SULIT

BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENGAJIAN TINGGI

JABATAN KEJURUTERAAN AWAM

PENILAIAN ALTERNATIF BERIKUTAN
PELAKSANAAN PERINTAH KAWALAN BERSYARAT

SESI JUN 2020

DCB6232 : BUILDING TRANSPORTATION

NAMA PENYELARAS KURSUS : MARIAM BINTI ABDULLAH

KAEDAH PENILAIAN : PEPERIKSAAN ONLINE

JENIS PENILAIAN : SOALAN ESEI BERSTRUKTUR (2 SOALAN)

TARIKH PENILAIAN : 4 FEBRUARI 2021

TEMPOH PENILAIAN : 1 JAM

LARANGAN TERHADAP PLAGIARISM (AKTA 174)
PELAJAR TIDAK BOLEH MEMPLAGIAT APA-APA IDEA, PENULISAN, DATA ATAU CIPTAAN ORANG LAIN. PLAGIAT ADALAH SALAH SATU PENYELEWENGAN AKADEMIK. SEKIRANYA PELAJAR DIBUKTIKAN MELAKUKAN PLAGIARISM, PENILAIAN BAGI KURSUS BERKENAAN AKAN DIMANSUHKAN DAN DIBERI GRED F DENGAN NILAI MATA 0.
(RUJUK BUKU ARAHAN-ARAHAN PEPERIKSAAN DAN KAEDAH PENILAIAN (Diploma) EDISI 6, JUN 2019, KLAUSA 17.3)

INSTRUCTION:
This section consists of **TWO (2)** structured questions. Answer **ALL** questions.

ARAHAN:
*Bahagian ini mengandungi **DUA (2)** soalan berstruktur. Jawab semua soalan.*

QUESTION 1
SOALAN 1

CLO1 C3 (a) Describe **TWO (2)** functions of emergency and safety switches in electrical lift

*Huraikan **DUA (2)** fungsi suis kecemasan dan keselamatan di lif elektrik*

[4 marks]
[4 *markah*]

CLO1 C3 (b) Differentiate between lift car door and landing door

Bezakan antara pintu kereta angkat dan pintu pendaratan

[5 marks]
[*5 markah*]

CLO1 C3 (c) Illustrate **FOUR (4**) arrangements of lift at 10 storey office building

*Gambarkan **EMPAT (4)** susunan lif di bangunan pejabat 10 tingkat*

[8 marks]
[8 *markah*]

CLO1 C3 (d) Explain **FOUR (4)** functions of travelator in airport building

*Terangkan **EMPAT (4)** fungsi travelator di bangunan lapangan terbang*

[8 marks]
[8 *markah*]

QUESTION 2
SOALAN 2

CLO2
C4

(a) The elevator requirements for a building are not the same. It depends on the capacity and function of the building.

Keperluan lift pada sesebuah bangunan adalah tidak sama. Ianya mengikut kapasiti dan fungsi bangunan.

Describe the constructional requirement for a elevator as stated in Uniform Building By- Laws 1984.
Huraikan keperluan pembinaan sebuah lif mengikut Undang-undang Kecil Bangunan Seragam 1984.

[4 marks]
[*4 markah*]

CLO2
C4

(b) Describe the ventilation requirement for a lift based on the Factories and Machinery (Electrical Passenger and Goods Lift) Regulation 1970.
Huraikan keperluan pengudaraan pada lif seperti yang dinyatakan dalam Peraturan Kilang dan Jentera (Lif Penumpang dan Barang Jenis Elektrik)1970.

[8 marks]
[*8 markah*]

CLO2
C4

(c) A group of lift cars with 3 m/s speed are designed for 10-storey shopping mall with 5 m level height. Given the door width is 1.2m, door speed is 0.5m/s, L is 50m and n is 20 persons. Calculate the round trip time.
Sekumpulan kereta lif berkelajuan 3 m/s direka bagi sebuah pusat membeli belah 10 tingkat yang memiliki ketinggian level 5 m. Diberi nilai kelebaran pintu lif adalah 1.2m, kelajuan pintu terbuka adalah 0.5m/s, L adalah 50m dan n adalah 20 orang. Kirakan masa perjalanan sepusingan.

[13 marks]
[*13 markah*]

SOALAN TAMAT

FORMULAR

Formula:

i. Peak demand in 5 minutes $= \frac{(\text{Floor area})(\%\ \text{starting \&stopping time})}{(\text{Floor area per person})(100)}$

with Floor area per person = population density
% starting and stopping time = 17% for unified
= 12% for staggered

ii. Car travel distance, L = (Room height x Number of storey)

iii. Load factor, n = (80% x Maximum capacity of car)

iv. Probable number of stops, $S_1 = S - S\left(\frac{S-1}{S}\right)^n$

with S = maximum number of stops
n = 80% of maximum capacity of car

v. Total upward journey time, $T_o = S_1\left(\frac{L}{SV} + 2V\right)$

with S_1 = probable number of stops
L = car travel distance
S = maximum number of stops
V = car speed

vi. Total downward journey time, $T_d = \left(\frac{L}{V} + 2V\right)$

with L = car travel distance
V = car speed

vii. Door operating time, $T_o = 2(S_1 + 1)\left(\frac{W}{V_d}\right)$

with S_1 = probable number of stops
W = door width
V_d= door speed

viii. Total passenger transfer time, $T_p = 2n$

with n = 80% of maximum capacity of car

ix. Round trip time, RTT = $(T_u + T_d + T_o + T_p)$

with T_u = Total upward journey time
T_d = Total downward journey time
T_o = Door operating time
T_p = Total passenger transfer time

x. $$\text{Interval} = \frac{(\text{Round trip time})}{(\text{Number of cars})}$$

xi. $$\text{Capacity of the group} = \frac{(5 \text{ minutes x } 60 \text{ seconds x Number of cars x n})}{(\text{RTT})}$$

with n = 80% of maximum capacity of car
RTT = Round Trip Time