



EXAMINER'S REPORT

NOVEMBER 2021

OFFSHORE SUPPORT INDUSTRY

Question 1

Explain FOUR of the following terms/acronyms.

- i. AHC Crane
- ii. FMEA
- iii. ISM Code
- iv. Knock for knock
- v. OVID
- vi. W2W

Students should have a general understanding of each of the terms/acronyms:

- i. AHC Crane
Active Heave Compensating Crane.
An overview of function and examples of it's application were expected.
- ii. FMEA
Failure Mode Effects Analysis.
Method aimed at identifying potential failures and their corresponding outcomes.
Reference to application in DP systems expected.
- iii. ISM Code
International Safety Management Code.
Ensuring an effective safety management system for shipboard operations.
Answer should include reference to: SMS; SMC; DOC; DPA; Safety Officer.

- iv. Knock for knock
Answer should reference:
A reciprocal or mutual indemnity.
Mutual Hold Harmless agreement covering damage, personal injury, illness or death.
Advantages due to large number of contractors/sub-contractors operating offshore.
- v. OVID
Offshore Vessel Inspection Database.
An inspection protocol for offshore vessels.

Answer should reference:
Operated by OCIMF.
Comparison with CMID.
Approved/accredited inspectors.
- vi. W2W
Walk to Work.
Answer should reference:
Gangway access system.
Active motion compensation.
Leading manufacturers.

Question 2

Using diagrams to support your answer describe and identify the main features and equipment of a modern Diving Support Vessel suitable for undertaking saturation diving operations.

Students were expected to produce a drawing of a Saturation Diving Support Vessel and the sketch should provide sufficient detail to demonstrate understanding of the basic structure and equipment incorporated in the vessel.

Features/equipment should include: Helideck, subsea cranes, ROV stations, moonpools, saturation diving spread, substantial accommodation and a strengthened and extensive clear deck.

Indicative hull dimensions would also be expected.

Question 3

BIMCO SUPPLYTIME 2005 is a charter party used within the offshore industry.

Select FIVE clauses you consider significant, discuss their relevance and any amendments you might suggest explaining your reasons why.

Marks were awarded for the rationale in selecting a particular clause as significant and its relevance, the accuracy of describing the particular clause and the understanding demonstrated with any amendments suggested.

Question 4

Offshore wind farms are constructed using both fixed and floating foundations. Describe each of these concepts and contrast and compare the different type of construction, support and service vessels that will be utilised by each type.

A good answer will include details of:

Fixed and floating foundation units.

Application related to water depth.

Foundation fixing and mooring arrangements.

Size of windfarm foundations relative to oil and gas installations.

Size of turbines.

Requirements for construction vessels – height/weight of lifts etc.

HL vessel types - monohull; semi-sub; jack-up.

W2W systems

Vessel designations: CTV; SOVs

Question 5

Your exclusive client has requested a meeting to discuss the options relating to anchor handling vessel specification selection for the forthcoming deployment of a semi-submersible drilling rig from a sheltered shallow-water area to a harsh environment deep-water location.

Prepare a briefing note for the meeting highlighting the key considerations which will be evaluated as part of the vessel selection process.

Briefing Note should demonstrate awareness of the considerable variation between straightforward 'in field' tows in relatively shallow water, with potentially little change in anchor scope between locations, and the requirements of extended tows to deep water locations with complex anchor scopes.

Answer should reference:

- Anchor scope arrangements – chain, wire, fibre rope, surface/sub-surface buoys
- Vessel specification – Bollard Pull, BHP, ROV capability, accommodation capacity, winch package, chain lockers, rope/pennant reels
- Deck handling equipment.
- Flexibility in propulsion arrangements.

Question 6

Use the world map provided to indicate areas where FPSOs are deployed. Describe the operating concept of these vessels highlighting their advantages and disadvantages when compared with other offshore installations.

Key Areas were expected to include: West Africa, Brazil, UKCS/Norwegian Sea, SE Asia, China, Australia

When describing advantages/disadvantages students were expected to demonstrate a general

understanding of the FPSO concept and include:

- Weathervaning
- Remote locations/no pipeline infrastructure
- Deep water/prohibitive cost of fixed installation
- Field life/redeployment

- Flexibility in marketing options
- Operational/maintenance costs

- No drilling derrick/need for separate well intervention/work-over vessels
- Weather imposed operational constraints

Question 7

Describe the OSV spot, medium and long term charter markets; discuss their advantages/disadvantages to both the charterer and owner.

A good answer was expected to include:

Spot:

- Volatile rates
- Vessels hired only when required
- Availability of vessels is unpredictable

- Relationship building issues
- Impact on HSE levels

Longer term charters:

- Security of employment
- Mortgage potential
- Planning/budgeting
- Relationship building/Development of operating standards

Question 8

Discuss how the effects of the COVID 19 pandemic have impacted on the offshore support industry.

Looking for understanding of current and recent events, effects and mitigation measures. Broad macro effects and more detailed specific effects/measures should be covered.

Broader macro issues could include:

Extensive national lockdowns, travel restrictions, Chinese factories shut, oil price, oil demand all effecting Global economic growth.
Compounding effects of China/US trade war, new emission regs.

Other issues could include:

- Capex decisions of energy majors
- E&P issues – quarantines/maintenance programmes
- Crewing and Project Management issues.

Ameliorating measures:

- Effectiveness of stimulus programmes.
- Waiver/relaxation of some regulatory requirements.