Transportation Exam , Year 2011

ALLAH Y3eenkom !!!

2id3oolna bil Exams :D

M. Rasem (Aboo Al Roos Jr.)

1) 3 design requirement for sag Vertical Curve, and Explain each one

2) 3 design requirement for crest Vertical Curve, and Explain each one

3) → Explaing Backward forming, Backward recovery, forward forming forward reccovery shockwaves? The Before and after situation and give real life example of each?
→ illustrate each shockwave on a graph.

4) what time mean speed, give the equation, explain the variables in the equation!

5) what space mean speed, give the equation, explain the variables in the equation?

6) Show the difference between sketch planning and traditional planning on a graph

ch one for Crest Vertical Curve, and Eplain

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7) Show the difference between sketch planning and traditional planning on a Gruph

8) Two advantages of the gravity Model over the ~~fr~~ fratar Model

$$Y(f) = 8 - 0.2R_c + 0.5R_c + 10F - 6F$$

F: is the cars owned
R_c: is the number of ppl per HH
→ trips produced

~~Give a free critic~~ criticize this model, give three

5) ... explain the variables

what space mean speed, give the equation, explain the variables in the equation?

6) Show the difference between sketch planning and traditional planning on a Graph

7) Two advantages of the gravity Model over the ~~[illegible]~~ fratar Model

8) $Y(I) = 8 - 0.2R_c + \rightarrow 0.5R_e + 1oF - 6F$

F: is the cars owned

R_c: ~~are~~ is the number of ppl per HH

→ trips produced

~~Give three critic~~ criticize this model, give three reasons.

9) I dont remember

I think those were the short Answer questions

* Multiple choice there were 45 questions, Do 4
I dont remeber them.

long answer question:

(1) creat a super elevation development, and plot on a graph. Given a lot of ~~#s~~ numbers

(2) $K = 24S - 2.5v + \ln V$

a) find free flow speed

b) [illegible]

Multiple choice there were 45 questions, Do 40
I dont remeber them.

long answer question:

① creat a super elevation development, and plot it on a graph. Given a lot of ~~#s~~ numbers

② $K = 24S - 2 \cdot Sv + \ln V$

a) find free flow speed
b) lane capacity
c) draw a speed – density diagram

③ $U(k) = 10 - 0.2T_d \rightarrow 0.02T_r - 0.5T_w - 0.1C$

T_d ↓ waiting time; T_r ↓ in vehicle time; T_w ↓ cost; C ↓ ce

$$n = 24S - 2.5v + \ln v$$

a) find free flow speed
b) lane capacity
c) draw a speed-density diagram

③ $U(K) = 10 - 0.2T_u - 0.02T_r - 0.5T_w - 0.1C$

T_u ↓ something; T_r ↓ waiting time; T_w ↓ in vehicle time in min; C ↓ cost in cents

	Tu	Tr	Tw	C
Transit	5	10	20	300
Car	10	0	35	250

a) find probability of each model?
b) If Tr for transit increased by 5min?
C)
D) I dont know, very hard
E)

④ Actual commuter travel Motor Cycle

Tr model?

C) Tr for transit increased by 5min?

D) I dont know, very hard

E)

④

Time	Arrival	Cumulative Arrival	Motor Cycle
6:00 6:10	#	#	5
6:10 : 6:20	#	?	15
⋮	#	#	6
⋮	?	#	6
⋮	#	?	5
7:00 7:20			5

a) find the maximum Q length?

b) The maximum delayed time?

c) The time the Queue started and ended?

5) example 3.8 from notes., shock whose

6) Something About Binomial, posterior distributed (Hard)

7) Something about Bayes theorm (Hard)