
UNIVERSITI SAINS MALAYSIA

1st. Semester Examination
2005/2006 Academic Session

November 2005

EAS 353/3 -

Duration: 3 hours

Instructions to Candidates:

1. Ensure that this paper contains **NINE (9)** printed pages including appendices before you start your examination.
2. This paper contains **FIVE (5)** questions. Answer **FOUR (4)** questions only. Marks will be given to the **FIRST FOUR (4)** questions put in order on the answer script and **NOT** the **BEST FOUR (4)**.
3. All questions carry equal marks.
4. All questions **MUST BE** answered in English.
5. Each question **MUST BE** answered on a new sheet.
6. Write the answered question numbers on the cover sheet of the answer script.

(Dr. Bad)

2. (a) Give **FIVE (5)** differences in the design consideration for solid slab (one-way and two-ways sparring) and flat slab.

(5 marks)

- (b) Sebuah papak konkrit setebal 150 mm mempunyai tiga sempadan selanjar menanggung beban tangki air sebesar 230 kN. Keluasan tapak tangki ialah 3 x 2.5 m seperti yang ditunjukkan dalam Rajah 2.0. Tentukan:

- (i) beban rekabentuk
- (ii) momen lentur muktamad
- (iii) tetulang utama pada tengah rentang dan sempadan
- (iv) daya ricih muktamad
- (v) pesongan dan keretakan

Gunakan data berikut:

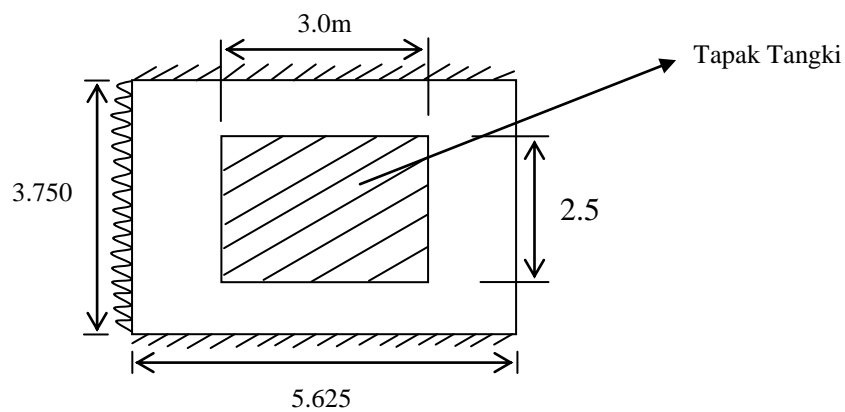
Tebal papak konkrit, $h = 150$ mm

Kekuatan ciri konkrit, $f_{cu} = 30$ MPa

Kekuatan ciri kekuli, $f_y = 250$ N/mm²

Tebal penutup = 220 mm

Beban kenaan = 2.5 kN/m²



Rajah 2.0 : Papak Konkrit Selanjar

