MCA UK Orals Question Bank:

- DRAW AND EXPLAIN 2 STROKE TIMING DIAGRAM.
- IS THE FUEL INJECTION ANGLE FIXED FOR ALL 2 STROKE ENGINES.
- HOW VIT WORKS
- HOW IS FUEL INJECTION TIMING CHANGED IN ME ENGINES.IF NO CAM ISPRESENT THEN HOW INJECTION TAKES PLACE.EXPAIN THE PROCESS.
- WHAT IS MOP ,CCU ,EICU AND TACHO (FEW GENERAL WORKING QUESTIONSON ME ENGINES RELATED TO HPS AND HCU SYSTEM)
- EXPLAIN MAPROL ANNEX 6 COMPLETE.
- WHAT IS ODP AND GWP.
- WHAT WAS THE ODP AND GWP OF THE REF GASES ONBOARD YOUR LASTVESSEL.
- WHAT ENTRIES ARE MADE IN NOX TECHNICAL FILE AND PARAMETERS FORNOX COMPLIANCE AS PER TIER 2 AND TIER 3.
- WHAT IS THE CURRENT REGULATION FOR THE SOX EMISSIONS.
- AS YOU HAVE SAILED ON A VESSEL WITH SCRUBBER SYSTEM ,WHAT WASTHE SULPHUR CONTENT OF THE FUEL USED ON-BOARD.
- WHY THE SYSTEM IS CALLED OPEN LOOP SCRUBBER SYSTEM.
- HOW DO YOU KNOW THE FUEL IS COMPLIANT WITH ALL THE REGULATIONS.
- WHAT IS THE EFFECT OF VANADIUM AND SODIUM PRESENCE IN THE FUEL .
- WHY IS THERE A DIFFERENCE IN BN VALUE OF CRANKCASE OIL,

CYLINDEROIL FOR 2 STROKE ENGINE AND 4 STROKE ENGINE OIL.

- TWO STROKE ENGINE TURBOCHARGER CARTRIDGE REPLACEMENT PROCEDURE (ONES I FINISHED WITH THE PREPARATION PROCEDURE HESTOPPED ME AS I TOLD HIM I HAVE NOT DONE IT PRACTICALLY)
- WHAT IS AXIAL FLOW AND RADIAL FLOW.
- PURPOSE OF DIFFUSER,NOZZLE RING AND LYBRITH SEAL.
- TYPES OF BEARING ON THE 4 STROKE ENGINE.
- WHY IT IS CALLED FLOATING BEARING.
- DIFFERENCE BETWEEN CONSTANT FLOW AND PULSE TURBOCHARGING
- CERTIFICATES CARRIED ONBOARD YOUR VESSEL.
- WHAT IS ANTI FLOULING CERTIFICATE FOR.
- HOW IS INSULATION RESISTANCE TEST CARRIED OUT ON A MOTOR28.WHAT SHOULD BE THE MINIMUM VALUE FOR I.R
- DRAW AND EXPLAIN STAR DELTA STARTER.
- WHAT ALL CHECKS ARE DONE ON THE MOTOR PANEL.
- PURPOSE OF BOILER WATER TESTING. .32.EXPLAIN THE TESTING PROCESSAND CHEMICALS USED FOR DOSING .
- Main engine performance, including power card, draw card, light spring.Main engine reversing

- Main engine fuel pump overhauling.
- Main engine fuel injector, start from test vice.
- Unit overhauling with all safety measures, liner, piston
- Marpol Annex6, what are regulations covered , then NOx, SOx and procedurefor reduction(dwi,exr,scr, open scrubber and closed scrubber)
- How to release CO2 ,if your c/e not available.
- General Experience / what kind of ships you are working on
- What is the exam you are doing. Wanted to hear the complete sentence.

43. What is the exam you are doing. Wanted to hear the complete sentence. Where do you find the syllabus.

- Type of Engines
- Man B&W 10K98MC-C what is k stands for

46. Sulzer 6RTA72U what is u stands for
47. Marpol Annex VI Regulations
48. What are ozone depleting substances
49. Where do you find them onboard

- Types of gases, what gas do you use onboard,
- How do you record, what measures do you take to prevent pollution.

52. Ozone Depletion value of R22
53. What is Global Warming Potential.
54. Figures for new gases.

- NOx file what to record. What do you check on the components. How do you maintain.
- Two stroke timing diagram. Explain what angles can be changed, reasons.

- Procedure to liner overhaul. What are the checks to be done on the liner and piston. How to record. What do you do for a polished liner.

- What do you find in Analysis report
- Boiler water tests. What are the chemicals to be used. The purpose of eachchemical. What is the reason for increasing of Cl level.
- Main lube oil pump switch board, what are the checks to be done.

Motorside inspection

65. IR test

- Explain Star delta.
- What are the other starting methods.

68. Terminal box cable connection method.
69. Showed me 2 stroke timing diagram and asked me to explain
70. How would you know if the engine is working efficiently? Told him drawcard and power card

- Showed me diagrams of draw cards, 4 of them but asked questions on only the first 2. Early injection and late injection. What the drawings represent, the meaning of the first dotted line on the diagram and the consequences of the early and late injections. He was looking for uptakefire.
- Asked what actions I will take in the event of uptake fire.
- What actions will you take to correct the late injection on the fuel pump

74. How do you adjust the fuel pump timing?

- What will be of concern to me as a result of the late injection – MARPOLannex IV I mentioned Sulphur content and he asked what else would beof concern. NOx. How do you control? I mention the primary and secondary methods of control.
- If you have to change the fuel pump, what is required of you. He waslooking for NOx technical file.

- Your compressor runs for 2-3 hours daily, all of a sudden, it is running for6 – 7 hours, what could be the reason?
- What would happen if the intercooler is leaking.

83. What are the safety devices on the compressor?
84. How many relief valves do we have on the compressor.

- What is the difference between relief valve and safety valve.
- How do we get fresh water onboard. I explained about the two staged vacuum system and he asked which water is used in the condenser.
- If temperature and vacuum are ok, but you are still getting salt content above required level, what could be the problem.
- What happens to the brine generated.

89. How is the water treated .
90. Where do we get the guide for the treatment. (captains medical guide)
91. What do we need to do to use the water for boiler feed.

- How do we remove oxygen.
- If you find oil floating on the boiler reservoir what could be the reason.

94. You want to carry out maintenance of the fuel oil tank, talk me through the procedures to take.

- What are the gases the gas tester test's for.
- What percentage of oxygen should you expect. If the gas tester reads 30% oxygen, what does that mean? Faulty tester,he was looking for calibration.
- If all of a sudden you no longer get a response from the motor man inthe tank, what will you do?
- What are the checks you carry out on the BA set
- What will happen if star connection does not disconnect and the deltaconnection comes online?
- What is the difference between the Over current relay and Fuse?
- If you want to work on the motor what procedure would you take? Waslooking for LOTO
- There is fire in the engine room and the chief engineer is incapacitated, the captain has asked you to release the CO2, what is the procedure? I mentioned quick closing valve and he mentioned that I should have started me emergency generator so I don't throw my ship into blackout.
- Why is the pilot gas to the main valve released first

- Where would you get this procedure from?
- What does the SMS comprise of?
- How do u know about your Class 2 oral exam syllabus?.
- Draw and explain 2 stroke timing diagram.
- Draw and explain power card and draw card.
- Draw ignition delay diagram and explain the causes?
- What do u meant by injection delay and how to know about it?
- What is VIT ? what is significance of it?How to know about setting of VIT ofall the units.
- Draw Fuel pump and show how VIT and fuel plunger is adjusting?
- How to confirm that fuel bunkered is bad quality and what are the information given in BDN?
- What are the action u will do if u receive bad quality of fuel?
- How do u know that ur Ship is complied with Marpol Annex 6? He want to listen about IOPP certificate? What is SOX limits and he want to know about year wise changing limits?
- Where do u expect h2S and what is the limit? How u know that it is safe toenter in double bottom tank.
- How u will prepare ur boiler for survey explain procedure in details. Whatare thing u will check in the furnace side of boiler.
- How to overhaul safety valve and what are the test u will do to know safetyvalve spring is in good condition.
- What are causes of cracks in the boiler tubes. How to find crack tube
- Explain all the boiler water test in details and how u will know about sea water ingress.
- What u will do to reduce oxygen level in the boiler water.20.How do u know about the healthy condition of motor
- What is the procedure of IR testing of motor? What are the steps to followbefore overhauling any electric motor
- Draw star and delta connection circuit and explain the safeties?
- What do u mean by STCW
- What is IMO and what are the other convention of IMO.25.What do u mean by SOLAS?

- What do u mean by bulkhead deck.
- what are the type of bulkheads? I explain about A60, B30 and C bulkheads.
- What are the types of watertight doors
- How will you know that ur Air condition play is not efficient.
- What are the sign of gas leakage and how will you restore ur plant.
- What do u mean by critical temperature the gas?
- How these gases are related to pollution?
- What is the procedure for recovering the gases and to maintain records.
- What are the other systems or books u follow to ensure safety of ships. Hewants to listen about SMS system and lock out tag out procedure
- How will you guide ur juniors to prepare for class 2 oral exam?

- How will you conclude early injection, what are indications, what are the actions you will take to rectify
- If late injection happens what all the indications of late injection: effects of late injection
- So, what will happen if improper combustion
- Effects of accumulation of carbon particles in scavenge places
- Uptake fire, how to identify if the fire is small or iron fire & actions to fight it.
- FO tank entry procedure in detail, Atmosphere checks and contains (I added atmosphere limit from COSWP)
- What will you do if radio communication is lost from the team.
- Who will be STBY at the entrance and why.
- Shown Co2 bottle fire extinguisher line diagram and asked to explain the diag what are the safeties.
- CE is injured and Master asked you to release CO2 to ER, explain complete procedure and what all things to check during release. Dangers in Co2 room.
- 4th Eng calls and tell you that frequency is hunting while taking AE onload, your actions and causes.
- What is overspeed protection, reverse power protection. How to test.
- Do you have Bow thruster: yes: explain about principle – hydraulic driven fixed pitch propeller? explain full hydraulic circuit?
- Safeties of Large size motors

- why use starter & delta ckt for large motors explain with numbers? when you will change star to delta? what is the reason of trip after changing to delta (he was looking for timer fault). What will happen if stuck in star.
- Reason for boiler PH 13, what will happen to boiler, action, cause. Foaming & purging ?
- Reason for caustic embrittlement how to control.

- Marpol ANX 6 reg 12 to 22
- STCW
- What is NOx tec file and what is there in it
- Oil in cascade tank, how will you know from where is it leaking and your actions and wt chem to use.
- what is EEBD where to use.
- Prov. Ref cycle explain and effects of air and moister in system. Reason for HP cut-out.
- Short cycling on ref compressor and reason.
- how do you know if survey is due.
- you are joining as a 2nd engineer , vessel is going to dry dock, yourresponsibility and duties
- where you can find everyone s dutie
- onboard explain ISM
- explain COSWP explain SMS
- what r the certificates on board Nd what are the conditions or surveys toget these certificates
- passenger ships fire protection structural construction, what type ofbulkheads used, class Nd temperature, timing .
- procedure to take out keyless shrunk fit propeller Nd propeller with key.boiler safeties, prepare boiler for survey
- enclosed space entry
- induction motor having some fault, what will you do , he wanted electricalwork permit , lock out tag out procedure , IR test Nd all
- how alternator works

- Two stroke valve timing diagram was screen shared and asked to explain valve timingdiagram: small cross questions.
- How will you asses the performance of main engine: Taking indicator cards
- Shown early injection, injection delay, draw cards and asked what all indications of this,explain this diagram.
- How will you conclude early injection, what are indications, what are the actions you willtake to rectify: leads to trouble shooting part ended up with saying timing.
- How will you check fuel timing in 2S engines, how to adjust with VIT, without VIT: explainedas per manual
- If late injection happens what all the indications of late injection: effects of late injection :improper combustion, hig exh temp, low pmax
- So what will happen if improper combustion: carbon deposits,
- Effects of accumulation of carbon particles in scavenge places : fire hazard
- How will you takle scavenge fire: explained as MAN BW procedures
- Effects of carbon deposits on cylinder liner? : liner wear , piston ring collapse etc
- Piston is pulled out and placed in workshop what all checks you will do: visual inspection,any cracks examine by dye penetrant test, any pitting marks, checking for scoring on piston rod.
- What all measurements you will take for piston,: All clearances, Template to check pistoncrown burning, groove depth, ring width.
- How to take butt clearance and axial clearance: Explained conventional procedures.
- How to assess the performance of EGB : temp difference,
- Explain how to replace and test faulty injector.
- How to alter Fuel Pump Timing. (Explained VIT)
- Fuel oil properties. (Pour point, flash point etc)
- How does Sulphur affect the engine. (Explained Cold corrosion)
- What is Hot corrosion.
- Your 4’th engineer tries to bring the incoming generator on-load but voltage is high, what action will you take.

- Electrical safeties on generator.(Asked about all trips)
- Earth fault on motor. What actions to be taken.
- Boiler gauge glass indicates oil traces, what actions will you take. Informed company and class actions to open up boiler for survey. Boiler chemical treatment, what are the tests and chemicals used.Explain SOLAS.

- ISM in detail
- PMS in detail
- Main engine fuel pump timing gear
- Dry Dock in brief
- Stern tube renewal of seal
- What is Pilgrim Nut
- Rudder clearance
- Structural fire protection
- Enclose space and rescue
- CO2 firefighting system in detail
- Star Delta draw and explain
- BA set explain
- Emergency generator testing procedure
- Inert Gas system in detail
- L.O analysis report
- F.O analysis report

- Fuel oil contamination of Lube oil in four stroke engine
- One unit exhaust temperature high. What actions to be taken
- Opening procedure of cylinder head
- What is short circuit
- Moisture in refer system, causes and remedies
- Entry procedure in forepeak tank

247. 2nd engineer responsibilities(special looking for documents under 2E which compliesto ism and marpol)

248. Wht is sms doc smc ism etc(sms in brief, ism jst definition only and purpose notasked abt chapters)
249. As 2E How would u implement PMS on take over Vessel
250. Type of survey carried out onboard
251. How would u know machinery survey due.(he want to hear class will give intimate tocompany and ship)
252. Asked about main bearing survey and complete procedures(before checks and afterinspection completed wht will u more checks-cc defection want to hear)
253. What is Turbocharger surging, cause,effect and while your in watch as 2nd eng whatwill be your action
254. Ask about lube oil analysis, why its carried out and in report what will u checked,how to identify that engines component is wear down from lube oil reports and Source of fuel oil contamination and effect
255. Refrigeration system have moisture inside, cause, effect and how will you removemoisture process here ask Cross Q)
256. How would IR testing carried out for 3 phase motor
257. What are the saftey protection for motor
258. What kind of short circuit is worse at all (LLL and phase to earth as sm one touch themotor at time he will get shock)
259. Cruises ship in drydock , what all the things u checked (special ask bow thruster checks, fin stabilizer checks, rudder clearance(how will you

- Fuel oil Analysis explain what all do we check?
- Presence of Vanadium Sodium, what to be understood?
- Explain Hot Corrosion.
- Explain Cold Corrosion.
- Fuel pump timing how to check and adjust.
- What to be checked if we are having Injection Problems.
- 4 Stroke engine complete overhauling procedure.

- Clearances to be checked during overhauling.
- Enclosed space entry procedure.
- Engine Room fire what actions will you take.
- Boiler water test and chemical dosing.
- Co2 fixed firefighting system explain.
- How to find Main Engine performance.
- Different diagrams, draw and explain. (Power, Draw Compression, LightSpring)
- What is Surging. How it happens.
- Drawing JCW system.
- How Crosshead Lubrication done.
- What you find in Lube Oil test result from shore.
- How to take over as 2E to a new ship and new company.
- What is SMS explain.
- What is STCW. What ratings should have.11.Draw AC system for accommodation.
- Draw Flammability diagram. (explain)
- How high voltage used for Electric propulsion.
- Hazards of LNG.
- LNG cross section diagram. 16.How you train for firefighting.
- Hazards of LNG on environment.
- Hazards of refrigerant on atmosphere.
- How electricity produced in Alternator.
- How speed is controlled for Motors.

- Function of Tie rod.
- Why Tie rod near Crankshalt.
- Why 4 stroke engine don’t have tie bolts.
- Function of holding down bolts.
- Why long holding down bolts
- What is Crosshead function.
- How lubricate Cross head.
- Method of Crosshead lubrication.
- Cross Head clearance
- How to cary out Unit Overhaul.

- What are the checks carried and after removing Cylinder head.
- what is hot corrosion.
- How to Control corrosions.
- Effects of hot corrosion.
- What is Cold corrosion.
- How to Control cold Corrosion
- Effects of cold corrosion
- Checks of liner.
- Liner crack type.
- Liner wear Pattern.
- Why Scavenge port area wear.
- why lines top wear.
- Type of lives wear.
- Causes of liner wear.
- How to maintain liner wear.
- Sign of liner Crack.
- Causes of liner Crack.
- After fixed New Liner what you do.

- Consequences of misalignment.
- what you record before take deflection.
- How to take Crank Shaft deflection.
- How Crank case explosion occur.
- What is hot spot.
- Why hot spot occur.
- How you guess / know weather hot spot or not.
- How to Prevent Crankcase emplosion.
- What are the action taken on detecting hot spot / OMD alarm.
- What are the safety devise in crank case.
- Why breather pipes.
- Why crank case relief door fitted.
- How to Check / test crank case relief door.
- What are the inspection of 4 Stroke Piston.

- 4 Stroke piston construction.
- Cause of Cracks Piston Crown.
- Cause of Piston Overheating.
- How does Seizure of trunk piston engine occur.
- Draw Injector.
- Injector Overhaul.
- Injector Checks.
- How to detect leaky injector.
- Effects of leaking injector.
- 4 stroke timing diagram.
- 2 stroke timing diagram .
- Type of indicator cards.
- Power card.
- Draw card.

- Worn Injector holes (reason &indications)
- Early injection (reason & indications).
- Late infection (reason & indications).
- After burning (reason & indications).
- Performance Curve.
- Draw Card points (Injection start/stop, Ignition start/stop).
- How to fuel Pump timing Check.
- Problems of fuel pumps.
- How to adjust fuel pump timing.
- If no fly wheel mark how to check timing.
- what is VIT
- How to notice incorrect timing.
- Function of Spill port.
- Function of deliver valve.
- CE resposiblities. of during bunkering.
- What are the things to check on bunker receipt.
- Bunkering procedure.
- What are the bunker Samples.

- BDN information.
- Marpol annex VI Sample.
- Fuel oil treatment on board.
- Impurities in FO and effects.
- Sulphur limilation.
- Fuel grade.
- How to check fuel quality.
- What is spot check.
- Fuel oil test report.
- Fuel test on board.

- FO components.
- Asphaltienes effects.
- what is Viscosity.
- What is Pour Point.
- What is Flash pont.
- what is detergent.
- What is dispersant.
- LO sampling procedure
- Contaminant in Lube Oil.
- Causes of contamination and effects and remedy action.
- What us batch Purification.
- How to maintan LO Onboard.
- On board LO tests.
- LO analysis report.
- Properties of LO.
- Draw LO System.
- How to back Flush Filter work.
- what we checks on bearings.
- Bearing Clearance method.
- Effect of excessive bearing clearances.
- Causes of bearing over heat.
- What is Combustion.

- Draw 2 stroke Cross head engine section.
- ME slow downs.
- ME shut downs.
- Starting aid system draw.
- Starting air valve draw.
- Why slow turn.

- Turbocharges lubrication methods.
- Turbocharger Problems. what can affect TC Performance.
- Why TC vibrate.
- What is Sursing.
- Causes of Sursing.
- How to LOCK TC rotor.
- TC clearance.
- What is ISM.
- How to implenet ISM to ship.
- what is SMS.
- What manual inclute SMS.
- what is SMC.
- what is DOC.
- Types of maintenance Procedure.
- what is PMS.
- what is Condition montoring system.
- Condition monitoring ME ?.
- MSN
- MIN
- MGN
- What is MLC.
- what is STCW.
- What is SOLAS.
- What is MARPOL.
- What is COSWP.
- what is PSC.

- Enclosed Space enety procedure
- which gas detect.

- why boiler water test.
- Boiles water test / treatent / Remedy Causes.
- Boiler inspection.
- Water Side check.
- Fire Side check.
- External check.
- Caustic Cracking.
- How to test boiler.
- What is ore ring.
- Boiler Survey.
- Boiler safely valve inspection.
- How to test safety valve.
- How to fire boiler on cold condition.
- Baler alarms.
- Boiler shut downs.
- Boiler feed system draw. 489.
  196.
- Boiler burner failures.
- Type of boiler burners.
- What is refactory. / materials.
- What is accumlation test.
- What is boiler safety valve bench test.
- what is boiler forming.
- what is boiler priming.
- How to Calculate boiler efficiency.
- Draw boiler Safely Valve.
- ME JW system draw.
- How PT No temperature sensor work.

- Associated problems.

- How to detect leak.
- Refrigerant properties.
- Emergency generator maintenance.
- Emergency generator rules
- Emergency power supply.
- Emergency generator checks (manual/ Auto).
- Emergency generator load testing.
- Generator Safeties.
- Generator Paralleling.
- Switch board safety device.
- What is fuses.
- Difference between fuse and trip.
- How to MCB work.
- How to achive OCR action.
- Over Current relay.
- Generator Start but voltage not showing, why?
- Remedy, when generator fails to excite.
- What is field Flashing Method of excitation.
- What is AVR.
- How reverse power trip work.
- How induction to motor work.
- Over Current Protection of motor.
- How motor Single phasing.
- Methods of reduce motor starting current.
- Methods of motor starting.
- DOL.
- Star - Delta.

- If Phase indicator is not working.
- Insulated neutral system (advantages/disadvantages) Earthed neutral system (advantages / disadvantages).
- What is NER.
- Causes of Single Phasing.

- Effect of Single phasing.
- Protection devices for single phasing.
- How to detect Single phasing.
- How to Check AC motor.
- How to Corried out IR test.
- 02 analizer working.
- UPS Charging system.
- High voltage IR testing procedure.
- How to identify instrincially safe equipment.
- what is ship fire plan.
- Fixed Fire fighting system in ship.
- Water milst / hil- fog system.
- How hi-fog system Fights with fire
- Benefits of hi- fog.
- Maintenance of hil-fog.
- Fired CO2 system.
- Maintenance of CO2 system.
- Inspection of CO2 system Safety device in CO2 system .
- How to release CO_2.
- Why time delay provided.
- Why CO_2 room ventilate.
- Ship Fire detecting Systen (type of detectors).
- Position of detectors.

- Special arrangement of paint locker
- How to Fight with Fire.
- Class A bulk head.
- Class B buik head.
- Foam System.
- Emergency fire pump regulations.
- Dry dock (preparation).
- Which documents need to Sent to dock yard.
- How to prelate ship to load line Survey.

- What they checks mainly.
- Load line mark.
- Types of water tight doors.
- Which conditions /Situation water tight doors closed. 294. SOLAS requirment for water tight doors.
- Why inspect lifeboad switching gear.
- Who force to Survey.
- Requirement/ Regulation of Davit.
- Draft Survey.
- How to PID Controller work.
- What is ppm.
- What make boiler start and stop on auto, describe how it is regulated?
- 302. What is the difference bw working pr. & Operating Press., why safety vv is
- adjusted 3% above working pr?why not 2% or 5%
- How boiler tube is holded inside boiler, boiler tube is leaking, how to rectify,
- who is certified to carry out welding inside and who certifies that

- What is master gauge? How will you check boiler pr. Gauge is showing correct pr.? How often is it calibrated? Who calibrates?

- Alternator air gap?why? How will it be effected? How to adjust if less or more.

- Cooling water treatment? Importance607. CO2 room safeties, inspection

- Purifier room fire, action from starting to end

- How will you implement safety onboard as an 2nd Engg?610. Loses

along a Two stroke propulsion system.

- How is thrust transferred to the hull, lead onto workings of a thrust block
- How do you know your injection timing is correct?
- What are DFDE Gas safeties on your ship & what happens when gas leakage is detected?
- What do you check for in the fuel oil lab test results? (Viscosity, density, flash point,water content etc.)
- What about in L.O (RLA Sample)? (viscosity, Flash point, Microbial 616. contamination, TBN.
- How do you carry out Steam Plant performance checks? (kymaetc)
- How do you know your boilers are operation well?
- Various boiler water test on board and how do you know the amount of chemical to dose?
- Carry out boiler survey in details?
- How do you put back the boiler online after survey? Remember testing boiler alarms and trips in your details.
- Boiler Safety valve lifting pressure and details of how to set boiler safety valve after survey?

- Explain working principle of Hifog system? (Do not forget to mention the SW connection too)
- Explain working principle Dry Powder system?
- Draw and explain fixed CO2 system including its PMs?
- What are the safety precautions you would take when working on HV system on board?
- TAKING OVER AS 2nd ENGINEER ON A VESSEL, FOR WHICH YOU ARE NOT FAMILIAR BEFORE, WHAT THINGS WOULD YOU CHECK AND ASK FROM OUTGOING 2nd ENGINEER?
- EXPLAIN MAIN AIR STARTING SYSTEM AND SAFETIES INCORPORATED WITH THE SYSTEM
- Why ship is divided in different zones .
- Engine is running but no voltage what would you check? (Voltmeter,AVR and excitation)
- Crankshaft Deflection : What all to check before taking a deflection.(Examiner wanted to know more about holding down bolts)

- When to take deflection. 636.
  Safeties of MSB.
- Generator paralleling.
- Boiler open and closed system.
- How to flash-up the boiler.
- How to start the COPT plant.
- Inert Gas System.
- How to bring down the O2 content in inert gas system
- Function of deck seal tower.
- Safeties on cargo tank from overpressurisation.
- How much pH level of water to be maintained.
- What happens if high or low pH.
- One of the Units have High Piston Cooling Oil temperature. What action to be taken.
- Refer compressor continuously running, what could be the reason
- AC system: What will happen if water is not removed.
- Name of the bacteria that grows.
- How to prevent its reoccurrence.
- What to do or How to clean a Shower Head, if not used for a longtime.
- Working of Synchroscope and Why can't it be running all the time.
- What is free surface effect, How to reduce it.
- Procedure and permits for entering a tank.
- What are the equipment's supplied from Emergency Generator.
- Function of the Thrust Pad and working.
- Carbon in crankcase, what are the reason.
- How crosshead is lubricated.
- What actions are taken or what is done to have a proper lubrication of Crosshead Bearing.
- How to reverse the Main Engine.
- What are the MCA notices. (M Notice)
- What is the full form, what do they stand for
- Which M'Notice has to be followed. (MSN)
- If pollution takes place which manual to be followed. (SOPEP)
- How to check an Earth Fault.
- What if Generator is Motoring, which safety will be activated.

- Induction Motor causes Lagging Power Factor, How to increase power factor.
- How to reduce Motor Starting Current.
- Manual paralleling of Generator(full procedure).
- When you enter ECR you see 2 Generators running parallelly, But one D/G is running on 500KW and the other on 300KW.You adjust the Load manually and bring the load to equal sharing. Later after sometime you see the load again back to 500KW on one and 300KW on the other.So what you need to check or adjust. (Droop Setting on Governor).