



**Pakistan Institute  
of Public Finance Accountants**

# **Model Solutions**

**Telecommunication Rules,  
Accounts and Procedures  
(Application)**

**Summer Exam-2023**

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## Summer Exam-2023

### **Solutions – Telecommunication Rules, Accounts and Procedures (Application)**

#### **Q.1. The Need for Spectrum Management:**

Spectrum management is an extremely important part of telecommunications policy and regulation. The spectrum is allocated for particular uses, and specific technical and service rules, developed by spectrum managers, govern those allocations. As a result, technical and service rules are a crucial determinant of the structure and performance of industry and of institutions devoted to ensuring public safety, security and national defense. There are four main areas of work in spectrum management: planning, engineering, authorization and monitoring. These are briefly described below:

1. Spectrum planning involves the allocation of portions of the frequency spectrum to specified uses in accordance with international agreements, technical characteristics and potential use of different parts of the spectrum, and national priorities and policies.
2. Spectrum authorization involves granting access under certain specified conditions to the spectrum resource by various types of radio communication equipment and the certification of radio operators.
3. Spectrum engineering involves the development of electromagnetic compatibility standards for equipment that emits or is susceptible to radiofrequencies.
4. Spectrum monitoring and compliance involves the monitoring of the use of the radio spectrum and the implementation of measures to control unauthorized use.

#### **Spectrum Pricing:**

Administrative methods of setting spectrum prices are increasingly being supplemented by the use of market based methods for determining spectrum prices. Spectrum pricing methods have taken various forms: from setting license fees at a level sufficient to recovering the cost of spectrum management; through to applying administrative incentive prices (AIP); and, to auctions and using them to make initial assignments and as a consequence establish a price for spectrum.

**Total Marks 10**

#### **Q.2. Protection and communication of official information (Rules of Business, Rule-55, Page-47)**

i

- (1) Information acquired from official documents relating to official matters shall only be communicated by a government servant or, as the case may be, designated official to the press, to non-officials, or even to officials belonging to other government offices in accordance with the procedure laid down in section 3 of the Freedom of Information Ordinance, 2002 (XCVI of 2002).
- (2) Detailed instructions shall be issued by the Cabinet Division for the treatment and custody of official documents and information of a classified nature.
- (3) Ordinarily all official news and information shall be conveyed to the press and the public through the Press Information Department or the External Publicity Wing of the Information and Broadcasting. The manner in which this may be done shall be prescribed by general or special orders to be issued by the Information and Broadcasting.
- (4) Only Ministers and Secretaries, and such officers as may be authorised, shall act as official spokesmen of the Government. No statement involving foreign policy shall normally be made by a person (other than the Minister of State for Foreign Affairs and the Prime Minister) without prior consultation with the Foreign Affairs Division.



## Summer Exam-2023

### Solutions – Telecommunication Rules, Accounts and Procedures (Application)

#### Q.2. Channels of Communications (Rules of Business, Rule-56, Page-47)

ii

- (1) Except as provided in sub-rule (2), all correspondence with the Government of a foreign country or a Pakistan diplomatic mission abroad or a foreign mission in Pakistan or an international organization shall normally be conducted through the Foreign Affairs Division:

Provided that by means of general or special orders to be issued by the Foreign Affairs Division, direct correspondence may be allowed under such conditions and circumstances as may be specified.

- (2) All requests to a foreign Government or an international organization for economic or technical assistance shall be made through the Economic Affairs Division, which shall correspond with the foreign Government, etc., in accordance with the prescribed channel. The Economic Affairs Division may allow, by general or special orders, such requests to be made direct.

- (3) Correspondence with Provincial Governments shall be conducted direct by the Division, in respect of the subjects allocated to them, subject to the provisions of rule 8, and it shall ordinarily be addressed to the Secretary of the Department concerned in the Provincial Government:

Provided that under general or special orders to be issued by a Division, its Attached Department may be authorised to correspond direct with the Department of a Provincial Government under such conditions and circumstances as may be specified therein.

- (4) Copies of the correspondence with the Provincial Government in respect of the affairs of former and acceding states, if any, and Tribal Areas shall be endorsed to the Kashmir Affairs & Northern Areas and States & Frontier Regions Division, provided that Division may, by means of general or special orders, specify the class or classes of correspondence which shall be conducted through that Division.

- (5) All correspondence with the headquarters of the Defence Forces viz. General Headquarters, Naval Headquarters, Air Headquarters, or their subordinate formations, shall normally be conducted through the Defence Division:

Provided that by means of general or special orders to be issued by the Defence Division direct correspondence may be allowed under such conditions and circumstances as may be specified.

#### Q.2. Provisional forecast of official and non-official business (Rules of Business, Rule-37, Page-40)

iii

The Secretary, Parliamentary Affairs Division, shall prepare a provisional forecast of the business to be brought before the Assembly, the Senate or the joint sitting, as the case may be and shall make, through the appropriate Leader of the House, or in the case of the joint sitting, through the Prime Minister, proposals to the Speaker or, as the case may be, the Chairman for the allotment of days for the transaction of official as well as non-official business. The final arrangement as approved by the Speaker or, the Chairman as the case may be, shall be circulated by the appropriate Secretariat to all the Divisions and the Secretary, Prime Minister's.

**Total Marks 20**



## Summer Exam-2023

### Solutions – Telecommunication Rules, Accounts and Procedures (Application)

Q.3.

Description		Amount in (Rs)
A	Gross Revenue 2022	1,000,000
B	(Less) Allowable Deduction	
-	Discount on Commission	75,000
-	Annual License Fee of 2021	265,000
-	APC Contribution of 2020	85,000
	<b>Total Allowable Deduction</b>	<b>425,000</b>
	<b>Adjusted Gross Revenue for Calculation of Fee (A-B)</b>	<b>575,000</b>
-	ALF @ 0.5% of adjusted Gross Revenue	2,875
-	R&D @ 0.5% of adjusted Gross Revenue	2,875
-	USF @ 1.5% of adjusted Gross Revenue	8,625

Inter operator cost was not taken as allowable deduction being still outstanding.

**Total Marks 10**

#### Q.4. Forms of Interconnection

Here we introduce several key concepts in interconnection:

- ☐ One-way and two-way interconnection
- ☐ Unbundling, facilities sharing and co-location
- ☐ Asymmetric interconnection regulation.

##### 5.3.1. One-way and two-way

##### Interconnection

There are two broad forms of interconnection: one-way interconnection and two-way interconnection. One-way and two-way interconnection can co-exist. For example, new entrants often obtain parts of their networks from the incumbent carrier (one-way interconnection), and then exchange traffic with the incumbent (two-way interconnection).

##### One-Way Interconnection

One service provider or carrier must obtain inputs from another carrier in order to offer services to its customers. The carrier supplying the inputs may or may not compete with the firm purchasing the inputs.

For example, prior to 1996, local exchange carriers in the United States were prohibited from offering long-distance services. Long-distance carriers such as AT&T, Sprint and MCI obtained access from these local exchange carriers, to offer long-distance services to customers on the local exchange network. Payment for one-way interconnection is always from the interconnecting operator the long-distance carrier) to the interconnection provider (the local exchange carrier).

##### Two-Way Interconnection

In two-way interconnection, two or more carriers must connect their facilities (networks) so that customers of one carrier can call customers served by other carriers, and *vice versa*. Two-way interconnection also occurs in other industries. For example, credit cards such as VISA and MasterCard are provided over interconnected networks of member banks and participating merchants. Cardholders, member banks and merchants pay fees to access a credit card network.



## Summer Exam-2023

### Solutions – Telecommunication Rules, Accounts and Procedures (Application)

#### Unbundling Interconnection

Unbundling is the mandatory offering by network operators of specific elements of their network to other operators, on terms approved by a regulator or sanctioned by a court. Unbundling goes further than imposing an obligation on incumbents to offer interconnection services to entrants. It requires the incumbent to allow entrants to lease certain individual building blocks that make up a telecommunications network. Unbundling of network elements allows competing operators to enter the market and roll out services with considerably less sunk investment in some or all components of a competing network, e.g.:

- A new entrant might initially install switches in central business districts only, and lease those components of the incumbent carrier's network needed to directly serve customers in other areas, or
- An entrant might lease just those network elements needed to offer competing retail services (such as DSL services). In this way the entrant can offer competing services to customers without duplicating all components of the incumbent carrier's infrastructure, and without simply reselling the incumbent's service offering. Unbundling usually requires facilities sharing or collocation, where the incumbent operator houses the communications equipment of competing operators to facilitate connectivity, or permits entrants to share infrastructure such as cell-site masts, cable ducts, or telephone poles.

#### 5.3.2. Asymmetric interconnection

Interconnection regulation can apply equally to all telecommunications carriers (symmetric regulation) or to incumbent carriers only (asymmetric regulation). Asymmetric interconnection regulation is very common. The rationale for asymmetric regulation is to redress the consequences of market power. Asymmetric regulation does this by placing additional requirements on incumbent or dominant operators that might otherwise be able to prevent or deter competition. For example, United States and Canadian regulators impose an interconnection obligation on all firms classed as telecommunications carriers. However, only incumbent firms are required to unbundle and share network components.

**Total Marks 20**

#### Q.5. CALCULATION OF APC FOR USF

##### Formula for calculation of APC:

ASR x Permissible Range = Total ASR

Total ASR - LDI Share x Avg. US\$ rate – MTR

Total APC for USF = Traffic x APC

S. No	Month	Traffic	Approved Settlement Rate (ASR)	Permissible Range (76%)	Total ASR	LDI Share	Avg US \$ Rate	MTR	APC	Total
1	2	3	4	5	$(4 \times 5) = 6$	7	8	9	$(6-7) \times 8-9 = 10$	$10 \times 3 = 11$
1	January-20	50,000	0.11	0.76	0.0836	0.05	160	0.90	4.476	223,800
2	February-20	52,000	0.11	0.76	0.0836	0.05	160	0.90	4.476	232,752
3	March-20	65,000	0.11	0.76	0.0836	0.05	160	0.90	4.476	290,940
4	April-20	75,000	0.11	0.76	0.0836	0.05	160	0.90	4.476	335,700
5	May-20	85,000	0.11	0.76	0.0836	0.05	160	0.90	4.476	380,460
6	June-20	95,000	0.11	0.76	0.0836	0.05	160	0.90	4.476	425,220

**Total Marks 20**

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