UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FIRST SEMESTER EXAMINATIONS, MAY 2018

COURSE NO: GL 236
COURSE NAME: **TRAINING ON OIL RIGS**
CLASS: GDII **TIME**: 2 HRS

Name**:** _____Index Number: _____

Answer all questions UNDER sections A and answer two questions from section B.

SECTION A (40 MARKS)

1. Spillage is a major environmental issue for only land drilling operations. True or false

2. The wearing of proper foot gears and helmet on the platform is important to prevent slipping on the floor and avoid…… respectively.

3. Safety and efficiency considerations require constant monitoring of the well to detect drilling problems. True or false

4. The primary well control system used during drilling operation is called.....

5. What rigs are usually used for offshore drilling operations at water depths of 200m?.....

6. The earlier drilling platform used at swampy areas at depths around 30 feet is known as……..

7. The bottle type rigs are modified models of the swamp barges, to meet up with drilling operation at farther areas offshore. True or false

8. The air gap set for Jackup rigs is based on the prevailing wave condition of sea. True or False

9. For barge units to move on and out of location, they either have to……..or…….

10. For deeper offshore areas of harsh sea conditions, which of the following drilling rigs is preferred for drilling operations at that spot.
    a. Jackup rigs
    b. Drill ship
    c. Semi-submersible

11. The rig platform that has the self-elevating ability on racks and pinion is known as……..

12. The rig equipped to drill several wells at a stationary position is known as

    a. Cantilever rig
    b. Movable rig
    c. Portable rig

13. The secondary well control system or equipment installed during drilling operation is known as…….

14. The BOPs used offshore and onshore are the same in function and structure. True or False.

15. All the following equipment can be used onshore except
    a. BOP
    b. Christmas tree
    c. Drill pipe and drill collar
    d. Telescopic joint

16. Mention two subsea equipment ……and……

17. For water depths ranging between 100-120 meters, which of the following rigs will be most suitable to use for a drilling operation?
    a. Barges and bottle type
    b. Jackup and drill ship
    c. Drillship and Barges

18. Which of the following offshore platforms is a mobile units but not a floating unit?
    a. Drillship
    b. Semisubmersible
    c. Jackup

19. What is the function of the moonpool on the Drillship?

20. The equipment used to connect the subsea wellhead system to the surface production is called
    a. Mudline suspension system
    b. The base guard
    c. The tie-back system

SECTION B

Question 1 is compulsory. Choose any one from question two and three

QUESTION 1 (15marks)

I. Explain what a rig is? **(2 marks)**

II. Mention the two main types of drilling techniques that have evolved in the petroleum industry. State which type is the modern practicing technique? **(2 marks)**

III. Outline two disadvantage of using the cable tool drilling rigs. **(2 marks)**

IV. List four of the functions of drilling mud or fluid. **(4 marks)**

V. Give the three types of land rigs that can be found in the Petroleum Industry**.(3 marks)**

VI. Mention two positioning systems that are used on offshore platforms to prevent drifting of the rigs. (2 marks)

QUESTION 2 (15marks)

I. State the six main components of a rotary rig. **(6 marks)**

II. Mention three of the parts of the rotary system. **(3 marks)**

III. State one function of the hoisting system. **(2 marks)**

IV. What equipment comprises the block and tackle system? **(3 marks)**

V. Is BOP used during production operations? Why? **(1 mark)**

QUESTION 3 (15marks)

I. Mention three subsea equipment used offshore. **(3 marks)**

II. Mention three personal safety measures on the rigs. **(3 marks)**

III. Give two functions of the circulation system of the rig. **(2 marks)**

IV. Mention the three means of preventing slips, trips and falls. **(3 marks)**

V. Why is it important to employ well control systems during drilling and production operations? **(4 marks)**

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