CHARTERED INSTITUTE OF TAXATION (GHANA)

FEBRUARY 2020 EXAMINATIONS

OIL, GAS AND OTHER MINERALS TAXATION

MARKING SCHEME AND SUGGESTED ANSWERS

Question 1

(a)The three main contractual arrangements under which countries grant oil and gas exploration and production rights to upstream petroleum companies are the following:

- **a.** Royalty/Tax Regime or Concession;
- **b.** Production Sharing Contract or Agreement; and
- **c.** Service Contract (Pure or Risk) **(2 Marks)**

The Royalty/Tax Regime or Concession

The key features of this contractual arrangement are as follows:

- A State grants petroleum exploration and production rights to a contractor.
- Contractor carries risk of exploration failure.
- If there is a commercial discovery and petroleum is being produced, the State levies royalty on production and tax on income as revenue to the State.
- The contractor has the right to export the oil and gas less any domestic supply arrangement.

(2 Marks)

Production Sharing Contract (Agreement)

The key features of this contractual arrangement are as follows:

- Exploration and production rights are granted to a contractor by a State.
- Contractor carries economic risk of exploration.
- The state as the resource owner is entitled to a proportion of the oil and gas produced.
- The contractor keeps agreed proportion of the oil to cover cost (cost oil).
- The remaining oil which is the profit oil is shared between the contractor and the state.
- In some jurisdiction the contractor's share of profit oil is subject to income tax.

(2 Marks)

Service Contracts

There are two types of service contracts; pure and risk.

Pure Service Contract is a contractual arrangement under which

- The State hires a contractor to explore and produce oil and gas for a fee. A form of technical service.
- Contractor carries no economic risk of exploration
- The contractor is paid for its services. It could be an agreed proportion of the oil or gas to cover cost and fee.
- The State keeps the remaining oil and gas. **(2 Marks)**

Risk Service Contract is a contractual arrangement under which

- The State hires a contractor to explore and produce oil and gas for a fee. A form of technical service.
- Contractor solely bears or shares economic risk of exploration failure with the State
- The contractor is paid for its services. It could be an agreed proportion of the oil or gas to cover cost and fee.
- The State keeps the remaining oil and gas. **(2 Marks)**

Sub-Total Mark 10

(b) A Petroleum Fiscal Regime is a set of laws, regulations and agreements which governs the sharing of economic benefits derived from production of petroleum between the resource owner and the oil and gas companies. It is categorised into three main groups: Royalty/Tax Regime, Production Sharing Contract and Service Contracts. **(2 Marks)**

For a fiscal regime to be described as a "hybrid of Royalty/Tax Regime and Production Sharing Contract" that regime should have some of the main or distinctive elements of both fiscal regimes. Ghana has in its petroleum fiscal regime the main elements of the royalty/tax regime, that is royalty and tax, but does not have the distinctive elements of the production sharing contract, cost oil and profit oil. Ghana's petroleum fiscal regime cannot therefore be described or explained as "a hybrid of the Royalty Tax Regime and Production Sharing Contract." **(2 Marks)**

The main elements of Ghana's petroleum fiscal regime include:

- Royalty
- Initial (Carried) Interest
- Additional Participating Interest
- Income Tax
- Additional Oil Entitlement. **(2 Marks)**

Initial (Carried) Interest and Additional Participating Interest (API) is the State share of oil or gas distributed to interest holders in a Petroleum Agreement. This is not sharing of profit oil. **(1 Mark)**

The Additional Oil Entitlement (AOE) is additional profit tax based on the rate of return achieved. The base for determining the AOE is not production but rather cash flow calculation to determine

the rate of return achieved. Where the specified rate of return is achieved, Ghana is entitled to additional oil. The AOE is therefore not sharing of profit oil but rather the payment of additional tax in kind. **(1 Mark)**

The main elements of Ghana's fiscal regime are the royalty and tax and because the state participates in all upstream petroleum operations Ghana's fiscal regime can be described as **Royalty/ Tax Regime with State Participation**, to differentiate it from a pure royalty/tax regime.

(2 Marks)

Sub-Total 10 Marks

Total 20 Marks

Question 2

(a) FINANCE LEASE

A finance lease is a way of providing finance to a company to acquire assets for its operations. A leasing company (the lessor or owner) buys the asset for the user (usually called the hirer or lessee) and rents it to them for an agreed period. Under finance lease arrangements, the lessee has the option to acquire ownership of the asset. **(2 Marks)**

In accounting, a finance leased asset and associated liabilities are recorded in the statement of financial position of a company.

Under the Income Tax Act, 2015 (Act 896), a lease is a finance lease where:

- **(a)** the lease agreement provides for transfer of ownership following the end of the lease term, or the lessee has an option to acquire the asset for a fixed or presupposed price after expiry of the lease term,
- **(b)** a lease agreement in which the lease term exceeds seventy-five percent of the useful life of the leased asset;
- **(c)** a lease agreement in which the estimated value of the asset after expiry of the lease term is less than twenty percent of its market value at the start of the lease;
- **(d)** in the case of a lease that commences before the last twenty-five per cent of the useful life of the asset, the present value of the minimum lease payments equals or exceeds ninety percent of the market value of the asset at the start of the lease term;
- **(e)** a lease agreement in which the asset is custom-made for the lessee and after expiry of the leased term it will not be of practical use to any person other than the lessee. **(3 Marks)**

Where an asset has been leased by a lessor to a lessee under a finance lease, the lessee is required to deduct the interest portion payable for each year of assessment as an expense from income; and is entitled to capital allowance in respect of the capital portion. In respect of a lease of a road vehicle other than a commercial vehicle, the capital portion is limited amount specified in the Third Schedule to Act 896. **(1 Mark)**

The lessor is required to include the whole amount of the interest and repayment of the capital for that year as income in respect of the leased asset. He is not entitled to capital allowances in respect of the leased asset, but may reduce the amount of the payment of capital included in calculating the income of the lessor by a capital amount determined in accordance with guidelines issued by the Commissioner-General. **(1 Mark)**

Sub-Total 7 Marks

(b) OPERATING LEASE

Operating lease is a contract where the lessor (owner) permits the lessee (user) to use an asset for a specified period which is less than the economic life of the asset without any transfer of ownership rights. The lessee pays rentals for the use of the asset

Where an asset is leased under an operating lease, the lessee is required to deduct the rental as an expense from income.

The rental is treated as income of the lessor. The lessor is treated as the owner of the asset and is entitled to capital allowance on the cost of the asset. **(3 Marks)**

Sub Total 3 Marks

(c) In taxation, ring fence refers to the segregation of operations of a company into separate income streams for tax purposes. Separate Petroleum Operation is a terminology used for the ring-fence concept in the petroleum industry. (**1 Mark)**

Two levels of ring fencing in Act 896

i. **Contract Level**: Petroleum operations conducted under a petroleum agreement constitute a separate petroleum operation. Where a person has interest in two or more petroleum agreements, petroleum operations in respect of each petroleum agreement constitutes a Separate Petroleum Operation. **2 Marks**

ii. **Field Level**: Petroleum operations conducted with respect to each development and production area (field) within a contract area of a petroleum agreement constitutes a Separate Petroleum Operation. Where a person is conducting petroleum operations in two or more fields within a contract area, petroleum operations conducted in each field constitutes a Separate Petroleum Operation. **2 Marks**

Petroleum operations conducted in fields of a contract area are delineated as follows:

Petroleum operations conducted prior to the date of approval of a plan of development with respect to field and after approval of the plan of development in relation to the same field is conducted in respect of the Same Separate Petroleum operation. Petroleum operations conducted after the date of approval of the plan of development but not in respect of the same field is considered as conducted in respect of a new Separate Petroleum Operation. **2 Marks**

The following applies to Separate Petroleum Operation:

1. Each Separate Petroleum Operation is to be treated as a separate business;
2. Assessable income is calculated for each Separate Petroleum Operation;
3. Transactions between Separate Petroleum Operations are required to be conducted on arm's length basis;
4. Transactions between a Separate Petroleum Operation of a person and any other activity of a person should be conducted on arm's length basis;
5. Transfer of an asset to or from a Separate Petroleum Operation is required to be treated as acquisition and disposal of an asset.
6. Capital allowances for assets used in two Separate Petroleum Operations in a year are required to be apportioned in proportion to the use of the assets in each Separate Petroleum Operation. (3 **Marks)**

Sub-Total 10 Marks

Total 20 Marks

Question 3

(a**) Unitisation – Un**itisation refers to the joint development of a hydrocarbon reservoir which extends across two or more licence or contract areas in order to ensure the efficient production of the reservoir and to maximise the economic recovery of petroleum from such licences. Where during the appraisal of a discovery it is found out that a hydrocarbon reservoir straddles two licences, it is common in the industry that the licensees would agree to pool their resources to jointly exploit the reservoir. This avoids the duplication of infrastructure and well drillings to produce the same reservoir. Cost is thus reduced. **(4 Marks)**

In some cases, the hydrocarbon reservoir cut across the borders of two countries. Where the licensees of each country agree to jointly exploit that reservoir, it is referred to as Cross-Border Unitization. The term Sole-Country Unitization is used to described unitisation which solely takes place in one country. That is where the hydrocarbon reserve straddles two licences in the same country. **(4 Mark)**

(b) Redetermination – This is a process where the proportionate share of oil and gas initially determined to be in place in the contract area of each licence during unitisation is re-

assessed. As more data is obtained about the unitised field, it is common for the information derived to be used to re-determine the oil and gas in place in each contract area of the unitised field. This is an important principle because it allows for a more accurate allocation of costs and production between the parties to the unitisation agreement. **(4 Marks)**

Sub-Total Marks 12

(c) Total Production in Unitised Area	500,000,000 barrels
Hydrocarbon in Coastal Reef area of Unitised Area	40%
Hydrocarbon in Deep Sea area of Unitised Area	60%
ABC's interest in Coastal Reef PA	40%
ABC's interest in Deep Sea PA	30%
Oil Price per barrel	$50

Proportionate Production from Coastal Reef and Deep Sea Areas

Coastal Reef Area=	(40/100 x 500,000,000)	200,000,000 barrels
Deep Sea Area =	(60/100 x 500,000,000)	300,000,000 barrels

ABC Limited's Gross Income:

Income from Coastal Reef =	(40/100 x 200,000,000 x $50)	$4,000,000,000
Income from Deep Sea =	(30/100 x 300,000,000 x $50)	$4,500,000,000
ABC Limited's Gross Income:		$8,500,000,000

Sub Total 8 Marks

Total 20 Marks

Question 4

(a)When a person parts with the ownership of a petroleum right is referred to as assignment of interest in a petroleum agreement or disposal of petroleum rights. (2 **Marks)**

Tax treatment is as follows:

1. When assignment occurs before the date production commences, the consideration is deducted from the pool balance of petroleum expenditure being incurred before production. (**1 Mark)**

2. When a petroleum right is assigned when production commences and thereafter, the gain from the realisation is added to petroleum income and taxed at 35 percent. **(1 Mark)**

3. Where a petroleum right is assigned when production commences, the written down value of the capital allowance expenditure of the assignor is transferred to the assignee. Where it is only a part of the right that is assigned, the written down value of the capital allowance expenditure is apportioned between the assignor and the assignee in proportion to the percentage retained and assigned accordingly. **(2 Marks)**

Indirect Assignment – When the underlying ownership of an entity that holds a petroleum right in Ghana changes by 5%, that entity is deemed to have disposed of a proportionate interest in the asset in Ghana. The consideration for that disposal is the consideration received or receivable, or the market value of the proportion of the right treated as disposed of, whichever is higher. The book value of the proportion of the right disposed of is deducted from the consideration or the market value to arrive at the gain or loss from the disposal. **(3 Marks)**

Capital allowance not affected because the assignor is deemed to have disposed of a proportionate interest in the petroleum right and reacquired it at the same cost.

(1 Mark)

Sub-Total 10 Marks

(b)

(i) Computation of Capital Allowance

Underlying Assumption

In accordance with the provisions of the Income Tax Act, 2015 (Act 896), all capital and revenue expenditure incurred in respect of exploration and development prior to the commencement of commercial production are required to be place in a single pool and only granted capital allowance from the year commercial production commenced. Under terms of Ghana's petroleum agreements, the State (GNPC) does not pay exploration cost in respect of its Initial Interest and Additional Participating Interest. Exploration cost is payable by Deep Sea Ventures and Coastal Explorations and should therefore be shared according to the ratio 45:40. **(1 Mark)**

Total Exploration Cost:

250,000,000 + 15,000,000 + 5,000,000 +100,000,000= **US$370,000,000**

Assumed bonus is signature bonus. Under Act 896 Bonus paid is capitalised. This is paid by the companies. The state therefore has no share in this cost and therefore the ratio for sharing the Bonus paid should be same as that of exploration cost (45:40)

(1 Mark)

Apportionment of Exploration Cost	**US$370,000,000**
Deep Sea Ventures	45/85 X 370,000,000 = 195,882,353
Coastal Explorations	40/85 X 370,000,000 = 174,117,647

Total		370,000,000

(2 Marks)

Under terms of Ghana's Petroleum Agreement, the State (GNPC) does not pay development cost in respect of the Initial Interest, but pays in respect of the Additional Participating Interest. Development cost is therefore paid by Deep Sea Ventures, Coastal Explorations and the State (GNPC) in respect of the Additional Participating Interest and should therefore be shared according to the ratio 45:40:5. **(1 Mark)**

Total Development Cost:

2,000,000,000+1,500,000,000+100,000,000 +430,000,000 = 4,030,000,000

The interest on loan contracted by the operator on behalf of the parties is in respect of development and therefore should have the same sharing ratio for development cost.

(1 Mark)

Apportionment of Development Cost US$4,030,000,000

Deep Sea Ventures	45/90 X 4,030,000,000 =	2,015,000,000
Coastal Explorations	40/90 X 4,030,000,000 =	1,791,111,111
State (GNPC)	5/90 X 4,030,000,000 =	223,888,889
Total		4,030,000,000

(2 Marks)

Capital Allowance Computation

Deep Sea Ventures

Capital Expenditure – 2,210,882,353 (195,882,353 +2,015,000,000)

Year	**Cost**	**Rate**	**Allowance**	**Written Down Value**	
2016	2,210,882,353	20%	442,176,471	1,768,705,882	**(1 Mark)**

Capital Allowance Computation

Coastal Explorations 1,965,228,758 (174,117,647 + 1,791,111,111)

Year	**Cost**	**Rate**	**Allowance**	**Written Down Value**	
2016	1,965,228,758	20%	393,045,752	1,572,183,006	**(1 Mark)**

Sub-Total – 10 Marks

Total Mark 20 Marks

Question 5.

Gold Resources Ltd. will be liable to pay:

- **a)** Mineral Royalty;
- **b)** Mineral Income Tax;
- **c)** Tax on Interest. Credit granted for withholding tax paid.
- **d)** Tax on gain on disposal of asset. This is added to income from operations

2 Marks

(a) Computation of Mineral Royalty

Gross Income from operations	US$300,000,000
Mineral Royalty @ 5%	15,000,000 **1 Mark**

(b) Computation of Interest Withholding Tax

Interest Income	US$1,000,000
Tax @ 8%	80,000 **1 Mark**

(c) Computation of Mineral Income Tax

Underlying Assumption:

Sparrows Mine and Dove Mines share the same processing facility and therefore constitute the same separate mineral operation. Capital allowance is therefore computed on the sum of their reconnaissance and prospecting costs. **(1 Mark)**

Capital Allowance Computation

Year	Cost	Rate	Allowance	Written Down Value	
2016	80,000,000	20%	16,000,000	64,000,000	**(1 Mark)**

Tax Computation

	US$	US$	
Net profit as per accounts/returns		120,000,000	
Deduct			
Minerals Royalty	15,000,000		**1 Mark**

Hedging Income	3,000,000		
Interest Income	1,000,000		
Consideration Realised from sale of asset	800,000		
Gross Dividend from resident company 30% rights	200,000	20,000,000	
		100,000,000	
Add Back:			
Depreciation	12,000,000		
Reconnaissance & Prospecting Cost (Sparrows Mine)	45,000,000		**1 Mark**
Reconnaissance & Prospecting Cost (Dove Mine)	35,000,000		
Exploration & Production Rights (Eagle Mine)	25,000,000		**1 Mark**
Expense on Hedging transactions	5,000,000		
Cost of asset sold	300,000	122,300,000	
Adjusted Profit		222,300,000	**1M**
Less Capital Allowance		16,000,000	
Chargeable Income from Mineral Operations		206,300,000	
Add:			
Hedging Income	3,000,000		
Less Allowable Hedging Expenses	3,000,000		
Hedging Income Added	0	0	**1 Mark**
Hedging Loss Carryforward	2,000,000		
Interest Income		1,000,000	
Consideration from sale of Asset	800,000		
Less Cost of Sale of Asset	300,000	500,000	**1 M**
Total Chargeable Income		204,800,000	
Tax @ 35%		71,680,000	**1M**
Less Interest Withholding Tax		80,000	
Tax Payable		71,600,000	**1M**

Underlying Assumption

(a) Dividend is deducted from profits because it is subject to final withholding tax. But in this case it is exempt because the company that received the dividend controls more than 25% voting rights in the company that paid the dividend. Assumption is that the company that paid the dividend is not a mining or upstream petroleum company. (**1 Mark)**

(b) Royalty computed on gross income from mineral operations. Other income not included. (**1 Mark)**

(c) Exploration & Production Rights of Sparrows Mine and Dove Mines are capital expenditure and therefore added back and capital allowance granted instead. **1 Mark**

(d) Eagle Mine is a separate mineral operation and therefore the cost incurred in acquiring the Eagle Mine (US25,000,000) is excluded from determine the tax liability of Gold Resources Ltd. No tax liability computed for the Eagle Mine because no income was earned. It was acquired at the close of business on December 31, 2016. (**1 Mark)**

(e) Hedging expense is required to be limited to the hedging income included in the income from mineral operation. Hedging income in this case is US3,000,000 and its expense is US$5,000,000. The excess of US$2,000,000 is therefore disallowed as deduction and added back to profits. It is required to be carried forward and deducted from future hedge income. (**1 Mark)**

(f) It is an obligation on any resident person, other than an individual, who pays interest to any person to withhold tax from the Interest. The interest withholding tax is not a final tax and therefore the interest incidental to the operations is taxed at the applicable rate and withholding tax deducted from the tax liability computed.

(1 Mark)

Assumptions Sub-Total 6 Marks

Total Marks 20