

(1) With reference to a centrifugal pump used for ballast /bilge emergency

explain the purpose of

- (a) the volute
- (b) the purpose of the wear rings and why the clearance is critical
- (c) the need for a priming device

2 state three reasons for a relief valve to lift

- (b) state three reasons a relief valve would not lift
- © explain how the correct operation of a relief valve is ensured

3(a).list 5 fittings on a main air receiver

- (b) explain the purpose of the fittings fitted in a

4.worksheet

identify the valves and ports

5. With reference to reduction gearing and a pneumatic clutch device

- (a) state five protection devices fitted
- (b) explain the need for each device fitted

6. with reference to a gearbox explain

- (a)
- (b) pitting
- © abrasion

7. sketch a shaft coupling of the flexible diaphragm type

8. Describe the response of the voltage output of an ac alternator when a sudden load is applied

9 State the requirements for connecting a three phase generator to the switchboard

sketch a connection diagram for synchronising lamps stating when synchronising would occur

State what happens if incorrect synchronizing should occur

State the possible consequences of incorrect synchronising

10 . With reference to lead acid batteries state the precautions when preparing the electrolyte from concentrated acid

describe the procedure should acid come in contact with one of the following

(a) Surface or work area

(b) eyes