

類 科：輪機技術

科 目：輔機

考試時間：2小時

座號：\_\_\_\_\_

※注意：(一)禁止使用電子計算器。

(二)不必抄題，作答時請將試題題號及答案依照順序寫在試卷上，於本試題上作答者，不予計分。

(三)本科目除專門名詞或數理公式外，應使用本國文字作答。

一、離心式泵與齒輪式泵的特性關係，請就(一)水頭與排量，(二)轉速與水頭，(三)轉速與排量，(四)水頭與所需功率，(五)轉速與所需功率，分別試述之。(20分)

二、真空沸騰式造水機中的真空度過高或過低有何不良影響？如要保持足夠持續的真空度的條件為何？請分別試述之。(20分)

三、船舶用兩段式往復式空壓機系統中有那些部分需要冷卻及其作用好處為何？請試述之。(20分)

四、冷凍系統中壓縮機吸入冷媒壓力過低，其可能的原因與處理之對策為何？請試述之。(20分)

五、請將下列英文譯成中文：(20分)

This sewage treatment plant consists of a tank with three main compartments: aeration compartment, settling tank (clarification) compartment, chlorination and discharge compartment.

Chlorination and discharge tank water from the clarification section is mixed with disinfectants (sodium hypochlorite) and is sterilized. The compartment has float operated switches which activate the effluent pump discharge when the high level is reached and stop the pump when the compartment is nearly empty. Chemical dosing is by tablets added to the basket in the chamber and these dissolve slowly when in contact with the water in the chamber as the water level rises.