



KIBABII UNIVERSITY

UNIVERSITY EXAMINATION
ACADEMIC YEAR 2020/2021

FIRST YEAR FIRST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION
MASTERS OF EDUCATION IN EDUCATIONAL PLANNING AND MANAGEMENT

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

DATE: 21.01.22

TIME 8:00- 11:00 AM

DURATION: 3HOURS

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 |
| 2000 | 348985 | 352475 | 314086 | 317237 | 288645 | 289223 | 266420 | 266952 |
| 2001 | 349237 | 352729 | 314313 | 317456 | 288854 | 289432 | 266612 | 267145 |
| 2002 | 365067 | 368718 | 328560 | 331846 | 301947 | 302551 | 278697 | 279254 |
| 2003 | 381663 | 385480 | 343497 | 346932 | 315673 | 316305 | 291367 | 291949 |
| 2004 | 396772 | 400740 | 357095 | 358880 | 328170 | 329483 | 302901 | 304113 |
| 2005 | 431677 | 435994 | 388509 | 390452 | 356263 | 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