

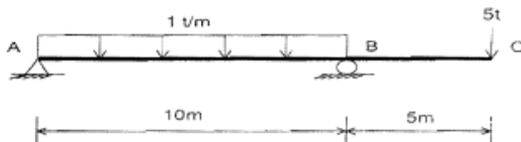
系所組別 土木工程學系在職專班

考試科目 土木工程學(專班)

考試日期 0306 節次 3

※ 考生請注意 本試題 可 不可 使用計算機

- 88 水災重創南台灣(土石流、斷橋與淹水等),讓我們體會到永續工程與防災管理對 21 世紀土木人而言,可謂為一慈悲工程。請您就工程生命週期之規劃設計、施工(含材料與工法等)與維護管理各方面,提出可供避免或降低未來此類重大災害發生的建議。(16%)
- 各國代表去年底於哥本哈根所舉行的全球氣候變遷會議中,對節能減碳作出了控制溫度上升與減少 CO₂ 之決議,此對於高耗能的營建工程將有重大影響。請您分別就既有(已使用)的土木設施或建築物,提出能達到節能減碳的工程作法。(16%)
- 請繪製梁(均勻載重為 1 t/m)之剪力圖與彎矩圖。(16%)



- 何謂主動土壓力與被動土壓力?請以作用在擋土牆之側向力為例說明產生此二土壓力之條件。(16%)
- 請依以下之進度資料,繪製箭線網圖並計算各作業之總浮時與自由浮時。(16%)

作業項目	作業時間(天)	前置作業
A	5	—
B	4	—
C	3	B
D	3	B

- 請翻譯及評論以下的短文。(20%)

Taipei 101 had yielded its status as the world's tallest building to Dubai couple weeks ago. The following statements were cited from Mr. Liu, a spokesman of the Taipei 101 company:

Our company has applied for green building certification. It is expected to be certified in 18 months and will become the world's tallest green building. Taipei 101 aims to reduce its energy and water consumption by 10 percent under a 60-million-dollar investment. We expect to recover this investment within three years after the project is completed. Annual utility savings is expected to be \$20 million. In addition, we expect that visitors to the skyscraper's observatory will keep increasing due to this innovative project. However, one of the main challenges for this project is to persuade about 10,000 employees to cooperate.