

MSP-1F: Sociology, Psychology and Anthropology

Block 1: Sociology and Anthropology

- Q.1 Explain the characteristics of primary groups with examples.
- Q.2 How do you define 'urban'? Classify the cities as per Gist and Halbert and E. E. Muntz.
- Q.3 What do you understand by 'social stratification' and explain the types of social groups with examples.
- Q.4 Briefly discuss the following:
(a) Caste system
(b) Social structure
(c) Joint family

Block 2: Psychology

- Q.1 Explain the stages of development in detail.
- Q.2 Discuss about the techniques of effective communication.
- Q.3 Classify wellbeing with suitable examples.

MSP-2F: Economics and Geography

Block 1: Economics

- Q.1 (a) Define microeconomics and macroeconomics.
(b) Differentiate between economic activity and non-economic activity.
- Q.2 (a) Define the concepts demand, supply and price and explain their relationship with each other.
(b) Explain the law of diminishing return.
- Q.3 What do you mean by Gross Domestic Product? How is it used as a scale of economic progress of a country?
- Q.4 Explain the characteristics of Indian economy.

Block 2: Geography

- Q.1 How do you explain the relationship between man and environment?
- Q.2 Explain the geographic approach in terms of postmodern philosophy.
- Q.3 Differentiate between GIS and GPS.
- Q.4 Write down the various settlement patterns.

MSP-3C: Basic Statistical Methods for Population Studies

Block 1: Some Basic Mathematical Tools

- Q.1 (a) How do you define combinations in mathematical term? Give an example with the help of its formula.
(b) Calculate exponential growth rate of population using the population data from the study materials or from any source of your choice.
- Q.2 (a) Define ratio. Explain how does it differ from proportion and rate?
(b) What is interpolation? Explain its use and limitations.
- Q.3 What is graduation. Explain the methods of graduation.
- Q.4 How do you explain arithmetic, geometric and exponential rates of population growth?

Block 2: Basic Measures of Statistics, Elements of Probability Theory & Probability Distributions

- Q.1 Define mean, median and mode with examples, and explain their relationships
- Q.2 (a) How do you define statistics? Explain its importance in research.
(b) What are the characteristics of data?
- Q.3 What do you mean by diagram and graph? Explain their role in presentation of research highlights.
- Q.4 Explain the rules of probability with suitable examples.

Block 3: Statistical Methods Used in Population Data Analysis

- Q.1 (a) Define correlation and regression. Explain the situations in which these can be used in social science research.
(b) What is rank correlation? Calculate Spearman's rank correlation by using the data from study materials or from any source of your choice.
(c) What do you mean by analysis of variance? Explain its basic assumptions underlying its use?
- Q.2 What is multiple classification analysis? Explain its uses and limitations in social science research.
- Q.3 Explain the meaning of path analysis with its assumptions. Demarcate its role in explaining the relationship between and among different variables in social research.
- Q.4 What do you mean by logistic analysis? Explain its assumptions and application.

Block 4: Sampling Designs and Statistical Inference

- Q.1 What is probability proportional to size (PPS)? Calculate PPS by using the data from the study materials of from any source of your choice.
- Q.2 Differentiate the following terms:
- (a) Null and Alternative hypothesis
 - (b) Type I and II error
 - (c) Standard error and Standard Deviation
 - (d) Point and Interval Estimates
- Q.3 Explain the steps in testing the hypothesis with an example.
- Q.4 What do you mean by statistical hypothesis? Explain the different types of statistical hypotheses with examples.

MSP-4C: Introduction to Demography and History of Population

Block 1: Introduction to Population Studies and History of Population

- Q.1 Define demography. How does population studies differ from demography? Explain the importance of population studies as a special discipline among social and health sciences.
- Q.2 Explain the development of population studies in India.
- Q.3 Explain the levels of population and its growth among Indian states and Union Territories, and trends in India.

Block 2: Sources of Population Data

- Q.1 Define population census. Explain the historical development, importance and application of Indian census.
- Q.2 What are the different features of Indian Census 2011? Please suggest for strengthening the population census in India, being the most important and reliable data source of the nation.
- Q.3 Explain the history and development of civil registration system and its importance in India.
- Q.4 What do you mean by sample survey? In what situations do we use sample survey. Explain its uses and limitations.

Block 3: Age-Sex Structure

- Q.1 Discuss the measures of age-sex structure of a population with suitable examples?
- Q.2 What are the broad age-groups of a population and how they are different from reproductive age-group. Please suggest for Indian age-sex structure to be or closer to ideal population age-sex structure.
- Q.3 Discuss the factors affecting the sex ratio of a population. Demarcate the different scenarios of sex ratio of general population and of child population in India citing the figures from any recent data source.
- Q.4 Tabulate the levels of sex ratio of general population and of child population among the districts of your home-state from the recent available data source, and explain the possible reasons for their extreme levels from available literatures.

MSP-5C: Fertility and Nuptiality

Block 1: Nuptiality: Concepts and Measures

- Q.1 Demarcate the trends of mean age at marriage for males and females in India from Census of India.
- Q.2 Discuss the measures of nuptiality with suitable examples.
- Q.3 Calculate Singulate Mean Age at Marriage (SMAM) using the data from the study materials or any source of your choice.

Block 2: Basic Concepts and Measures of Fertility and Reproduction:

- Q.1 (a) Discuss the importance of the study of fertility in population dynamics.
(b) Explain the modern methods of family planning with their merits and demerits.
- Q.2 Give a brief account of various sources of fertility data.
- Q.3 What are the strengths and weaknesses of Rele's methods?
- Q.4 Differentiate the following terms:
(a) Primary sterility and secondary sterility
(b) Fecundity and Fecundability
(c) Birth Order and Parity
(d) Fertility and Sterility

Block 3: Framework for and Synthesis of Fertility Analysis

- Q.1 Calculate TFR using the data from the study materials or from the study materials or any source of your choice.
- Q.2 What are the eight variables in Bongaarts's proximate determinants model? Explain the estimation of various indices of Bongaarts's model.
- Q.3 Briefly discuss the following:
(a) Theory of Social Capilarity
(b) Theory of Diffusion or Cultural Lag

Block 4: Fertility Transition in Some Developed and Developing Countries

- Q.1 Discuss the Coale's fertility indices.
- Q.2 Discuss the fertility differentials of India by demographic, socio-economic and health characteristics of the population from the recent NFHS data.
- Q.3 Write short notes on the following:
1. Net Reproduction Rate (NRR)
2. Gross Reproduction Rate (GRR)
3. Total Fertility Rate (TFR)

MSP-6C: Evaluation, Adjustment of Demographic Data and Population Projection

Block 1: Evaluation and Adjustment of Demographic Data

- Q.1 Compute the following indexes for India using the data from Table-1 and describe the quality of data with the help of indexes such as: (a) Whipple's index; (b) Myer's index; and (c) UN Joint Score.

Table 1: Distribution of population by single year age, India, 2011							
Age	Total	Male	Female	Age	Total	Male	Female
0	20311234	10633298	9677936	52	7735164	4068700	3666464
1	21755197	11381468	10373729	53	5590790	2808043	2782747
2	23056268	11952853	11103415	54	6394912	3263610	3131302
3	23974041	12331431	11642610	55	15607546	7769352	7838194
4	23710038	12333024	11377014	56	7071837	3666804	3405033
5	26054230	13725480	12328750	57	4599026	2339391	2259635
6	25654245	13394700	12259545	58	6718934	3072508	3646426
7	24826640	12903364	11923276	59	5148712	2607957	2540755
8	26968373	14061937	12906436	60	17810689	8677046	9133643
9	23424638	12214985	11209653	61	6026813	3095448	2931365
10	30552107	16089436	14462671	62	5745143	2892015	2853128
11	24740946	12962604	11778342	63	3994105	1977207	2016898
12	27877307	14637892	13239415	64	4086957	2060033	2026924
13	24280683	12563775	11716908	65	13022352	6275854	6746498
14	25258169	13165128	12093041	66	4511946	2278670	2233276
15	25899454	13739746	12159708	67	2605082	1353711	1251371
16	24592293	13027935	11564358	68	3548373	1640034	1908339
17	21217467	11349449	9868018	69	2767230	1396057	1371173
18	27958147	15020851	12937296	70	10986280	5393714	5592566
19	20859088	10844415	10014673	71	3084183	1584873	1499310
20	28882735	14892165	13990570	72	2250929	1176727	1074202
21	19978972	10532278	9446694	73	1366536	708381	658155
22	23528225	12392976	11135249	74	1520914	787804	733110
23	19154055	9674189	9479866	75	4772346	2278704	2493642
24	19880235	10093085	9787150	76	1667133	832251	834882
25	27768078	14311524	13456554	77	835048	438394	396654
26	20076997	10315030	9761967	78	1068415	506957	561458
27	16709350	8552032	8157318	79	889561	434297	455264
28	22127016	10719926	11407090	80	3784938	1725200	2059738
29	14732524	7445696	7286828	81	1027816	491522	536294
30	30399029	15628996	14770033	82	603793	306378	297415
31	13823245	7157502	6665743	83	380185	192946	187239
32	17613544	8801105	8812439	84	423497	210994	212503
33	12764541	6108879	6655662	85	1264798	580527	684271
34	13994592	6964192	7030400	86	447898	215850	232048
35	28422631	15036666	13385965	87	221411	112348	109063
36	15827717	8067568	7760149	88	235640	112374	123266
37	11692231	5784879	5907352	89	213420	99007	114413
38	17471758	8090401	9381357	90	833072	360237	472835
39	11726347	5939867	5786480	91	258297	118606	139691
40	28528992	15173411	13355581	92	153561	75430	78131
41	11567894	6172297	5395597	93	94630	46220	48410
42	13380642	6856826	6523816	94	106974	51972	55002
43	9334352	4468914	4865438	95	272534	124950	147584
44	9626232	4873938	4752294	96	120268	57894	62374
45	23872961	12685175	11187786	97	71413	35238	36175
46	10992678	5735540	5257138	98	104511	48393	56118
47	7951297	4043122	3908175	99	64571	28284	36287
48	11649592	5568554	6081038	100+	605778	289325	316453
49	7851799	4105723	3746076	ANS	4489802	2372881	2116921
50	21462422	11379329	10083093	Total	1210854977	623270258	587584719
51	7885966	4323584	3562382				

ANS= Age not stated.

Source: Census of India 2011.

Q.2 Discuss the post-data collection quality indicators in a large-scale sample survey?

Q.3 Write short notes on the following:

- (a) Pre-course or Mid-course data quality indicators in a large-scale sample survey
- (b) Content error and coverage error

Block 2: Population Estimates and Projections

Q.1 Discuss the mathematical methods of population projection.

Q.2 Write down the population projections by the World Bank and United Nations

Q.3 Estimate the age-wise male population for 1 October 2005 using following data.

Table-2:		
Age-group	1 March 2001	1 March 2011
0-14	140.3	161.7
15-29	92.3	114.3
30-44	60.9	80.3
45-59	39.1	46.8
60+	21.8	29.4
Total	354.4	432.5

Q.4 Write short notes on the following:

- (a) Ratio method of sub-national population projection
- (b) Projection of school enrolment

MSP-7C: Introduction to Demographic and Statistical Software

Block 1: Introduction to Demographic and Statistical Software

- Q.1 Describe the process of bivariate analysis, recoding and generating variables in STATA.
- Q.2 What is an operating system in a computer? Describe it with some suitable examples.
- Q.3 Prepare an age-sex pyramid using the following data:

Age Group	Male	Female
0-4	285011	259973
5-9	311457	279720
10-14	338240	300984
15-19	336729	303732
20-24	323720	320146
25-29	290125	299035
30-34	271253	275104
35-39	258230	259736
40-44	222269	223291
45-49	197642	197486
50-54	165724	164963
55-59	135245	131615
60-64	115464	115908
65-69	78387	80220
70-74	62119	68468
75-79	36440	39266
80+	48465	58272

- Q.4 Write short notes on the following:
- (a) Digital computer and analog computer
 - (b) Devices of a computer
- Q.5 What is SPSS? Describe the process of database structure in SPSS.

MSP-8C: Spatial Distribution, Migration and Urbanization

Block 1: Spatial Distribution: Measures and Patterns

- Q.1 What are the geographical factors responsible for the high population density in the Gangetic plains of India?
- Q.2 What are the factors affecting the distribution of a population.
- Q.3 Write short notes on the followings:
- (a) Lorenz curve and Gini co-efficient
 - (b) Standard Distance

Block 2: Migration: Concepts, Measures, Determinants and Consequences

- Q.1 Discuss the pattern and causes of internal migration in developing countries.
- Q.2 Discuss the important sources of migration data. Highlight the determinants and consequences of internal migration.
- Q.3 Critically discuss 'Mobility field theory' and its application in developing countries.

Block 3: Urbanization: Concepts, Measures, Patterns and Consequences

- Q.1 How to measure the level of urbanization? What do you understand by CBD and Urban area?
- Q.2 Discuss 'Kingsley Davis's model of urbanization.' What do you mean by urban turn-around?
- Q.3 Differentiate between:
- (a) Suburb and Urban-rural fringe
 - (b) Primary index and City concentration index
 - (c) Megalopolis and Ecumenopolis

MSP-9C: Historical Demography

Block 1: Historical Demography

- Q.1 What is famine? Most of the deaths during famines in British India were man made. Explain with example.
- Q.2 Discuss in brief various sources of historical demography data.
- Q.3 Discuss the population distribution and culture during prehistoric period.
- Q.4 Describe the British Indian Census. What kind of fears and rumours prevailed among the general population regarding census?
- Q.5 Write short notes on the following:
- (a) Mendel's Principle of genetics
 - (b) Paleolithic Culture
 - (c) Bills of Mortality
 - (d) Domesday book

MSP-10C: Gender and Reproductive Health

Block 1: Gender Issues in Population Studies

- Q.1 Discuss the reproductive health indicators for global monitoring.
- Q.2 What is Gender empowerment measure (GEM)? Write down the three basic dimensions of empowerment covered in GEM.
- Q.3 What are the factors influencing sex ratios in India?

Block 2: Reproductive Health

- Q.1 Define Abortion. Briefly describe MTP Act in India.
- Q.2 Write short notes on the following:
- (a) Assisted Reproductive Technologies
 - (b) Adolescent Reproductive Health
 - (c) Reproductive Rights
- Q.3 Write down the main methodological issues in measurement of infertility.
- Q.4
- (a) Discuss the Process Context Approach (PCA) in reproductive health.
 - (b) What are the key principles of reproductive rights?

MSP-11C: Population and Development

Block 1: Population and Development: Concepts, Measures and Linkages

- Q1. Critically discuss the Marxian view on Population.
- Q2. Discuss the basic tenets of social development? What are the major indicators of social development?
- Q3. (a) Discuss the effects of development on various demographic parameters.
(b) Discuss the methodology for calculating the Multidimensional Poverty Index.

Block 2: Divergent Views of Population and Development

- Q.1 Explain the views given by Easter Boserup on population development.
- Q.2 What was the major difference between mercantilists and physiocrats with regard to population?
- Q.3 How does overpopulation affect development?

Block 3: Population and Development: Natural, Capital and Human Resources

- Q.1 Discuss the demographic and economic determinants of labor supply.
- Q.2 What are the major determinants of demand for natural resources?
- Q.3 What are the demographic characteristics which determine savings by individuals and households?

Block 4: Social Development and Environment: Concepts & Implications

- Q.1 What is the relationship between population growth, development process and environmental degradation?
- Q.2 Write short notes on the followings:
- (a) Impact of population growth on health
(b) Greenhouse effect and global Warming
- Q.4 Discuss the concept of sustainable environment. Write down the sustainable development goals in India.

MSP-12C: Research Methodology

Block 1: Basic Concepts and Sampling Techniques

- Q.1 Discuss reliability and validity of measurement.
- Q.2 (a) What are the steps involved in a research process?
(b) What is the sample size?
- Q.3 Describe the following terms:
- (a) Sampling Frame
 - (b) Sampling and Non-Sampling Errors
 - (c) Parameter and Statistic
 - (d) Probability and Non-Probability Sampling
- Q.4 (a) What are data collection tools in qualitative research? What are the advantages of qualitative research methods?
- (b) What are the distinctions between qualitative and quantitative research methods.

Block 2: Research Methods

- Q.1 (a) What do you mean by research ethics.
(b) What are the different steps in data processing?
(c) Explain the various steps in data validation and updating.
- Q.2 (a) Why should the items on a questionnaire always be pre-tested?
(b) Write down the basic guidelines to conduct an interview in social science research.
- Q.3 Define a questionnaire in your own words. Why do you need to filter in the questionnaires?
- Q.4 Major components of research design. Discuss.

MSP-13C: Concepts and Measures of Global Health

Block 1: Concepts, Measures and Determinants of Global Health

- Q.1 Discuss the significance of various determinants of health.
- Q.2 Define global health and state the differences between international health and public health.
- Q.3 Write short notes on the following:
- (a) Summary measures of population health
 - (b) Health Adjusted Life Years (HALYs)

Block 2: Health Care Delivery Systems and Policies

- Q.1 How do you measure the performance of healthcare systems?
- Q.2 Write short notes on the following:
- (a) Human Rights Approach to Health (HRAH)
 - (b) Role of World Bank in Global Health
- Q.3 What is Multi-Criteria Decision Analysis (MCDA). Discuss the need for MCDA.

MSP-14C: Population Policies, Programme and Evaluation of Health & Family Welfare Programmes

Block 1: Population Policies & Programmes

- Q.1 Discuss the major health issues in developed and developing nations.
- Q.2 What are the principle elements of a population policy?
- Q.3 Write short notes on:
- (a) Alma Ata Declaration 1978
 - (b) Policies adopted for refugees

Block 2: Population Programme Management

- Q.1 What are some of the areas of population programmes where management contribution is made?
- Q.2 (a) What are some of the areas of population programmes where management contribution is made?
- (b) Discuss the community-based distribution systems (CBD).
- Q.3 Discuss Judith Bruce framework of quality of care.

Block 3: Evaluation of Family Planning Programme

- Q.1 What are the steps to analyse the cost-benefit of any investment?
- Q.2 What is Framework for evaluation. Draw a diagram depicting objectives involved in the evaluation of family planning programme.
- Q.3 Differentiate between monitoring, evaluation and operational research.
- Q.4 (a) Discuss the direct method of evaluating the fertility impact of family planning programme.
- (b) What is meant by 'use-effectiveness' of contraception?

MSP-15C: Advanced Statistical Packages and Applications in Large-scale Data
--

- Q.1 Write down the methods of doing cluster sampling in STATA and R.
- Q.2 What do you understand by consistency and accuracy of data?
- Q.3 (a) What is third party audit?
(b) How do you read ASCII file?
- Q.4 Write short notes on:
(a) Data error
(b) Missing data

MSP-16C: Morbidity, Mortality and Public Health

Block 1: Basic Concepts and Measures of Morbidity

- Q.1 Write a short note on 'Global Burden of Disease (GBD) Study-2017'.
- Q.2 Define morbidity. Describe the importance of studying morbidity with suitable examples.
- Q.3 (a) What are the new elements of ICD 11?
(b) What are the major problems in the analysis of mortality on the basis of the causes of death data?
- Q.4 (a) Discuss the usefulness of studying epidemiology.
(b) Compare the demographic and epidemiologic transitions in the context of India.

Block 2: Basic concepts and measures of mortality

- Q.1 Define mortality. Compare the age-specific mortality curves for developing and developed countries and explain the reasons for difference in the shape of the curves.
- Q.2 (a) Why do we standardize crude rates? Briefly discuss the direct method of standardization.
(b) Crude death rate (CDR) should not be considered for the purpose of comparison. Give proper justifications for this statement.
- Q.3 (a) Why do we standardize crude rates? Briefly discuss the direct method of standardization.
(b) Describe the salient features of present mortality situation observed globally, with suitable examples
- Q.4 (a) What is the demographic relevance of mortality?
(b) Define infant mortality and maternal mortality.

Block 3: Life Table and Indirect Methods of Mortality Estimation

- Q.1 What is life table? What are the parameters that are considered in constructing a life table?
- Q.2 Write short notes on:
(a) United Nations Model Life Tables

- (b) Method of forward projection for estimating intercensal mortality
- Q.3 The following are the portions of a life table where some of the values are missing. Estimate the missing values with the assumption that deaths are evenly distributed within the age group.

Age (x)	l_x	L_x	T_x	e^0_x
15	--	78,201	3,493,601	44.6
16	--	77,984	--	--
17	--	77,764	--	--
18	--	77,538	--	--
19	--	77,301	--	--
20	--	77,060	--	--

Calculate the following:

- the probability that a person of exact age 15 years will die between 16 and 20,
 - expected number of years lived by a person aged 15 years between ages 15 and 20,
 - expected age at the death of a person aged 20 years.
- Q.4 What is complete life table? Describe each column of a complete life table.

MSP-17C: Population Ageing and Health Transition

Block 1: Life Course Perspective and Socio-demographic Dynamics of Ageing

- Q.1 Discuss the demographic determinants and components of population ageing.
- Q.2 Write short notes on:
- (a) Ageism
 - (b) Reason for change in living arrangement after age 60 in India.
- Q.3 Write down the inter-relationship between population ageing, fertility, mortality and migration.

Block 2: Health Transition, Health Care System and Health Financing

- Q.1 Give a brief account of healthcare expenditure for elderly in India.
- Q.2 Explain work participation and occupational structure among the elderly in India.
- Q.3 Describe the social welfare pension schemes for elderly.
- Q.4 What does demographic dividend mean? Discuss it.

Block 3: Elder Care and Policies

- Q.1 Discuss the India's National Policy for Senior Citizens-2011.
- Q.2 Discuss the importance and key elements of Rashtriya Swasthya Bima Yojana (RSBY).
- Q.3 Write short notes on "Maintenance and Welfare of Parents and Senior Citizens Act, 2007"

MSP-18E: Urbanization, Space and Planning

Block 1: Urbanization, Space and Planning

- Q.1 How would you define a region? Discuss the various types of regional planning.
- Q.2 Discuss the different types and patterns of settlements?
- Q.3 Write short notes on:
- (a) Harris and Ullman's Multiple Nuclei Model of urban growth
 - (b) Garden city
- Q.4 (a) Discuss the applicability of GIS in various domains of urban planning.
- (b) When was the Smart Cities Mission launched? What were its objectives?
- Q.5 What do you understand by solid waste management? What are the different types of solid waste?

MSP-18E: Biostatistics and Epidemiology

Block 1: Biostatistics and Epidemiology

- Q.1 Discuss the Kaplan-Meier estimate of survival function.
- Q.2 Write short notes on:
- (a) Standard deviation and standard error
 - (b) McNemar's Test
- Q.3 Discuss the dynamics of disease transmission.
- Q.4 (a) Discuss the methods of hypothesis testing in clinical trials.
- (b) What is randomized controlled trials? Discuss the methods of carrying out a randomized control trial.
- Q.5 Describe the dynamics of disease transmission with suitable diagram and also discuss the modes of disease transmission.
