

SAFETY AND RESOURCES MANAGEMENT ON BOARD SHIPS

SUBJECT CODE – UAME 505

SEMESTER V – BE(ME)-15

Questions- Part A (2 marks each)

UNIT -1

1. What is 'ISM' code ?
2. What is the purpose of 'ISM' code
3. Write the definition of 'Administration' ?
4. What are objectives of 'ISM' code ?
5. When the revised ISM code is effective from ?
6. What is Safety Management Manual ?
7. What is the role of ' Classification society' with respect to the ISM code ?
8. What is 'Internal safety audit' ?
9. Write the abbreviations of 'DOC' and 'SMC'
10. What is the maximum validity of 'DOC' ?

UNIT -2

1. What is the definition of 'Risk' ?
2. What are the two main factors of Risk ?
3. What is 'Non Conformity' ?
4. What is meant by ' Observation' ?
5. What is 'RO' (Recognised Organisation) ?
6. Name the three activities of 'Risk handling process'.
7. In Maritime risk analysis, what are the incidents classified as 'Critical' ?
8. How the Safety Management System is developed ?
9. What is 'hazard' in risk management terminology ?
10. What is meant by ' Risk Analysis' ?

UNIT -3

1. What is the definition of 'Accident' ?
2. What is the definition of 'Near Miss' ?
3. What is meant by 'Incident' ?
4. Who should investigate the Accident/Near miss ?
5. Why the copies of the reports are forwarded to the DP ?
6. As an external reporting system, to whom, the accident reports are forwarded ?
7. In 'Risk communication' system, what is the benefit achieved ?
8. Where the 'Accidents' and 'Near misses' to be discussed in detail?

9. What is the principle objective of 'Accident investigation'?
10. While assigning any job to a junior cadet, who should be in charge for risk assessment?

UNIT -4

1. What methods are used to prevent ice formation in the sea chests?
2. What is the result of by passing safety cut outs ?
3. If any items to be transferred, what precautions to be taken, while the person is moving?
4. How the explosive vapours migrate from cargo tanks to other enclosed spaces ?
5. What precautions to be observed, prior to entering enclosed spaces ?
6. What equipments to be provided on ME for preventing Crankcase explosions?
7. For preventing breakdown of any machinery, what precautions to be taken?
8. To whom, it should be reported in case of deficiency of shore loading/discharging equipments?
9. While executing non routine jobs, what is the SMS procedure ?
10. What are the fatigue risk factors, ship's crew and officers are subjected with ?

UNIT -5

1. What is the objective of 'Engine room resource management ?
2. Write the meaning of 'Time management'
3. How to control stress?
4. What is the abbreviation of 'SWOT' ?
5. What needs to done other than work permit to ensure entry of enclosed places is safe ?
6. What is the regulation on 'speed' at which Water tight doors are closed ?
7. In Safety Management System, what is the Alcohol policy on board ships ?
8. What could be the general reasons for collision of two vessels ?
9. What are the root causes and contributory factors involved in 'Electrocution'?
10. How to prevent the Drug trafficking on board ships?

Questions- Part B (6 marks each)

UNIT -1

1. Explain the importance of 'Designated Person' ?
2. Why the Master of the vessel is having 'Over riding authority ?
3. What are the development of plans for safe ship board operations ?
4. Explain the term 'Emergency preparedness ?
5. Describe the various drills conducted on board.
6. What are the corrective and preventive actions to be taken following an accident?

UNIT -2

1. What are the main classification factors of 'Risk Assessment' ?
2. What is 'Major Non-conformity'?
3. When the 'Observation' becomes 'Non-conformity'?
4. What are the instructions to be given to crew regarding 'Risk assessment'?
5. Explain the lessons learned from an accident during Incinerator inspection.
6. What are the contributing factors which lead to an explosion in non cargo tanks?

UNIT -3

1. Explain the 'Dangerous Incident'
2. Explain the 'Internal reporting' procedure on board.
3. Explain the lessons learned from a serious accident of loss of life in enclosed spaces.
4. What are the precautions to be observed for the operation of Water tight sliding doors?
5. When an oil spill occurs during cargo discharging, what actions to be taken to prevent re-occurrence ?
6. Explain how the fatigue affects the performance of ship's staff.

UNIT -4

1. Explain the root causes of Hydrogen Sulphide hazard.
2. How will you prevent the Electrical shock and electrocution?
3. What are the steps taken to prevent collision as per COLREGS ?
4. List the importance of effective communication between the ships to prevent collision.
5. Explain the importance of correct labeling of CO2 flooding system cylinders.
6. How the leakage of LPG gas on board can lead to a dangerous situation ?

UNIT -5

1. What are the two basic ideas of 'Johari Window' Communication model ?
2. In case of flooding of machinery spaces, what kind of emergency pumping out arrangement is provided in the ships?
3. When a ship is grounded, what are the inspections to be carried out?
4. What actions to be taken immediately, in event of oil leak during cargo discharging?
5. List the safety precautions regarding operation of Water tight doors.
6. What kind of accident can happen during lowering Life boat?

Questions- Part C (10 marks each)

UNIT -1

1. Describe the functional requirements for a safety management system as per the ISM code effective from 1st July 2010
2. Explain the DOC (Document of Compliance) .State the procedure for the renewal of DOC and withdrawal of DOC.
3. Describe a major accident happened in the enclosed spaces , which resulted in deaths of shore personal on board ship's enclosed spaces. State the lessons learnt from this incident.

UNIT -2

1. Explain the importance of 'Safety Committee meeting' on board and describe the important features of such meeting.
2. How to identify the hazards and evaluate the risks while processing the 'Risk assessment' ?
3. Describe an incident of 'Oil spill' occurred during cargo discharging. Explain how the pollution could be prevented on such occasions.

UNIT -3

1. Explain the 'Reporting procedure' of all Incidents to the head office.
2. Describe an incident of 'Flooding of Engine room' from the sea chest. Explain how the machinery spaces got flooded and state the lessons learnt from this incident.
3. Explain an incident of 'Grounding of a vessel' during the passage through a narrow water transit and state the reasons found during the official investigation.

UNIT -4

1. Describe an incident of 'ME Crankcase explosion'. Explain the reasons why it happened and state the lessons learnt from this incident.
2. Describe an incident of 'Loss of life in an unprotected tank. State the lessons learnt from this incident.
3. Explain an incident of 'Drug trafficking' on board a ship and state the lessons learnt from this kind of incident.

UNIT -5

1. Explain the twenty important factors of 'Resource Management'.
2. Describe an incident of 'Loss of life' due to electrocution on board a ship . Explain how such accidents can be prevented. State the lessons learnt from this incident.
3. Describe an incident of ' Collision of two ships' due to failure of monitoring and effective communication and state the outcome of official investigation reports.