



**UNIVERSITY EXAMINATION  
ACADEMIC YEAR 2020/2021**

**FIRST YEAR FIRST SEMESTER REGULAR EXAMINATION**

**MASTERS OF EDUCATION IN EDUCATIONAL PLANNING AND MANAGEMENT**

**COURSE CODE: EPM 829 COURSE TITLE: QUANTITATIVE TECHNIQUES IN  
EDUCATIONAL PLANNING**

**DATE: 5.10.21 TIME 2.00PM-5.00PM**

**DURATION: 3 HOURS**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question One (compulsory) and Any other TWO (2) Questions

1. (a) You are newly employed to be in-charge of the Ministry of Education Planning department. During your orientation you observe that data had not been taken seriously in the department and little data is available. In your demographic analysis course at the University you were informed that, to plan without data is like walking in the dark without a direction. Describe the type of data you will put in place and illustrate how these data will be useful in the planning of education system in Kenya. (20 marks)
  
- (b) Discuss the factors which in your opinion limit reliability of demographic data as a tool guiding investment choices in the education sector in developing countries (10marks)
  
2. (a) Define the following terms as used in educational planning: (3marks)
  - i) Repetition rate
  - ii) Transition rate
  - iii) Grade retention rate

(b) The data sets provided in Appendices 1, 2 and 3 shows the enrollments, repetition, dropout rates for selected grades and years and population data for County X. Use the information to compute the following (12marks)

- (i) Grade Intake Rate (GIR) for 2003
  - (ii) Net Intake Rate (NIR) for 2005
  - (iii) Gross Enrolment Rate (GER) in Grade 3 in 2004
  - (iv) Net Enrolment Rate (NER) in Grade 1 in 2000
  - (v) Gender Parity Index for Grade 2 in 2001 and 2002
3. Discuss the methods that can be used by Educational planners to establish and maintain teachers' data base in Kenya
4. Discuss the measures that can be adopted to enhance efficiency of an education system

**KIBU observes ZERO tolerance to examination cheating**

This Paper Consists of 3 Printed Pages. Please Turn Over.

## APPENDIX 1: ENROLMENT DATA SET FOR COUNTY X

Year	Grade 1		Grade 2		Grade 3		Grade 4		
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
	*	329978	331978	296980	299776	272925	275494	251910	254281
2000	**	369575	371815	326678	329754	294759	297534	269543	287338
	*	331284	311792	296156	281548	274005	258743	252907	238820
2001	**	364412	342971	322008	304072	293185	276855	270610	269866
	*	342167	328769	307950	296878	283006	272831	261215	251823
2002	**	372962	358358	331047	319144	299987	289201	279500	284560
	*	367211	363773	330490	329390	303720	302709	280334	279401
2003	**	396588	393955	354285	353106	321943	320872	299957	315723
	*	381230	379006	343107	342242	315315	314521	291036	290303
2004	**	407916	405536	366781	365857	335811	334965	311409	328042
	*	412481	411179	371233	371295	340421	341220	314208	314946
2005	**	437230	435850	394249	394315	360846	361693	336203	355889

\* Refers to enrolled students where each grade corresponds to its official age

\*\* Refers to enrolled students irrespective of age

## APPENDIX 2 POPULATION DATA SET FOR COUNTY X

Year	Age 6		Age 7		Age 8		Age 9	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
					28864			
2000	348985	352475	314086	317237	5	289223	266420	266952
					28885			
2001	349237	352729	314313	317456	4	289432	266612	267145
					30194			
2002	365067	368718	328560	331846	7	302551	278697	279254
					31567			
2003	381663	385480	343497	346932	3	316305	291367	291949
					32817			
2004	396772	400740	357095	358880	0	329483	302901	304113
					35626			
2005	431677	435994	388509	390452	3	357688	328831	330146

APPENDIX 3 REPEATERS AND DROP OUT FOR COUNTY X									
Year		Grade 1		Grade 2		Grade 3		Grade 4	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2000	*	330	620	594	280	546	540	1008	926
	**	66	93	95	112	55	51	48	47
2001	*	331	624	596	282	548	543	1012	931
	**	66	94	95	113	55	52	48	48
2002	*	342	658	616	297	566	573	1045	982
	**	68	99	99	119	57	55	50	50
2003	*	367	730	661	329	607	636	1121	1090
	**	73	109	106	132	61	61	53	56
2004	*	381	758	686	342	631	660	1164	1132
	**	76	114	110	137	63	63	55	58
2005	*	412	822	742	371	681	717	1257	1228
	**	82	123	119	149	68	68	60	63

\* Refers to repeaters  
 \*\* Refers to dropouts