OFFSHORE SUPPORT INDUSTRY

May 2025

EXAMINERS REPORT

Question 1.
Students are expected to provide a brief description of each term.

Conductor
Large diameter pipe that forms the first (upper) section of a casing string for a well
On a fixed installation, it forms a rigid connection between the wellhead on the seabed and the surface platform
First element of a 'spudding-in' operation.
Will either be driven (piled) into the seabed or a hole drilled (hence sometimes referred to) to as the 'Drive Pile')

Production Phase
Sometimes termed 'Operations Phase'
Period from 'first oil' to cessation of production
Will include 'Start-up' 'Plateau Production' and 'Decline' phases
Excludes exploration, appraisal and abandonment/decommissioning stages
. Export of production could be by pipeline or shuttle tanker

BOSIET
Basic Offshore Safety Induction and Emergency Training
Requirements for operatives working offshore on O&G installations and are generally required on OCVs equipped with a helideck for heliops.
Includes sea survival, firefighting, evacuation and first aid training.
Includes helicopter evacuation/ditching training.

S-Lay
Type of pipelaying procedure
Pipeline leaves pipelayer in near horizontal position.
Pipe line follows 'S' shaped configuration with sag bend at seabed and over-bend at surface.
Bending stress at over-bend can be alleviated by use of 'stinger'
Faster than J- Lay and application for shallower waters
(Sketch would gain mark)

STCW
Standards of Training, Certification and Watchkeeping.
An IMO convention establishing standards for the crewing of ships in order to ensure shipowners/operators employ competent crew.
Standards of training and the level of qualification required for the various posts Onboard the vessel are specified.
Intention is to establish a common international standard for crewing vessels Irrespective of which flag state the vessel is registered in.

Satellite Well
A well separate from the main wells but in the same field

Drilled by an MODU and generally at the outer sections of a reservoir which cannot be produced from the main installation and drill centre of a field
A satellite well will be completed subsea with control umbilicals and flow lines connecting (tied-back) to the main platform/installation.

Question 2.
Students are expected to provide a brief explanation of each clause with focus on what they consider the most significant elements.

Maintenance Days: -

Awareness of the concept whereby the vessel operator is allowed time to undertake essential maintenance during term charters.
Recognition that OSV contracts differ significantly from CPs used in the shipping industry and the nature of the offshore industry, work-roles, operational practices require industry-specific solutions.
Examples of specific application of Maintenance Days – paid/unpaid, accumulation etc.

Laycan: -
Explanation of delivery laydays.
Explanation of cancelling date.
Explanation of options to amend delivery date/laycan

On/Off Hire Surveys:-

Usually Independent, almost always required.
Cost is usually split 50/50
Purpose is primarily to take an accurate reading of fuel, lubes and water on board at time of delivery and redelivery.
Additional areas may cover, tank surveys for other cargoes to ensure clean and empty etc.

Early Termination

Understanding that early termination is the termination of the contract prior to the contracted firm period.
There are two main reasons for same:

1) For cause – which means for valid contracted reasons such as breakdown, non- performance, bankruptcy of Owners, war etc.
2) Without cause – which means Charterer may have no further need for vessel although this is normally restricted by not being allowed for commercial reasons such as a decline in the market rates for similar vessels.

Some CPs will include an Early Termination Penalty value thus making it a liquidated damages compensation payment.

Mob/Demob Fees: -
Explain mobilisation/demobilisation fees are a lump sum payment due on delivery And/or redelivery of the vessel, generally covering the owners' costs/lost charter

time taken to transit the vessel to/from place of delivery/redelivery.

Question 3.

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

Answer should include a suitably annotated sketch showing general arrangement, helideck, A-frame, subsea AHC cranes, deck cranes/tugger winches, recovery/abandonment winch, ROV stations, moonpools, substantial accommodation and a strengthened and extensive clear deck.

Description of features – DP2, propulsion arrangement described ie. number and location of thrusters/azimuths and approximate dimensions.

Environmental design features, sulphur emission areas, heat recovery HVAC system and 'Clean Design' class notation.

Range of operations could include:

- IRM
- Cable laying
- ROV Support
- Survey
- Subsea pipeline, umbilical, cable laying – repair & maintenance
- Trenching (cutting & jetting)
- Saturation diving
- Subsea module installation & maintenance
- Topsides/deck module installation & maintenance
- Riser installation
- Mooring installation
- Transportation of equipment

Specific workscope equipment could include:

- Trenching Spread
- VLS: Vertical Lay System tower
- Carousel or reel facility for pipe/cable storage

Propulsion arrangements:

- Thrusters: bow, stern, tunnel, azimuth, number fitted
- Main Propulsion: shaft drive to props/stern thrusters

Additional marks were gained for accurately including specification values – dimensions, capacities, power ratings, accommodation numbers,

Question 4.

The examiner was looking for a general awareness of the current state of the industry.

- Mainly fixed installation up to about 40m water depth.
- Floating installations now appearing, but not yet at commercial stage.
- Huge increase in turbine output: 2MW to 16MW machines installed.
- Designs for 16 -18MW prototypes constructed – 22MW underdevelopment.
- Blade diameters 90m – 250m.
- Fixed installations - Steel jacket construction (similar to O&G).
- Floating installations – Spar and semi-submersible.
    - Spar – 40m draft
    - Semi-subs – 10m draft
- Similar construction techniques to O&G but smaller scale.
- Similar anchoring/mooring arrangements as semi-subs.

Survey vessels/guard vessels undertaking similar roles to O&G.

Construction vessels/heavy lift – similar to O&G.
Some specialist OCVs due to a lot of construction in shallow waters.
Anchoring/mooring systems usually deployed by conventional AHTS.

Unmanned installations when operational.
No fuel or provisions and little maintenance requirement so much less attendance required in comparison to O&G.
Maintenance crews are generally transported by Crew Transfer Vessels (CTV) – small workboats (often catamaran design) making fast transit from shore to location.
Boat Landing Stations (BLS) are specifically designed to interact with shaped fendering arrangements on CTV bows. (System sometimes referred to as 'surfers')

Leading countries:
NW Europe: UK, Germany, Denmark, Belgium and the Netherlands.
Far East: China, Vietnam, Taiwan

Question 5.
The examiner was looking for:
Definition of ERRV – Emergency Response & Rescue Vessel.
Understand that dedicated ERRV/Stand-by vessels are only a regulatory requirement in NW Europe.
The regulatory requirement primarily within jurisdiction of state where ERRV is operating Ie. determined by the Port State (Coastal state).
Large international Oil Companies will generally include ERRVs irrespective of Coastal State requirements.
Emergency cover for rig evacuation or MOB situation.
Additional functions:

- FiFi
- Oil Spill Response.
- Shuttle tanker assist.
- Protection of installation 500m zone.
- Floating Storage.
- ROV Operations.

Equipment:

- Daughter Craft
- FRCs
- Scramble nets
- Rescue Accommodation (beds/seating)
- Emergency provisions
- Hospital

Question 6.
The examiner was expecting an understanding of:

Requirement for an independent surveyor to carry out a fuel survey at time of delivery and redelivery to determine the quantity of fuel remaining onboard (ROB)
Additional survey items regularly include:
Tank surveys – liquid mud, brine, dry bulk.
Survey will establish the condition of tanks – empty of all residues and cleaned to an industry-accepted standard.

A survey certificate issued.
Vessel Assurance - determining vessel is fit for purpose and all equipment is fully functional.
Modification work for specific workscope
Welding on additional seafastenings
Charter responsible for cost of reinstating vessel to on-hire condition.
On-hire/Off-hire times
Costs of survey generally split on 50:50 basis.
Minor damage caused during charter (serious damage would require separate survey).

Question 7.
The examiner expected students to identify an area with significant offshore operations.

Thereafter looking for a listing ports with distances/steaming times to locations with reference to/discussions of:
Facilities:

- Quay space
- Water depth
- Safe berths/shelter
- Storage areas
- Transit sheds
- Quayside equipment (cranes/capacities)
- Specialist services/contractors
- Bunker availability
- Ship Repair/Dry-dock facilities
- Tidal/non-tidal
- Safe anchorage
- Port charges/ships dues/pilotage

Growth/Development

- Availability of dockside labour
- Hinterland – support industries
- Congestion/turn-around times
- Ease by which new companies can acquire premises/establish presence
- Local conditions/transport infrastructure/housing costs
- Political situation/risks
- Security threats (cargo theft/piracy/kidnpping)
- Cabotage
- Investor confidence/ease of raising capital

Question 8.
The examiner was expecting students to demonstrate awareness that OSV contracts differ significantly from CPs used in the shipping industry and the nature of the offshore industry, work-roles, operational practices require industry-specific solutions.

Examples could be quoted from specific CPs.

Awareness of fundamental difference between 'paid' maintenance days - paid for by the charterer as though the vessel were on hire.
Awareness of fundamental difference between accruable days or use them or lose them.
Understanding need for accruing days – ie. drydocking or extended periods of repair.
Problems for charterer if accruing days, particularly in long term CPs.

Marks were awarded for describing any of the 6 main ways to handle maintenance days referenced in the course book:

1. No maintenance days included.
2. Days included in CP but unpaid. ie similar to off-hire days
3. Days paid - limited ie. day/month fully accumulated
4. Days paid – limited and accumulated to a max. specified limit
5. Days paid – limited no accumulation – use them or lose them
6. Days paid – limited and accumulated but unused days at end of CP not paid

Specific examples such as short term spot market likely to have maintenance days excluded should be mentioned and recognition that actual terms are always negotiable and dependant on the current OSV market.