



8. (a) Draw & explain a navigation light circuit with indicators/alarms and alternate power supply (6)
- (b) Explain the procedure for starting emergency generator manually (6)
9. (a) Explain the parallel running and load sharing of alternators (6)
- (b) Draw and explain the following
- (i) Overload Trip (3)
- (ii) Short Circuit Trip (3)
10. (a) List out the following
- (i) Machineries found onboard a ship (3)
- (ii) Supporting systems for the main engine plant (3)
- (b) With a simple sketch explain the working of any one type of fresh water generator on board a ship (6)
- 11.(a) With a help of a neat sketch explain the working of an air compressor (6)
- (b) Explain water tube boiler with a neat sketch (6)
- 12.(a) Draw and Label the Fire Main Line/System showing the Fire Pump, Emergency Fire Pump, Isolation Valves and Fire Hydrants (6)
- (b) Draw and explain a typical bilge & ballast system of a ship (6)
- 13.(a) Draw and describe a 2 ram electro hydraulic steering gear system (6)
- (b) Describe the compression refrigeration cycle (vapour compression system of refrigeration) with a line diagram sketch with labelling of components (6)

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