

Deck & Engine Personnel Training Centre

Marine Apprenticeship Course (Engine)

2nd Semester: Final Examination (Assignment)

Serial No	Subject / Instructor	Assignment/Questions	Evaluation Criteria
1	Maritime safety FFA (LRM)	<ol style="list-style-type: none"> 1. What is an L.S.A ? 2. Write down the top 10 types of L.S.A.? 3. What is a life Jacket? 4. How many types of life jacket? 5. Write down the life jacket requirements? 6. What does life buoy mean? 7. What is life buoy made of? 8. What is the minimum inner and outer diameter of a life buoy? 9. Write down the cheeks for life buoy? 10. What is the capacity of life raft? 11. How long can you survive on a life raft? 12. How many types of emergency situation? 13. How does a life raft work? 14. Write down the manual launching preparation ? 15. What is the meaning of life boat? 16. How many types of life boat there? 17. What is a rescue boat called? 18. What is the difference between lifeboat and rescue boat? 19. Write down the requirement of rescue boat? 20. What is an EPIRB and how does it work? 21. What is SART? 22. What is the use of SART? <p>What is the difference EPIRB and SART?</p>	Knowledge, Language, Presentation, cleanliness
2	ICE (HK)	<p>Q1. What are the basic systems of ICE? Write down their names?</p> <p>Q2. Define Lubrication system? What are the major components of lubrication system?</p> <p>Q3. What are called lubricants? Write down the functions of lubricants?</p> <p>Q4. What is Intake system? Write down the function of air filter & inter cooler?</p> <p>Q5. What do you mean by Charging and Supercharging?</p> <p>Q6. What are the five major components of turbo charger?</p> <p>Q7. What is Scavenging? How many types of Scavenging are there? Write down their names?</p> <p>Q8. Write down the names of the major components of a high-pressure fuel pump?</p> <p>Q9. What is stand for 'TDC', 'BDC', 'BTDC', 'ABDC' and 'SIT'?</p> <p>Q10. What is coolant? Why an engine needs to be cooled?</p> <p>Q11. What are the causes of poor cooling or failure of cooling?</p> <p>Q12. How many methods are there to start an engine? Write down their names?</p> <p>Q13. What are the methods of injector testing? Write down the names of some parts of an injector?</p>	As above

Assignment: Prepare a question paper with 20 short question with their answer from the lectures.

3

English (MSI)

As above

1. Pick the right parts of speech.
 - i. How many types of parts of speech in English grammar? 5/8/4/7.
 - ii. Which is not a classification of parts of speech? Verb/Pronoun/Article/adjective.
 - iii. Rabindranath is Common noun/Proper noun/Countable noun/Material noun.
 - iv. Do, Forget, Give etc. are Noun/ Adjective/Preposition/ Verb.
 - v. With, into, between etc. are Adverb/ Pronoun/conjunction/Preposition.
 - vi. Which is the example of adjective? Honest/ Give/ Very/ Gold.
 - vii. And, but, or etc are example of Preposition/ Interjection/Verb/ Conjunction.
 - viii. Which is the example of Interjection? Alas!/ Remember/ But/On.
 - ix. How many types of Noun? 4/6/5/9.
 - x. Which is not material noun? Rice/Gold/Stone/Honesty.

2. Make it into Past Indefinite tense.
I get up at about 8 o'clock and go downstairs for some breakfast. I walk down to the shop and I buy a banana and some orange juice. I come back home and make myself a cup of tea. Next, I listen to the football on the radio before I go and meet some friends at the cinema. I then watch a film named " Hajar bochor Dhore" directed by Jahir Raihan and then I go back home. I cook some chicken and pasta for my dinner and I eat it quickly because I am Hungry.

3. Write the Past form and Past Participle form of the following verb(any ten).

Outgrew	Sleep	Swear	Spit	Swim	Dig
Put	Hit	Fall	Hang	Lay	Read

4. Write the meaning and Make sentence of the following Phrases & Idioms (any ten).

Acid test	A man of letter	Apple of discord	At the eleventh hour	Black and blue	Cat's sleep
Dead letter	Fish out of water	Kith and kin	Null and void	Narrow escape.	Weal and woe

5. Change the voice into active to passive.
 - i. I wrote a letter.
 - ii. Meena sings a song.
 - iii. People speak English all over the world.
 - iv. The man is climbing the tree.

		<p>v. Open the window. vi. The cow gives us milk. vii. He killed himself. viii. My mother looks after me. ix. Honey tastes sweet. x. He ran a race.</p> <p>6. Fill in the gap with appropriate preposition. i. We should abide the rules of the society. ii. I agree his proposal. iii. She burst tears. iv. Please, call a doctor. v. We should abstain smoking. vi. He deals rice. vii. His mother passed last year. viii. He died cholera. ix. Everybody should look their old parents. x. She put the lamp.</p> <p>7. Translate into English. i. বাংলাদেশ নদীমাতৃক দেশ। ii. বিপদে ঠৈর্ষ ধারণ কর। iii. মিথ্যা বলা মহাপাপ। iv. আজ বিজয় দিবস। v. ডিইপিটিসি শিতলক্ষ্যা নদীর তীরে অবস্থিত।</p> <p>8. Translate into Bengali. i. I read in DEPTC. ii. I want to be a Seaman. iii. Truthfulness is a great virtue. iv. The 16th December is a red letter day. v. It has been raining cats and dog since morning.</p> <p>9. Write a Short note about yourself and your future plan. 10. Write curriculum vitae (CV) for the post of Laskar/ Greaser/ Sukany. 11. Write a composition within 200 words (any one). i. The impact of rivers on our economy. ii. Tree plantation.</p>	
4	Basic Electricity (MSI)	<p>1. What is electricity and type of electricity. Define static and Dynamic electricity. 2. What is Ohm's law and explain unit of current voltage and resistance? 3. What is difference between cell and battery and what are the main parts of a battery. 4. What is primary and secondary battery and describe the maintenance of a battery. 5. Define what are the types of electric circuits and Draw the circuit of 3 resistance in parallel and explain the characteristics of parallel circuit.</p> <p>Explain the followings- Resistance, Capacitor, Transformer, AVO meter & mugger.</p> <p>6. What is difference between generator and motors? 7. What is synchronizing, what are the conditions flows for parallel</p>	As above

		<p>operation of 2 generators.</p> <p>8. What are the generator protections system and function of AVR?</p> <p>9. Draw a circuit diagram of Main switch board on board the vessel and shown how the electrical supply from the main bus-bar to Distribution box.</p> <p>10. What are the controlling devices in main panel board the vessel.</p> <p>11. Find out the total current when supply voltage 220v and resistance 100 Ohm's the electrical circuit.</p>	
5	E.K. General (HK)	<p>Q1. What is air compressor? Why we need compressed air on ship?</p> <p>Q2. Write down the properties of air? What are the components of air?</p> <p>Q3. What is inter cooler & after cooler? What are their functions?</p> <p>Q4. Without an after cooler what problems will occur?</p> <p>Q5. What are the causes of a high-pressure air compressor's poor performance?</p> <p>Q6. What is steering gear? What are the major components of it?</p> <p>Q7. Which components comprises with Telemotor? What is the location of transmitter and receiver?</p> <p>Q8. Rudder system consists of which unit? Write down the maximum movement of rudder on either side and time?</p> <p>Q9. How many types of Steering gear and Hydraulic pump? Write down their names?</p> <p>Q10. What is Sewage? Define Grey-water and Black-water?</p> <p>Q11. What is stand for 'ISPP' and 'STP'? What are the components of sewage treatment plant?</p> <p>Q12. What is a positive displacement pump? Write down the names of various positive displacement pump?</p> <p>Q13. Write down the difference between positive displacement pump & centrifugal pump?</p> <p><u>Assignment:</u> Draw a multi stage compressor with their stage and cooler.</p>	As above
6	Watch Keeping (FH)	<p>1. What do you mean by watch keeping according to STCW 1978 & Requirements for certificate of chief Engineer / Driver and officers ?</p> <p>2. Write down the responsibilities of a watch keeper?</p> <p>3. Write down preparing a Diesel Engine for running ?</p> <p>4. What do you mean by Engine safety devices and write down the safety devices equipment of engine ?</p> <p>5. Short Note:</p> <p>a) Scavenging Fire b) Engine log book</p> <p>c) Ums operation d) First aid e) Bilge out</p>	As above
7	Operation & Maint. (MZM)	<p>1. a) What is engine overhauling? b) How many kinds of engine overhauling and write their name? c) Describe the necessities of overhauling.</p> <p>2. a) What do you mean by major overhauling? b) Write overhauling procedures of an engine. c) Write down the name of five stationary parts and ten moving parts of a diesel engine.</p> <p>3. a) Write down the name of five measuring tools. b) How many kinds of engine starting systems and write those name. c) Which devices you have to check before the engine start?</p> <p>4. a) Which items you have to observe of a running engine? b) What is</p>	As above

		<p>engine knocking and why? c) Which items you have to check every day of an engine in the engine room?</p> <p>5. a) What is piston and how many kinds of piston-write those? b) How to change a damage piston of the diesel engine?. c) What is valve overlap and fuel timing?</p> <p>6. a) Write five faults of the engine. b) Write down the faults of the cylinder head. c) How to remove a piston with connecting rod from the crankshaft?</p> <p>7. a) Write down the parts of a crankshaft. b) Write down the causes of engine overheat.</p>	
8	Maritime safety LSA(MR)	<ol style="list-style-type: none"> 1. What is an L.S.A ? 2. Write down the top 10 types of L.S.A.? 3. What is a life Jacket? 4. How many types of life jacket? 5. Write down the life jacket requirements? 6. What does life buoy mean? 7. What is life buoy made of? 8. What is the minimum inner and outer diameter of a life buoy? 9. Write down the cheeks for life buoy? 10. What is the capacity of life raft? 11. How long can you survive on a life raft? 12. How many types of emergency situation? 13. How does a life raft work? 14. Write down the manual launching preparation ? 15. What is the meaning of life boat? 16. How many types of life boat there? 17. What is a rescue boat called? 18. What is the difference between lifeboat and rescue boat? 19. Write down the requirement of rescue boat? 20. What is an EPIRB and how does it work? 21. What is SART? 22. What is the use of SART? 23. What is the difference EPIRB and SART? 	
9	G. Seamanship (NI)	<p>(1)What is stopper? How many types of stopper? Which stopper use for natural fiber rope?</p> <p>(2)What is the function of a heaving line? How long of a heaving line?</p> <p>(3)How many mooring lines use to make fast a vessel when berthing Quay or Jetty. Write down the name of various mooring lines and their function?</p> <p>(4) Write down the 04 kinds of natural fiber rope? What is the color of Manila rope?</p> <p>(5) What is the meaning of Hitches and knots? Write down the name of five Hitches and knots.</p> <p>(6) How can you take care of ropes?</p> <p>(7) What is an anchor? An inland vessel how many anchor will carry?</p> <p>(8) What weight will be appropriate of a stream anchor or kedge anchor? (Inland and International)</p> <p>(9) What for a vessel goes an anchor? What is the day time signal for a</p>	

		<p>anchor vessel? Write down the principal parts of a stockless anchor?</p> <p>(10) What is draft? In a vessel where are draft marks celebrated?</p> <p>(11) What is trim? When a ship called “trim by the head”?</p> <p>(12)What is freeboard? What do you mean 1.2 meter free-boar?</p> <p>(13)What is keel and hull of a ship? Write down the three main types of ships?</p> <p>(14)Write down the name of fox'l fitting?</p> <p>(15) write short note of:- (I) Galley (II)Knot (III) Light ship (iv) Light vessel (v) Loaded ship (vi) Master(vii)Starboard side (viii) Skipper (ix)Bits (x) Bollard (xi)Bulkhead (xii)Bulwark (xiii)Fair lead (xiv) Freeing port (xv) Jack staff (xvi)Sounding pipe (xvii) Stem(xviii)Quartermaster(xix)Ventilator(xx)Ballast</p> <p>(16)What is the chief function of ships paint? Generally, how many types of paint? What kind of paint use as a primer code?</p> <p>(17) Show below draft marks:- (i)3.5 m (ii) 1.3 m (iii) 2 m (iv) 1.85 m (v) 4.4 m (vi) 8' – 6" (vii) 10' (viii) 9' -3" (ix) 11' – 6"(x)6' -6"</p> <p>(18) Echo sounding reading 1.4 m, Draft of vessel is 3.5 m, what will be total depth of water?</p> <p>(19) Depth of vessel 5.5 meter, free board 1.5 meter, Depth of water 4.5 meter, what will be under keel clearance?</p> <p>(20) Mean draft 3.5 meter, forward draft 3 meter, what will be after draft and trim?</p> <p>(21) What for use hand lead line? How many long a hand lead line? How weight will be the lead of a hand lead line?</p> <p>(22)How many mark and deep in a hand lead line? What is “The benefit of the lead?”</p> <p>(23)What is windless? Is windlass is a machine primarily provided as a means of letting the anchor cable run out and hauling it in again?</p> <p>(24)What stand for- (1) BIWTA (2) DEPTC (3) BIWTC (4) CPA (5) MPA (6) M.V. (7) F.T. (8)F.V. (9) MOS (10) SWL (11) NUC vessel</p> <p>(25) A vessels cargo hold Length 18m. Breadth12m. Height 8m.How many cubic meter cement clinker will take that hold?</p> <p>(26) What is air Draft/What is the fresh and salt water density? What stand for FWA and DWA?</p>	
10	E.K. Motor (FH)	<ol style="list-style-type: none"> 1. What is Engine ? Write down the classification of engine according to stroke and difference between two and four stroke engine ? 2. Write down the working cycle of two stroke engine with simple sketch ? 3. Write dwon the general idea about heat engine ? 4. What is the deference between wet sump and dry sump lubrication system? 5. What is scavenging ? Write down the type of scavenging process of two stroke engine ? 	

		<p>6. Write down the function of piston. And function of compression rings?</p> <p>7. What is crankshaft ? Write down the inspection of crankshaft and crack test ?</p> <p>8. What is marine engine cooling system ? Draw a simple line sketch of marine engine cooling system and show different parts ?</p> <p>9. What do you understand by marine engine starting system? Draw a electric starting system?</p> <p>10. Short Note.</p> <p>a) Engine stroke b) Compression ratio c) Cylinder block d) Governor</p> <p>e) Turbocharger f) Lube oil filter g) Air intercooler</p> <p>h) Auxiliary engine i) Engine safety device j) Engine over speed trip</p>	
11	<p>Workshop Practice (FH)</p>	<p>1. a) Write down some common causes of fire breaking out in workshop? b) Write down safety precautions in welding?</p> <p>2. What do you understand by welding and write down ARC welding tools and equipment?</p> <p>3. Write down layout tools and cutting tools & hand tools in metal shop?</p> <p>4. a) Write down difference types of measuring instrument? b) Make a list of precision measuring instrument?</p> <p>5. Write down classification hammer and function?</p> <p>6. a) Write down types of file? b) Write down the operation of sawing, chipping and drilling reaming operation?</p> <p>7. Write down the threads cutting tools (description)- a) Tap & Dies b) Internal thread cutting by taps? c) Thread cutting of pipe?</p> <p>8. What do you understand by soldering? a) Types of Brazing? b) Torch Brazing? c) Furnace Brazing? d) Electric Brazing?</p> <p>9. Make a list of ARC and gas welding tools and equipments?</p> <p>10. Short Note- (a) Gas Cutting equipment/tools, (b) Work holder, (c) Hamlet and hand shield, (d) File, (e) Hand Gloves, (f) Electrode, (g) Gas welding, (h) Pipe wrench, (i) Welding torch, (j) Gas cutting goggles</p>	
12	<p>Engineering Materials (MZM)</p>	<p>1. a) Write down the definition of engineering materials with five example. b) Write classification of engineering materials in different technology (any seven). c) Write down name of civil engineering materials (any ten).</p> <p>2. a) Write down the name of insulating materials (any ten). b) How many types of insulating materials and write their name? c) Write down the characteristics of engineering materials (any ten).</p> <p>3. a) Write down the definition of fuel and lubricants. b) Write down the classification of fuel with example. c) How many types of lubricants write those names with example?</p> <p>4. a) Write full name of API and SAE. b) Write down characteristics of</p>	

		<p>lubricating oils.(any ten) c) What is function of lube oil?</p> <p>5. a) Write down the name of synthetic insulating materials (any ten). b) Write uses of asbestos as insulating materials. c) Write down the name of sound absorbing materials (any five)</p> <p>6. a) Write uses of aluminum. b) Write advantage of using aluminum as construction materials. c) Write down characteristics of good paints.</p> <p>7. a) Write down uses of semi conducting materials b) Write down uses of optical fiber (any 10). c) Write down name of different kinds of glass.</p>	
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Assignments Submission date and time: 13,14,15 and 17 December 2020 from 09:30 am to 02:30 pm at Deptc Narayanganj.

Result will be given on 31 December 2020 at www.deptcnarayanganj.com under notice board.