

## CLASS 1 ORAL QUESTIONS

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Examiner – Mr. Rupasinghe

Date – 14<sup>th</sup> of February 2022

Result – Pass

Time duration .- 1.05 Hrs

1. Start the question about my project report exhaust gas cleaning
2. How does air pollution happen related to NO<sub>x</sub> SO<sub>x</sub>
3. Source of Sulphur for combustion
4. Sources of NO<sub>x</sub> formation
5. What are the other sources of N
6. What is the technical term for fuel NO<sub>x</sub>
7. What are the methods to reduce NO<sub>x</sub> formation
8. What are the other methods of NO<sub>x</sub> formation other than marine field
9. Primary methods describe
10. Describe EGR system
11. How does NO<sub>x</sub> reduce by fuel timing
12. What are the conditions need to increase formation of NO<sub>x</sub>
13. What happen when injection timing advance
14. Timing advance of Fiat type engine. (I said ,I don't have any idea about that)
15. Does P<sub>max</sub> increase power
16. Does P<sub>max</sub> increase efficiency of combustion
17. Does mean effective pressure increase due to P<sub>max</sub> increase
18. What is ignition Quality
19. What factor decide ignition Quality residual fuel
20. CCAI value increase what happen
21. Explain how does it happen
22. What factor decide ignition Quality distillate fuel
23. What happen cetane number increase

24. *How you do crank case inspection as CE*
25. *What thing you specially check in crank case*
26. *You have seen brownish paint patches inside crank case what you suspect*
27. *How does micro biological degradation of LO happen*
28. *What are the indications of micro biological degradation*
29. *Your company ask to take bunker of MDO 90% as per SMS but you convince the superintendant to take only 85% of capacity what are the reasons*
30. *What is the main factor governing capacity*
31. *Explain preparation for dry dock*
32. *Soon as on dry dock as CE what you check*
33. *Explain bottom inspection from aft*
34. *Rudder inspection*
35. *What is jumping bar clearance*
36. *Importance of jumping bar clearance and what item protect by this clearances*
37. *Propeller inspection*
38. *What things as CE you request from superintendant when you go to dry dock*
39. *What are the connection connect to ship from dry dock*
40. *Which machinery need continuous cooling water*
41. *Why Crosshead lubrication is critical*
42. *What are the development of crosshead lubrication system from past to nowadays*
43. *Why bigger diameter shorter crosshead pin requirement*
44. *What forces act on crosshead*
45. *How does axial vibration occurs*
46. *How does pin deform due to bending moment*
47. *What are the bearing design to withstand edge loading*
48. *How does stern tube bearing prevent edge loading due to heavy propeller*
49. *Your ship FWD seal is leaking What are your action*
50. *Small discussion about bunker calculation*
51. *As CE what is your responsibility when doing unit overhaul*
52. *What instruction you give to your 2<sup>nd</sup> engineer*
53. *In maneuvering bride inform too much black smoke coming from funnel what is your action as CE*
54. *Small discussion about marine industry*