International Institute of Health Management Research (IIHMR)
NEW DELHI
Batch- 2016-18
Term Exams

Time – 3 Hrs   **Total marks: 70**
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Essentials of Demography
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Instruction:

All answers are to be written on the answer sheet only. Answers written on the question paper will not be marked. Please mention the roll number on your answer sheet.

Part I: **20 Marks**

Q1.   Attempt all questions   **(5 Marks)**

1. The shape of the age specific mortality curve of countries with low mortality is roughly --
    (i)   U shape   (ii) V shape (iii) J shape   (iv) None of above

2. Marriage is
    (i)   Biologically identifiable event
    (ii)   Culturally and socially event
    (iii)   Biologically identifiable and Culturally & socially events
    (iv)   None of the above

3. Bongaarts model for Proximate Determinants of Fertility
    (i)   TFR= $C_{m*} C_c *C_a$
    (ii)   TFR= $C_{m*} C_c *C_a *C_i$ * TF
    (iii)   TFR= $C_{m*} C_c *C_a *C_i$
    (iv)   TFR= $\sum_{x=15}^{49} * fx$

4. Content Errors deals with the -------------aspect of the enumeration
    (v)   Quantitative
    (vi)   Qualitative
    (vii)   Quantitative and Qualitative both
    (viii)   None of above

5. If growth rate stays same from year to year. Hence, a population growing at 3.5 % per year would take ------ years to double.
    (i)   70 years
    (ii)   50 years
    (iii)   20 years
    (iv)   None of above

6. NRR ----- - is often referred to as "Fertility at the replacement level"

      (i) > 1   (ii) = 1   (iii) < 1

7. As per census 2001, the number of net migrants by last residence showed ------------at the top of the list

      (i)   Maharashtra

      (ii)   Delhi

      (iii)   Gujarat

      (iv)   Haryana

8. Late transitional phase is

      (i)   Continuing decline in birth rates and slowdown in the fall in death rates

      (ii)   High and nearly equal birth and death rates

      (iii)   Decline in death rates but high birth rates continue

      (iv)   Low and nearly equal birth and death rates

9. If value of Whipple's Index is >= 175 then data is

      (i)   Highly accurate data

      (ii)   Fairly accurate data

      (iii)   Approximate data

      (iv)   Rough data

      (v)   Very rough data

10 $_nq_x$ is the ………

      (i)   Probability of dying of a person between the age group 'x to x+n'

      (ii)   Probability of survival of a person between the age x to x + n

      (iii)   Number of persons surviving at the beginning of age x.

      (iv)   Number of deaths in the age group 'x to x+n'.

Q2. Please give the name of the **five** out of the followings.   **(5 Marks)**

(i)	AIDS	(ii)	NSSO
(iii)	SMAM	(iv)	SRS
(v)	CWR	(vi)	PPR
(vii)	NSV	(viii)	PPIUCD
(ix)	ASFR		

Q3. Define (Attempt any 10 questions) **(10 Marks)**

(i)	Demography and Population Studies	(ii)	Fecundity and Fertility
(iii)	Birth Order and Parity	(iv)	Reproductive Period and Amenorrhea
(v)	Demographic Dividend	(vi)	Still birth and Live birth
(vii)	Peri-natal Mortality Rate and Neo-natal mortality rate	(viii)	Total Fertility Rate and Net Reproduction Rate
(ix)	Net Migration	(x)	Currently Married
(xi)	Literacy	(xii)	Population Composition
(xiii)	Age-Sex structure	(xiv)	Coverage Errors

Part II: Attempt any two question **(20 Marks)**

Q 1. Describe **any** suitable source of Demographic data <u>in detail</u>?

<p align="center">**OR**</p>

Estimate Mean Age at Marriage of Female population as given in below table

Table: Female population and Never Married Female Population of a area

Age-Group	Female population	Never Married Female Population
15-19	2470261	1896428
20-24	2162674	496112
25-29	2025216	97478
30-34	1,567373	25851
35-39	1679690	12592
40-44	1295986	9138
45-49	1216392	5891
50-54	953206	4099

Q 2. Describe Demographic transition in India ?

Q 3. Describe Migration pattern in developing nations and in Europe /USA.

Part II: Attempt all question (30 Marks)

Q 4. Estimate the Total Fertility Rate (TFR) and Gross Reproduction Rate (GRR) of India 2011. Assume sex ratio at birth as 105 male babies per hundred female babies .

Table: Number of Birth Last Year and Number of Women, census 2011

Age-Group	No of Birth	No of Women
15-19	1,286,682	56,544,053
20-24	7,067,897	53,839,529
25-29	6,051,443	50,069,757
30-34	2,999,290	43,934,277
35-39	1,415,445	42,221,303
40-44	872,856	34,892,726
45-49	947,686	30,180,213

Q 5. The Population of India in 2001 and 2011 was 1028 million and 1211 million respectively. Estimate the population in 2007 if the increase in population is constant during 2001-11. If the growth continues at the same rate, estimate the population in 2017.

Q 6. Complete below Abridged Life Table for Female- India, 1998

Table: Abridged Life Table for Female- India, 1998

Age x to x + n:	$_nq_x$	$_Np_x$	l_x	$_Nd_x$	$_nL_x$	T_x	e_x
0	0.07350	0.92650	**D**	7350	94855	5890418	**J**
1-4	0.09197	0.90803	92650	8521	385300	5795563	62.6
5-9	0.01193	0.98807	84129	1004	418136	5410263	64.3
10-14	0.00598	**B**	83125	497	414384	4992128	60.1
15-19	0.00995	0.99005	82628	822	**G**	4577744	55.4
20-24	0.01265	0.98735	81806	1035	406443	4166658	50.9
25-29	0.01292	0.98708	80771	1044	401247	3760215	46.6
30-34	0.01390	0.98610	79728	1108	395868	3358967	42.1
35-39	0.01489	0.98511	**E**	1171	390171	2963100	37.7
40-44	0.01882	0.98118	77449	1458	383600	2572929	33.2
45-49	0.02567	0.97433	75991	1951	375079	2189329	28.8
50-54	0.04305	0.95695	74041	3187	362234	1814250	24.5
55-59	0.06623	0.93377	70853	4693	342534	1452015	20.5
60-64	0.11232	0.88768	66160	7431	312225	1109482	16.8
65-69	0.16430	0.83570	58729	9649	269524	797257	13.6
70-74	0.25480	0.74520	49080	12506	214137	527733	10.8
75-79	0.32636	0.67364	36574	11936	153031	**I**	8.6
80-84	0.46655	0.53345	24638	11495	94453	160566	6.5
85+	**A**	**C**	13143	**F**	66112	**H**	5.0