112 Intro to Computer system 2015 Exam

La lb o o o 3 O l 1 Of O l J l 0 I o l o x x x X o e i l O O I I O E f f fo X c i o x x x x X l i r X X X X o o o O 2 o l o l o 0 I X X X X IC Kmapfor Dzi 2 o l o 4 l O 0 3 O l 1 X X X X QcQo 4 L o o J l o 1 ZQ2 Oo ol u lo r l 0 I 0 o o o 00 O l O X X C i o 01 X O X X X l I i F E F Xx I 12 02QiQft Qi.QotIQ lo O X

Kmapfor Dii KmapforDoi QcQo QcQo ZQ2 Oo ol u lo IQ2 Oo ol u lo Oo U 0 O X 00111 ol X O X X ol X O K X il 0 o X X il 1 O X to M X X O lo O X X O D\_Qi Q QI Do I QitQiQo

Enman D

track O

Le Kmap for 0 i k map for Oz Qiao Qiao

Q2 00 Ol Il lo Q2 00 Ol Il lo O O I 1 O O l O 0 I I 0 O l D o O O Qo Oz QE Circuit Not part of the questions

Qo Oi to Oz

Za Kmap for output

boba bibo 00 Oo O Ol o Li o lo o ol I O O O 11170 O l d Output bz.bztbs.be bs bet bi b Any sum bigger than 9 should be considered here

if the sum becomes an invalid combination there should be a carry out part circuit FHpCou isCEomAdda

C Decimal to 11 12 The 4 bit number should be 0110binary

Binary lolo loll 1100

BCD 0000 0001 0010 d ein

AB fa.nl ITI EEi hIE cbit Snm am e Any bigger than 7 should incur a carry to the next digit

B TIE

tin adhd'I E sum cont

Assuming A and B are both within the range oil