Q. Code:817295

Reg. No. | | | | | | | | | | | | | |

B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2024

Sixth-Semester

OE18904 – MARINE VEHICLES

(Regulation 2018/2018A)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Upon completion of this course, students would have gained Elementary knowledge on ship, safety, prevention of pollution and hazards on board ship	**2**
CO 2	Upon completion of this course, students would have gained Familiarization on different types of ships	**2**
CO 3	Upon completion of this course, students would have gained Knowledge of Shipbuilding Materials	**2**
CO 4	Upon completion of this course, students would have gained Perception on Welding and cutting processes used in shipbuilding	**2**
CO 5	Upon completion of this course, students would have gained Awareness on governing bodies in shipping industry	**2**

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	Expand EEZ and how does the transit of goods help in improving economy?	**1**	**2**
2.	List a few scenarios that are considered to be hazardous onboard the ship.	**1**	**2**
3.	Why the cargo holds in the gas tankers are refrigerated?	**2**	**2**
4.	Give reason for RO-RO ships have very high freeboard when compared to oil tanker.	**2**	**2**
5.	Why the Aluminium alloys shall be preferred for shipbuilding?	**3**	**2**
6.	How the casting and molding are differed from each other?	**3**	**2**
7.	List a few advantages of Riveted joints.	**4**	**1**
8.	Why the oxygen is supplied separately during the gas cutting process?	**4**	**2**
9.	How the MARPOL helps in minimizing the pollution at sea?	**5**	**2**
10.	List out the duties of Port state control.	**5**	**1**

PART- B (5 x 14 = 70 Marks)

		Marks	CO	RBT LEVEL
11. (a)	With the help of a neat sketch explain the principal dimensions of both transverse and longitudinal section of the ship.	**(14)**	**1**	**2**
	(OR)			
(b)	Explain how the Garbage and Sewage pollutions are managed and discharged from the ship under international convention of prevention of pollution from ship?	**(14)**	**1**	**2**

12. (a)	Draw and explain the transverse sectional view of bulk carrier and mark all the necessary parts.	**(14)**	**2**	**2**
	(OR)			
(b)	Describe the general design of a liquified natural gas carrier and explain various methods employed to keep the gas on board the ship in a liquid state.	**(14)**	**2**	**2**
13. (a)	Write a short note on the following a. Steel forging **(5)** b. Steel casting **(5)** c. Steel sandwiching **(4)**	**(14)**	**3**	**2**
	(OR)			
(b)	With the help of a suitable diagram explain composite metals and discuss various types of composite material with an example.	**(14)**	**3**	**2**
14. (a)	Explain the steps involved in gas cutting on MS plates and electric arc welding on ferrous metals using a neat sketch.	**(14)**	**4**	**4**
	(OR)			
(b)	Briefly Explain the procedures, uses, benefits, and limitations of TIG and MIG welding techniques during metal joining process.	**(14)**	**4**	**4**
15. (a)	Explain in detail about the various **MARPOL** annexes that helps in preventing the pollutions on board the ship.	**(14)**	**5**	**2**
	(OR)			
(b)	Write a short note on the following a. SOLAS **(5)** **b.** IMO **(4)** c. MLC **(5)**	**(14)**	**5**	**2**

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Describe the differences between rivets and electric arc welding in terms of metal joining, and suggest the best suitable choice of approach based on its benefits and drawbacks for the shipbuilding process.	**(10)**	**4**	**5**

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