**GOVERNMENT OF KHYBER PAKHUNKHWA**

**ADMINISTRATION DEPARTMENT**

**(PUBLIC SERVICE COMMISSION)**

# PC-1

**Installation of Optical Fiber Networking, CBT and Upgradation of Existing IT System of Khyber Pakhtunkhwa Public Service Commission**

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| **ADP No.** | **Forum & Date of Approval** | **Total Cost** |
| **546-210254** | **DDWP****Dated: 28/07/2021** | **Rs. 94.58****Million** |

**PREPARED BY:**

**KHYBER PAKHTUNKHWA**

**PUBLIC SERVICE COMMISSION**

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| **1** | **Name of the Project** | Installation of Optical Fiber Networking, CBT and Upgradation of Existing IT System of Khyber Pakhtunkhwa Public Service Commission |
| **2** | **Location** | The project will be located at office of Khyber Pakhtunkhwa Public Service Commission (2 Fort Road Peshawar Cantt. Near Governor House). |
| **3** | **Authorities responsible for:****(i) Sponsoring****(ii) Execution****(iii) Operation & Maintenance** | Administration Department, Govt. of Khyber Pakhtunkhwa.Khyber Pakhtunkhwa Public Service Commission.Khyber Pakhtunkhwa Public Service Commission. |
| **4** | **Approving forum** | DDWP |
| **5** | **Plan Provision** | The Scheme is reflected in ADP 2021-22 under Khyber Pakhtunkhwa Public Service Commission, Establishment and Administration Department with an amount of **98.050** |
| **6** | **Project Objectives****Technical Parameters** | * + - 1. Establishment of Network Infrastructure
			2. Upgradation of Server Room
			3. Extension/Scalability of Computer Labs and equipment
			4. Customization of Data Bank
			5. Provision of Hardware for various Section of KP PSC
	1. The C&W Department completed construction work of the additional accommodation and handed over the building to PSC in August, 2018. However, an important component i.e., computer networking was not provided for in the additional accommodation. Detail of networking required is at **Annex-I**.
	2. The PSC requires High End servers to speed up the access to data on Serves i.e. (Database Server, Verisys Server, Recruitment Server, File sharing Server, Biometrics Server) with registered (Licensed) Operating System for Server. To run Network System efficiently, securely both online and offline a registered Hardware Network firewall is most important in order to run its system in effective and transparent manner the PSC needs to upgrade their Server Room Detail of required servers is at **Annex-II**.
	3. KP PSC initiated working on Computer Based Testing (CBT) in collaboration with the KP IT Board. The KP IT Board developed software in consultation with the PSC and made a successful demonstration. In the near future, the PSC would be able to start Computer Based Tests. The existing IT lab was established with 50 computers in 2012-14. A number of computer systems have become out of order. The remaining are also outdated and would not support the CBT software. The lab also needs 100 workstation/Terminal connected with a centralized CBT Server through Network, Network Establishment in IT-Lab is also needed for CBT System, Detail is at **Annex-III**.
	4. Customization and improvement in Data Bank is required in the CBT System, Requirement details is at **Annex-IV**
	5. Two heavy duty printers working in Examination and IT Section have completed their life but still being used due to non-availability of heavy-duty printers for printing hundreds of thousand pages of call letters, questions papers etc. a year. For smooth working, replacement of the two heavy duty printers is need of the hour. Two OMR Scanner also required for Examination section to speed up the paper checking process.

Six numbers laptops of Chairman/Members and IT Staff have been declared as condemned. The same need replacement Estimated cost is given at **Annex-V**. |
| **7** | **(A) Provision in Current Year ADP****(B) Total Allocation Required** | The Scheme has been reflected in the Current ADP 2021-22 with the total cost of **98.050** million with an allocation for current year is **12.80** million.Rs. 98.05 Million (Summary of Total Cost) |
| **8** | **Description and Justification of the Project** | The PSC system is online and networking is an integral part of the online system. While constructing additional accommodation consisting of two storeys on the central block and one story on eastern block of PSC office building, no networking has been carried out by the C&W Department as there was no provision of funds for the same. Fast data Communication between servers and clients is only possible by installing Fiber Optics as medium of communication, Wi-Fi Devices will be helpful for connectivity of portable devices, Internet availability and will work as backup connection of wired Network also.The existing servers are old and outdated and are not able to support new software and increasing load. So many times, the old servers crash due to hardware issues which creates huge problem for the IT Staff of KP PSC. High End Servers will improve the processor and hardware capabilities which will be helpful to run all the online and offline applications running in the KP PSC.Without a licensed physical Network firewall, it is impossible to manage a huge network of KP PSC. The firewall will be used to provide connectivity, security, integrity and reliability to PSC Network, Network firewall will be helpful to monitor and manage whole Network of PSC.Registered (Licensed) operating System multiply the performance and efficiency of Applications running on High End Servers. Two heavy duty printers and two OMR Scanners working in Examination and IT Section have completed their life but still being used due to non-availability of heavy-duty printers and OMR Scanners. Printers are used for printing hundreds of thousand pages of call letters, questions papers etc a year and OMR Scanner are used for checking of MCQS papers. For smooth working, replacement of the two heavy duty printers and addition of two OMR scanner is need of the hour. Moreover, six numbers laptops of Chairman/Members and IT Staff have been declared as condemned. The same need replacement.50 numbers computers purchased for the IT Lab under the Project “Automation of KP PSC (Phase-II) have become outdated and a number of these have become out of order. These computers would not support the software of the CBT online tests to be started in collaboration with KP IT Board.Establishment of complete CBT System in IT Lab having 100 clients (Terminal) Connected with CBT Server through a computer Networks, This CBT System will be used for CBT Testing as well as typing test advertised by KP PSC and federal Public Service Commission Islamabad.Due to Covid Pandemics it is now very important to connect any office online by providing Video Conferencing Facility system the same is required to KP PSC office.While making this PC-1 the following domain experts has been enveloped with the IT Staff of KP PSC throughout:* Science and technology and Information Technology
* KP IT Board
* KP Data Centre
* NTC
 |
| **9** | **Management Structure and Manpower Requirements during Execution and Operational Phases** | 1. **Project Director (DD-IT)**

Project Director Appointed as per Government Policy Manging the overall Project Execution and operation 1. **Project Assistant (AD-IT Networks)**

Supervising all the Network activities regarding implementation of Network Infrastructure.1. **Project DDO (Account Officer)**

Supervising the financial Transaction related to procurement.1. **Internees (Numbers:4(4 Each Year))**

Assisting Project Director, Project Assistant and Project DDO during ICT implementation.**Education Qualification*** Candidate having 16 years education form HEC recognized educational institutes.
* Maximum age limit 30 years.
* KPK Domicile holder.
* Duration of internship will be for one year.
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| **10** | **Capital Cost Estimates** |

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| **S.No.** | **Items** | **Amount (in million)** |
| 1 | Optical Fiber Networking | **29.97** |
| 2 | Upgradation of Server Room | **14.65** |
| 3 | Upgradation of IT Lab for Computer Based Testing | **16.10** |
| 4 | CBT Software Customization and Improvement in MCQ’s Data Bank | **18.50** |
| 5 | Provision of Heavy-Duty Printers and Replacement of Laptops | **12.00** |
| 6 | 04 Interns for KP PSC for 24 Months @ Rs. 25000/- per month | **3.36** |
| **G. Total** | **94.58** |

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| **11** | **Implementation Schedule** |  (i) **Date of Start:**  01.07.2021 (ii) **Date of Completion:** 30.06.2022  |
| **12** | **Additional projects/ decisions required to maximize socio-economic benefits from the proposed project** | The resources from the KP PSC Department will be involved in the implementation of this project. |

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| **13** | **Certificate** | **Prepared by:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Abdul Bari** **Assistant Director-IT** **Phone: 091-9212976**  **Checked by:** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **Mr. Muhammad Kashif** **Deputy Director-IT** **Phone: 091-9222469****Reviewed By:**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **Secretary (Public Service Commission)** **Govt. of Khyber Pakhtunkhwa****Recommended By:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Chairman KP PSC****Approved by:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Secretary Administration** |

A*nnexures*

**SUMMARY OF TOTAL COST**

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| --- | --- | --- |
| **S.No.** | **Items** | **Amount (in million)** |
| 1 | Optical Fiber Networking | **29.97** |
| 2 | Upgradation of Server Room | **14.65** |
| 3 | Upgradation of IT Lab for Computer Based Testing | **16.10** |
| 4 | CBT Software Customization and Improvement in MCQ’s Data Bank | **18.50** |
| 5 | Provision of Heavy-Duty Printers and Replacement of Laptops | **12.0** |
| 6 | 04 Interns for KP PSC for 24 Months @ Rs. 25000/- per month | **3.36** |
| **G. Total** | **94.58** |

**ANNEX -I**

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| **Optical Fiber Networking in PSC** |
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| **S.No** | **Name of items** | **No of items required** | **Unit price**  | **Total price**  |  |
| 1 | Layer-3 Manageable Core Switch 48 ports (Rack Mounted) | 2 | 2,200,000 | 4,400,000 |  |
| 2 | Giga Bit Access Switches 24 Ports (with data Cabinets for switches) | 20 | 500,000 | 10,000,000 |  |
| 3 | Wireless Giga Bit Access Point | 60 | 160,000 | 9,600,000 |  |
| 4 | Online UPS 10 KVA | 1 | 500,000 | 500,000 |  |
| 5 | Networking tool kit Bay Net (complete set) | 1 | 50,000 | 50,000 |  |
| 6 | Wifi USB Lan Adapter | 200 | 2,000 | 400,000 |  |
| 7 | Portable DVD-W Rom Drive For DVD Writing and Portable Hard disk Drive (2TB) for Backup | 2 | 10000 | 20,000 |  |
| 8 | Access point controller | 2 | 1,500,000 | 3,000,000 |  |
| 9 | Fiber Optic Deployment, Installation, commissioning including ODF, Pigtail, 24/48 Fiber Cabling, Splicing, Ducting, etc  | 1 | 2,000,000 | 2,000,000 |  |
| **Total** | **29,970,000** |  |

**ANNEX – II**

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| **Upgradation of Server Room** |
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|  |
| **S.NO** | **Name of Items/Model** | **No Of Items Required** | **Unit price**  | **Total Price- Items**  |  |
| 1 | High End Server for KP PSC Applications | 4 | 1,300,000 | 5,200,000 |  |
| 2 | Backup Servers for Disaster Recovery  | 2 | 1,300,000 | 2,600,000 |  |
| 3 | Physical Firewall with 3Years License (IPS/IDS antivirus, anti-spam bundled license) | 2 | 3,000,000 | 6,000,000 |  |
| 4 | Microsoft Windows Server 2020 with License for Servers | 5 | 170,000.00 | 850,000 |  |
| **Total** | **14,650,000** |  |

**ANNEX – III**

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| **Upgradation of IT Lab for Computer Based Testing** |
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| **S.NO** | **Name of Items/ Model** | **No of Items Required** | **Unit price**  | **Total Price (In PRS)** |  |
| 1 | ThinClient/CBT Server with UPS | 1 | 1,100,000 | 1,100,000 |  |
| 2 | 100 Thin Clients/Terminals with furniture(table,Chair) | 100 | 120,000 | 12,000,000 |  |
| 3 | Complete Network of Thin Clients(Nodes) and Server for CBT System | 100 | 30000 | 3,000,000 |  |
| **Total** | **16,100,000** |  |

**ANNEX – IV**

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| **CBT Software Customization and Improvement in MCQ’s Data Bank** |
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| **S.NO** | **Name of Items/ Model** | **No of Items Required** | **Unit price (In PRS)** | **Total Price (In PRS)** |  |
| 1 | Customization of CBT Software | 1 | 500000 | 500000 |  |
| 2 | Improvement in MCQ’S Data Bank | 60000 | 300 | 18000000 |  |
| **Total** | **1,85,00000** |  |

**ANNEX – V**

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| **Provision of Heavy-Duty Printers and Replacement of Laptops** |
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| **S.NO** | **Name of Items/ Model** | **No of Items Required** | **Unit price (In PRS)** | **Total Price (In PRS)** |  |
| 1 | Heavy Duty printers | 2 | 2200000 | 4400000 |  |
| 2 | Heavy Duty Scanner (OMR) | 2 | 1000000 | 2000000 |  |
| 3 | Laptops | 6 | 150000 | 900000 |  |
| 4 | Computer having Specification of Core i7 processor with LED 20”) for IT Staff/Department | 40 | 100000 | 4000000 |  |
| 5 | Video Conferencing System with Smart Screen 85" | 1 | 700,000 | 700,000 |  |
| **Total** | **12,000,000** |  |

**ANNEX – VI**

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| **HR** |
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| **S.NO** | **Name With Designation** | **No Of Posts** | **Per Month Salary** | **Duration(months)** | **Total Cost** |  |
| 1 | DD-IT (Project Director Additional Charge ) Allowance | 1 | 15000 | 24 | 360000 |  |
| 2 | AD IT- Network (Project Operation/Project Assistant Additional Charge) Allowance | 1 | 15000 | 24 | 360000 |  |
| 3 | Account officer (Project DDO Additional Charge) Allowance | 1 | 10000 | 24 | 240000 |  |
| 2 | 4 Internees | 4 | 25000 | 24 | 2400000 |  |
| **Total** | **3,360,000** |  |

**ANNEX – VII**









