<i>C</i>	1.3	69
<i>D</i>	2.0	96
<i>E</i>	1.7	89
<i>F</i>	1.8	83
<i>G</i>	1.6	58
<i>H</i>	1.4	67
<i>I</i>	1.0	51

PART—II

[POPULATION STUDIES : Code POPP (141)]

- (i) All questions are compulsory.
(ii) Answers are to be given on the question paper itself.

SECTION—A

(Question Nos. 1 to 20 carry 1 mark each)

Encircle the correct answer :

1. The preferred summary measure of fertility of population is
 - a. crude birthrate
 - b. child women ratio
 - c. total fertility rate
 - d. general fertility rate

2. Who among the following was the first to give the concept of stable population?
 - a. T. R. Malthus
 - b. R. A. Esterline
 - c. A. J. Lotka
 - d. A. J. Coale

3. Postindustrial urbanism is characterised by
- a. greater integration into global economic system
 - b. dominance of service over manufacturing
 - c. greater emphasis on R and D
 - d. All of the above
4. Fecundity is temporarily affected by
- a. male sterilization
 - b. female sterilization
 - c. Cu-T
 - d. None of the above
5. In a perfectly contracepting population, unwanted fertility is
- a. 0
 - b. 10
 - c. 20
 - d. Cannot say

5. Gravitational model to predict the volume of migration was proposed by
- K. Zipf
 - Everette Lee
 - E. G. Ravenstein
 - Michael Todaro
7. Contraceptive targets were dropped from the Indian programme following
- Geneva Conference
 - Bucharest Conference
 - Mexico Conference
 - Cairo Conference
8. In life table notation, the under-five mortality rate is given by
- $l_0 - l_5$
 - l_5 / l_0
 - $1 - l_5 / l_0$
 - $e_5^0 - e_0^0$
9. Proximate determinants of fertility framework was proposed by
- John Bongaarts
 - Judith Blake
 - Arsene Dumont
 - Gosta Carlsson
10. Which state experienced the lowest population growth rate in 2001–2011?
- Arunachal Pradesh
 - Delhi
 - Nagaland
 - Goa

11. Which of the following is a part of NRHM?
- Janani Suraksha Yojana
 - Navjat Shishu Suraksha Karyakram
 - ASHA
 - All of the above
12. Proportion of aged population increases because of
- decline in fertility
 - decline in mortality
 - increase in age-selective migration at 60+ age
 - All of the above
13. In a stationary population if the birthrate is 19.1, the life expectancy is closest to
- 47 years
 - 52 years
 - 57 years
 - 62 years
14. Which one of the following does **not** lead to widespread urbanization and uniform development over space?
- Polarization and reversal of polarization
 - Integration of core and periphery
 - Cumulative causation
 - Growth poles/centres
15. The concept of 'cycle of urbanization' was given by
- Kingsley Davis
 - John Friedman
 - Robert and Park
 - Raymond Dusman

16. If the total fertility rate in a population is 4.8, the net reproduction rate must be closest to
- a. 4.8
 - b. 4.0
 - c. 3.2
 - d. 2.4
17. Which State having adverse sex ratio has shown the highest improvement in 2011 Census?
- a. Gujarat
 - b. Punjab
 - c. Kerala
 - d. Meghalaya
18. The intervening opportunities in determining the volume of migration with distance were postulated by
- a. Peterson
 - b. Stouffer
 - c. Bacci
 - d. Zipf
19. In Northern Europe, the demographic transition began in the early
- a. 1700
 - b. 1800
 - c. 1900
 - d. 2000
20. The shift in the incidence of strongest population growth away from the largest cities in the national urban system is termed as
- a. counter urbanization
 - b. suburbanization
 - c. exurbanization
 - d. reurbanization

SECTION—B

(Question No. 21 carries 10 marks)

21. From the following information, bring out the salient features of the age structure of the population in different zones of India, 2001 :

	0-14	15-59	60+	Total
SOUTH				
<i>Male</i>	42430	97413	14842	154685
<i>Female</i>	40799	104413	18514	163726
NORTH				
<i>Male</i>	281444	351107	41748	674299
<i>Female</i>	277467	407775	44745	729987
WEST				
<i>Male</i>	24154	48253	3664	76071
<i>Female</i>	20986	37914	3631	62531
EAST				
<i>Male</i>	24154	40253	4264	68671
<i>Female</i>	20986	35014	4531	60531

SECTION—C

(Question Nos. 22 to 26 carry 2 marks each)

Write brief answers :

22. What is radix of a life table and what is life table total population?
23. Explain doubling time of the population.
24. Define neonatal, postnatal and perinatal mortality.
25. Write a short note on measurement of sex ratio.
26. Differentiate between lifetime migration and intercensal migration.

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SECTION—D

(Question Nos. 27 to 32 carry 5 marks each)

27. Critically evaluate the impact of family planning programmes on fertility transition in India.
28. Compare and contrast between Malthusian and neo-Malthusian views on population, resource use and development.
29. Examine the nature of relationship between Central Place and its region.
30. Discuss the contemporary trends in metropolitanization and suburbanization in India.
31. Discuss the factors responsible for the high maternal mortality in India. What steps are being taken by the government to lower the level of maternal mortality?
32. What are the major reasons for interstate migration in India?

PART—III

[ECONOMICS : Code ECNP (143)]

SECTION—A

(Question Nos. 1-10 are compulsory)

Encircle the correct answer :

1×10=10

1. Which of the following is **not** an assumption of the theory of revealed preference?
 - a. A cardinal measure of utility
 - b. Consistency
 - c. Transitivity
 - d. A consumer can be induced to purchase any basket of commodities if its price is made sufficiently attractive

2. Critics of the regulation of natural monopolies contend that
 - a. regulation reduces the incentive of firms to lower costs
 - b. regulated firms may use 'creative accounting' to inflate costs, prices and profits
 - c. when rates of return are based upon the value of real capital, an uneconomic substitution of capital for labour may occur
 - d. the industry may 'capture' or control the regulatory commission
 - e. All of the above

3. Concentration ratios measure the
 - a. number of firms in an industry
 - b. percentage of total sales accounted for by the four largest firms in the industry
 - c. degree to which product price exceeds marginal cost in various industries
 - d. geographic location of the largest corporations in each industry

4. Which of the following industries is an illustration of homogenous oligopoly?
 - a. Soaps and detergents
 - b. Tyres
 - c. Aluminium
 - d. Cigarettes
 - e. Household electronic equipment

5. When $a = 0.637$ and $b = 0.46$ for the Cobb-Douglas production function, returns to scale are
 - a. constant
 - b. increasing
 - c. decreasing
 - d. negative

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6. Which of the following elasticities measures a movement along a curve rather than a shift in the curve?
- The price elasticity of demand
 - The income elasticity of demand
 - The cross-elasticity of demand
 - The price elasticity of supply
7. Tobin's liquidity preference theory shows that when investors are risk averters, they hold
- a large proportion of their portfolio in the form of money as the current rate of interest decreases
 - a large proportion of their portfolio in the form of money as the current rate of interest increases
 - only money when the rate of interest is expected to fall
 - only money when the rate of interest is expected to increase
8. A Bank is insolvent, when
- deposit liabilities exceed owners' equity
 - owners' equity exceeds deposit liabilities
 - total assets exceed owners' equity
 - total liabilities exceed total assets
9. Perfect competition leads to a point on the grand utility-possibility curve.
- Always
 - Never
 - Sometimes
 - Cannot say
10. The marginal resource cost $MRC_a > P_a$, when the firm is
- a monopsonist
 - an oligopsonist
 - a monopsonistic competitor
 - All of the above

SECTION—B

11. Write short notes on any *four* of the following (maximum word limit 50) : 2×4=8
- (a) Laspeyres' price index
 - (b) Slutsky substitution effect
 - (c) Marginal rate of technical substitution
 - (d) Multicollinearity
 - (e) Normal distribution
 - (f) IS-LM curve

SECTION—C

(Question Nos. 12–15 are compulsory)

Answer the following questions :

5×4=20

12. Use the following frequency distribution of heights of 100 students of a college/university to find the mean height and standard deviation :

Height (in cm)	Number of Students
155–159	5
160–164	18
165–169	42
170–174	27
175–179	8
Total	100

13. Find the solution of the following equation system using matrix inversion method :

$$\begin{aligned} 7x_1 - x_2 - x_3 &= 0 \\ 10x_1 - 2x_2 + x_3 &= 8 \\ 6x_1 + 3x_2 - 2x_3 &= 7 \end{aligned}$$

14. A perfectly competitive firm faces price $P = 4$ and total cost $TC = Q^3 - 7Q^2 + 12Q + 5$.
- (a) Determine, by using calculus, the best level of output of the firm by the marginal approach.
 - (b) Find the total profit of the firm at this (the best) level of output.
15. Fit a least squares line to the following data using (a) X as independent variable and (b) Y as dependent variable :

X :	1	3	4	6	8	9	11	14
Y :	1	2	4	4	5	7	8	9

Also find the correlation between X and Y using regression coefficients.

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SECTION—D

8×4=32

Answer any *four* of the following :

16. Much has been written about the 'successful' growth story of India in the recent years. What, in your view, are the main sources of this growth and how effective has this growth been in addressing the major challenges of poverty and inequality in India? [Please give facts and figures in support of your arguments]
17. How do you explain the recent spell of food inflation in India? What factors are responsible for the long spell of food inflation? Can monetary policy be helpful in containing inflation?
18. Do you agree that the last decade has seen a trend towards informalization and casualization of the workforce? Explain with special reference to female employment.
19. Has manufacturing sector in India benefited from the trade liberalization since 1991? Should India follow a strategy of export-led growth?
20. Is the official methodology of poverty estimation in India better than the multidimensional poverty approach suggested by the UNDP? Explain the key differences and your reasons of preferring one over the other.
21. What are the existing structures of price incentives and stabilization in Indian agriculture? Explain whether futures trading in agricultural commodities has helped in realising better prices to the farmers.

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