



PMD NEWS BULLETIN

Volume XVIII, Issue-IV

October to December, 2017

PAKISTAN METEOROLOGICAL DEPARTMENT

QUARTERLY WEATHER SUMMARY FOR THE PERIOD FROM OCTOBER TO DECEMBER, 2017).

Pakistan's Monsoon (JAS) 2017 Rainfall. **POST-MONSOON (OND) 2017 RAINFALL**

The post monsoon season rainfall amounts were generally below normal over almost all parts of Pakistan. During the post monsoon (OND) season 2017, as a whole country, moderately below normal (-39 %) was recorded (Figure-1). On regional scale, similar position was observed on all provinces whereas GB was the driest region while Punjab was the least dry part in the season.

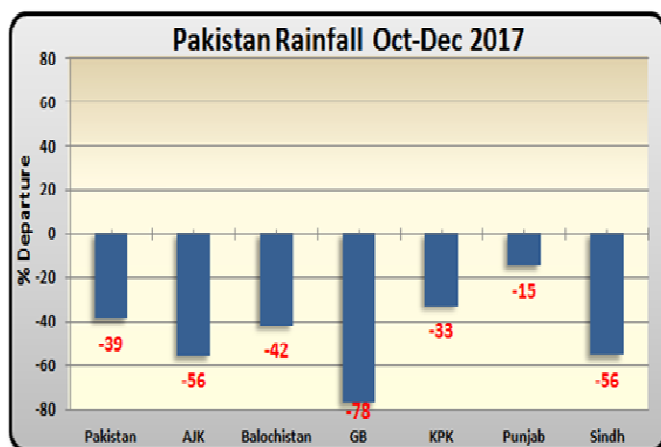


Fig-1 (Contributed by C.D.P.C, Karachi)

Actual rainfall with departure from normal at Met. Office, Lahore Airport during the period from October, 2017 to December, 2017 is as under :-

MONTH	ACTUAL RAIN	DEPARTURE
October, 2017	Nil	-11 mm
Nov. , 2017	05 mm	00
Dec. , 2017	12 mm	+5 mm

Heaviest rainfall 49.2 mm in a day was recorded at Rawalakot on 12-12-2017.

The lowest temperature -3.5°C was recorded at Rawalakot on 14-12-2017

(Contributed by R.M.C. Lahore / AIIP Lahore)

OZONE LAYER

Ozone layer monitoring continued regularly at ozone layer monitoring station Quetta. No significant change has been observed over Pakistan during the quarter under review. The ozone values remained between 260 to 320 Dobson Unit.

(Contributed by R.M.C, Quetta)

National Seismic Monitoring & Tsunami Early Warning Center, Karachi.

(October-December, 2017)

National Seismic Monitoring & Tsunami Early Warning Centre, Karachi successfully participated in the six monthly communication test on 13th December, 2017. The test was scheduled by Indian Ocean Tsunami Warning Mitigation System (IOTWMS). All the countries situated at the rim of the Indian Ocean participated in the test. Bulletins issued by Regional Tsunami Service Providers (RTSPs) were received through GTS, email and mobile phone.

The objectives of the test were to:

- Validate the RTSPs dissemination process for tsunami bulletin notification messages to National Tsunami Warning Centres NTWCs.
- Validate the reception of the notification messages by NTWCs.
- Validate the access by NTWCs to RTSPs password-protected websites containing bulletins.

Validate the reporting by NTWCs of national warning status information back to RTSPs, via a web-based warning status report form.

Test logs were prepared during the test which was then sent to IOTWMS secretariat for evaluation.

EARTHQUAKES:

TOTAL NUMBER OF EARTHQUAKES RECORDED DURING THE QUARTER (October-December, 2017)	412
NUMBER OF EARTHQUAKES LOCATED IN PAKISTAN / NEIGHBORING REGIONS (AS SHOWN IN THE Fig-2)	43

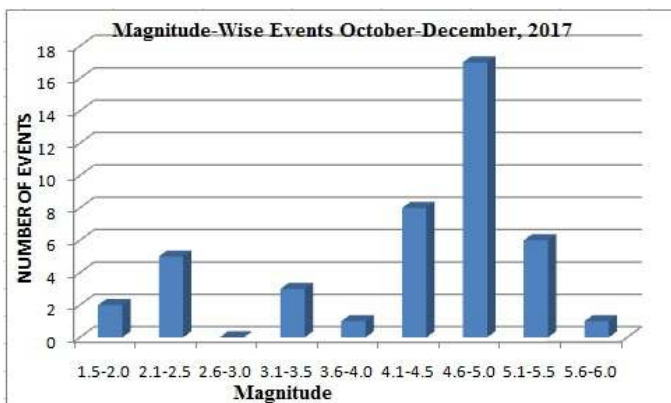
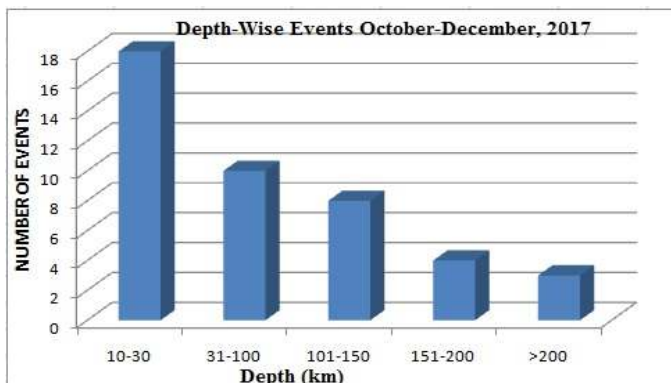
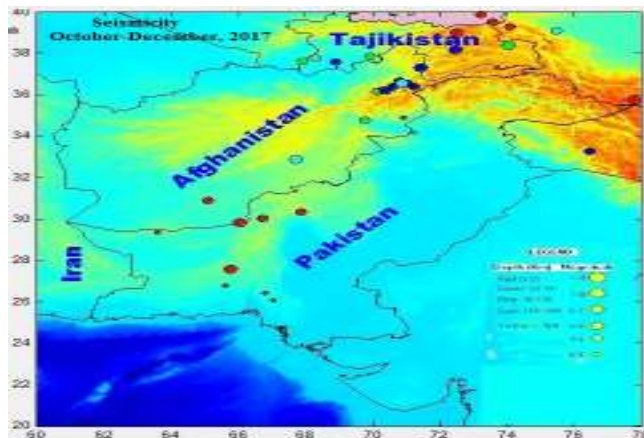


Fig-2

TSUNAMI: No earthquake having potential to generate tsunami was recorded during the quarter.

(Contributed by N.S.M.C Karachi)

EARTHQUAKE REPORTS.

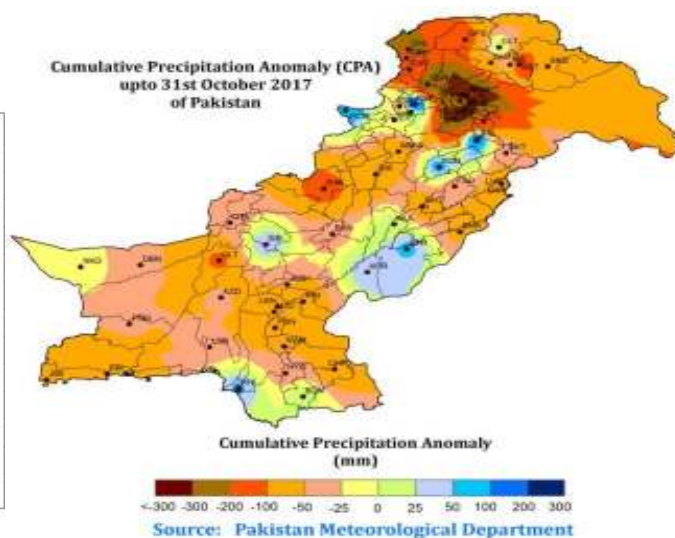
A total number of 907 earthquakes were recorded by the Seismological Network of Pakistan Meteorological Department, Regional Meteorological Centre Peshawar during the quarter (1st October to 31 December, 2017).

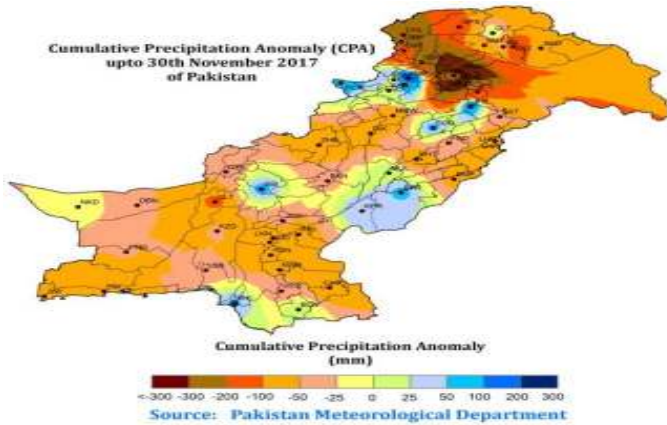
DROUGHT MONITORING

New drought monitoring tools/techniques used by NDMC during this period whose maps are available at <http://www.ndmc.pmd.gov.pk/> are:-

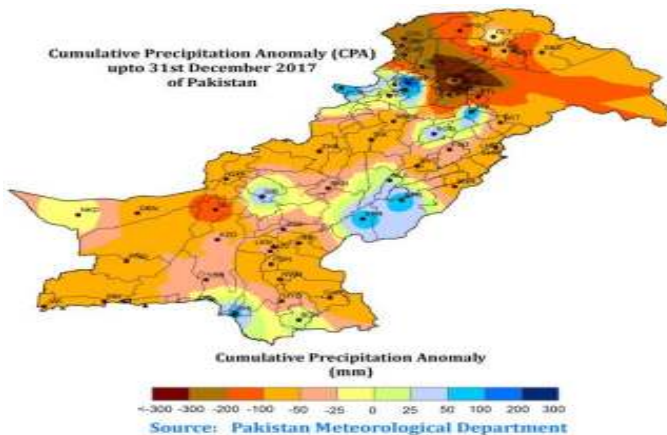
1. Cumulative Precipitation Anomaly (CPA).
2. Percent of Actual to Normal Rainfall.
3. Percentage Departure of Rainfall on 1,2,3,6&12 Months Basis.
4. Soil Moisture Anomaly.
5. Normalized Difference Vegetation Index.
6. Land Surface Temperature.
7. Temperature Vegetation Dryness Index (TVDI).
8. Weekly Precipitation Outlook.

Cumulative Precipitation Anomaly (CPA) is made on monthly Basis





Soil Moisture Anomaly (SMA) is made on monthly Basis



Normalized Difference Vegetation Index on Monthly Basis

(Contributed by N.D.M.C Islamabad)

TRAININGS / VISITS ABROAD

- ◆ the Pacific from 9-11 October, 2017 at Bangkok, Thailand.
- ◆ Ms. Humeira Hafeez, Senior Electronic Engineer, Karachi, attended the 8th Asia/Oceania Meteorological Satellite User's Conference (AOMSUC-8) AND ASSOCIATED events, hosted by Roshydromet and Roscosmos from 16-21 October, 2017 at Vladivostok City, Russian Federation.
- ◆ Dr. Zaheer Ahmed Babar, Deputy Director, has attended the International Training Course on the Numerical Weather Prediction from 20th November, 2017 at Nanjing, China.
- ◆ Mr. Saqib Hussain, Meteorologist, has attended the Internal Technical Assessment Workshop of Second Year of Implementation of the Strategic Strengthening Flood Capacity and Management of Pakistan-Phase II from 19-21 December, 2017 at Jakarta, Indonesia.
- ◆ Mr. Atif Irshad, Meteorologist, has attended the Internal Technical Assessment Workshop of Second Year of Implementation of the Strategic Strengthening Flood Capacity and Management of Pakistan-Phase II from 19-21 December, 2017 at Jakarta, Indonesia.
- ◆ Mr. Burhan Ahmed, Meteorologist, has attended the Four Weeks Training on Climatic Interpolation and Hydrological Modeling at Xinjiang Institute of Ecology & Geography (XIENG), Xinjiang and National Climate Centre (NCC) OF China Meteorological Administration (CMA) from 25th December, 2017, at Beijing, China.
- ◆ Syed Ahsan Ali Bokhari, Electronic Engineer, has attended the Four Weeks Training on Climatic Interpolation and Hydrological Modeling at Xinjiang Institute of Ecology & Geography (XIENG), Xinjiang and National Climate Centre (NCC) OF China Meteorological Administration (CMA) from 25th December, 2017, at Beijing, China.
- ◆ Ms. Farah Ikram, Assistant Meteorologist, has attended the Advanced School on Tropical-Extratropical Interactions on Intra-Seasonal Time Scales from 16-27 October, 2017, Trieste, Italy.
- ◆ Mr. Hazrat Mir, Chief Meteorologist, NAMC Islamabad, attended the International Conference on Resilient Hindu Kush Himalaya: Developing Solutions towards a Sustainable Future for "Asia" from 3-6 December, 2017 at Kathmandu, Nepal.
- ◆ Mr. Muhammad Riaz Chief Meteorologist, FFD Lahore, attended the 4th Session of WMO RA-II Working Group on Hydrological Services (WGHS) from 17-19 October, 2017 at Republic of Korea.
- ◆ Mr. Sahibzad Khan, Director, has attended the Expert Group Meeting on Regional Cooperation in Early Warning for Transboundary River Basin Floods, Flash Floods and Landslides in Asia and

- ◆ Mr. Sajid Rashid Khan, Assistant Meteorologist, has attended the International Training Course on Tropical Cyclones from 13-24 November, 2017 at Nanjing, China.
- ◆ Mr. Zafar Mahmood, Assistant Meteorologist, has attended the International Training Course on Tropical Cyclones from 13-24 November, 2017 at Nanjing, China.
- ◆ Mr. Shahid Mahmood, Assistant Programmer, has attended the International Training Course on the Numerical Weather Prediction from 20th November, 2017 at Nanjing, China.
- ◆ Mr. Muhammad Anwar, Assistant Meteorologist, has attended the Training Course on Weather Forecasting in Mid-latitude Regions from 27th November to 8th December, 2017 at Toulouse, France.
- ◆ Supervised the test/invigilation system, transparency, facilities provided to the candidates and to address any query on behalf of the Departmental Representative for screening and skill test by Open Testing Service (O.T.S) for PMD recruitment-2017 from 8-10, December, 2017 at Govt. N.D, Islamia High School Ichra, Lahore.
- ◆ Attended meetings regarding Installation of RADAR at Sialkot under the Chairmanship of Malik Nadeem Kamran, Minister for P & D, Punjab/ Chairman of Cabinet Committee on Floods on 26&27-12-2017.
- ◆ Attended a meeting of Scrutinizing Committee of Federal Flood Commission regarding the Umbrella PC-I of National Food Protection Plan (NFPP-IV), held on 15th December, 2017 in the committee room of the Office of the Chief Engineering Advisor/Chairman, Federal Flood Commission.

(Contributed by Met.(C.O) Islamabad)

QUARTERLY NEWS BULLETIN FLOOD FORECASTING DIVISION LAHORE.

GENERAL:

The flood season 2017 was terminated on 15-10-2017. During the flood season. The routine daily weather and flood forecasting bulletins and significance warnings (as and when required) were kept issuing to various Government, Semi Government departments. Print and electronic media and focal person to update them about the prevailing condition of weather and floods across the country.

MEETING:

- ◆ Mr. Muhammad Riaz, Chief Meteorologist, flood forecasting Division, Lahore.
- ◆ Attended a Seminar regarding “Climate Change Issues in Pakistan” a detailed presentation was given on “Flood Forecasting in Pakistan”.
- ◆ Attended a number of meetings on daily basis on the issue “Immediate measures to control & prevent air pollution and smog in the Punjab from 24th October 2017 under the chairmanship of minister for Environment, Environmental Protection Department, Government of Punjab, Lahore.
- ◆ Attended a meeting of the Cabinet committee on Floods on 23-10-2017, held under the chairmanship of Malik Nadeem Kamran, Minister for P&D, Punjab in the office of the S&GAD’s Committee room, Civil Secretariat, Lahore.
- ◆ Ch. Muhammad Aslam, Director, Director FFD, Lahore proceeded to Multan Sialkot Airports regarding QMS External Audit w.e.f 07-11-2017 to 09-11-2017.
- ◆ Mr. Sahibzad Khan, Director along with Ch. Muhammad Aslam, Director FFD, Lahore attended a “Post Flood Meeting of FFC”, held in the committee room of the Chief Engineering Advisor/Chairman, Federal Flood Commission on 22-11-2017.
- ◆ Ch. Muhammad Aslam, Director, FFD, Lahore participated in a conference Subjected “Stakeholders Conference on Sustainable Development indicator on IWRM” in the office of Chief Engineer, Ministry of Water and Power, Islamabad on 20-12-2017.

LECTURES:

Mr. Muhammad Riaz, Chief Meteorologist, Flood Forecasting Division, Lahore

- ◆ Delivered a Keytone Lecture on “Disaster Management” at a seminar at University of Veterinary & Animal Sciences (UVAS) Lahore on 12-10-2017 on the occasion of International Day for Disaster Reduction, organized by Department of Environmental Science, UVAS, Lahore.
- ◆ Delivered a lecture at Hamdard Foundation Pakistan, Lahore on the topic SMOG & ITS EFFECTS” on 6th December, 2017.

- ◆ Delivered a Keynote Lecture on National workshop on Air Pollution & Smog: from Science to solution” at University of Veterinary & Animal Sciences (UVAS) Lahore on 8th November, 2017.

VISITS:

- ◆ A number of students of different schools and colleges visited FFD, Lahore. They were briefed about functioning of different units of FFD, Lahore.

(Contributed by Chief Met. FFD, Lahore)

Combined activities of (R&D)

Local Seminar/ Training/ Conference etc.

- ◆ **Muhammad Athar Haroon** (Meteorologist): Submitted a research paper titled: “Trends in Climate Extreme Indices over Gilgit-Baltistan region of Pakistan” in Pakistan Journal of Meteorology.
- ◆ **Syed Ahsan Ali Bukhari** Presented a research on Kabul River Basin titled "Climate Change Projections of Kabul River Basin using a multi-model ensemble of High-Resolution Statistically Downscaled Data" in International Science Policy Conference on Climate Change 18 - 20 December, 2017. He gave training at Bahria University to students BS, MS, PHD of environmental science discipline .The training is on Grads, NCL, SURFERv.13. The training is for three days in dates October 4-6, 2017.
- ◆ **Burhan Ahmed:** Following book is published in this period:
 - i. Environmental policies to protect pollinators: Attributed to climate change. LAP Lambert Academic Publishing. ISBN 978-620-2-06280-0 (2017).
 - ii. He gave training by PMD at Bahria University to students BS, MS, PHD of environmental science discipline .The training is on Grads, NCL, SURFERv.13. The training is for three days in dates October 4-6, 2017.
- ◆ **Qamar Munir:** Only activity in mentioned time period is gave training by PMD at Bahria University to students BS, MS, PHD of environmental science discipline .The training is on Grads, NCL, SURFERv.13. The training is for three days in dates October 4-6, 2017
- ◆ **Mr. Adnan Shafiq Rana** (Meteorologist) along with his team performed the following Tasks:
 - i. A visit to Bindogol, Golain and Booni valleys in Chitral was convened during October 2017. One AWS was installed in Booni, and maintenance with data downloading activities from already installed hydro-met equipment in Bindogol and Golain valleys were completed. The visit was convened under Pakistan Science Foundation Project titled "Projection and Attribution of Stream Flow composition at Mountain rivers of China and Pakistan.
 - ii. Other visit was convened in Shimshal, Passu and Bagrot valleys during October 2017 and data downloading activity was done in these valleys. This visit was completed under Pakistan Science Foundation Project titled "Interaction of Westerly and Summer Monsoon in Upper Indus Basin and its impact on water resources.
- ◆ **Mr. Sohail Babar Cheema** (Meteorologist) submitted a research paper entitled “Spatio-temporal Characteristics of an Unusual Winter time Extratropical Weather System Causing Widespread Downpours over Pakistan” in Pakistan Journal of Meteorology Vol-13, Issue (26).
Presents his research work : “Response of the starting dates and the length of season in Pakistan (1960-2016) to global warming” in International workshop Climate Science session of SP3C at Serena Hotel, Islamabad on December 19, 2017.

(Contributed by Chief Met. R&D, Islamabad)

ACTIVITIES OF MR. ABDUL RASHID, CHIEF METEOROLOGIST (NSMC, KARACHI).

Mr. Abdul Rashid, Chief Meteorologist, Karachi, attended the following meetings, during the quarter (October – December, 2017):-

- ◆ Attended a meeting along with Mr. Shahid Abbas, Director, Regional Meteorological Centre, Karachi, regarding Heat Wave at Commissioner Karachi Division on 10-10-2017.
- ◆ Attended 80th Meeting of Sub-Committee of Sindh Agriculture Statistical Co-ordination Board for approval the Final Kharif Crop estimates for the year 2016.
- ◆ Attended a meeting regarding Winter Vacation held on 16-11-2017 in the office of Secretary School Education and Literacy Department, Government of Sindh.
- ◆ Attended a meeting on 17-12-2017 at PAF Base Bholari regarding investigation of cracks – PAF Base Bholari. Besides, other members of the team, Mr. Zahid Rafi, Director (Seismic) Islamabad also among them.

(Contributed by Chief Met. Karachi)

MISCELLANEOUS POINTS / MATTERS:

- ◆ Syed Mushtaq Ali Shah, Director RMC, Peshawar attended conference on the subject “Focus Group Discussion and 4th IWC” on 20-12-2017 under the theme of “Climate Change and Disaster Risk Management” for sustainable “Development and Business” organized by RIPHAH International University, Islamabad.
- ◆ Syed Mushtaq Ali Shah, Director RMC, Peshawar attended a project review meeting which was held under the chairmanship of “Chief Water Resources” M/O DD&R on 03-11-2017 at Pak Secretariat P-Block, Islamabad regarding Establishment of Flood Forecasting and Warning System Kalpani Nullah Basin, “Mardan Khyber Paktun Khwa”.
- ◆ Mr. Muhammad Ajmal Shad, Director, RMC, Lahore Visited Chiniot, Khanewal, Narowal,

Sheikhupura, and Hafizabad for Site selection to open new Meteorological Observatories at these districts during this period. He also visited Gujranwala to monitor OTS examination for fresh recruitment from 08-12-2017 to 10-12-2017.

◆ Mr. Abdul Qayoom Bhutto, Director, F&C Karachi, attended National Conference on Disaster Risk Reduction (DRR) from 10-11 October, 2017 at University of Sindh, Jamshoro.

◆ Mr. Abdul Qayoom Bhutto, Director, F&C Karachi, attended “One day Seminar on Climate Change and implementation Perspective” on 18th December, 2017 University of Sindh, (Thatta Campus). He also supervised OTS examination in Karachi from 8-10 Dec. 2017.

◆ Mr. Shahid Abbas, Director RMC, Karachi proceeded on tour to Sukkur on 8-10 December, 2017 to supervise the screening test conducted by Open Testing Service (OTS) regarding PMD recruitment, 2017.

◆ Mr. Shahid Abbas, Director RMC, Karachi attended an event/exercise (BARRCUDA-VIII) on 4th December, 2017 at Pakistan Maritime Security Agency, Dockyard Road Karachi.

◆ Mr. Shahid Abbas, Director RMC, Karachi attended 8th National Aviation Safety Team (NAST) meeting on 29th December, 2017 at Headquarters CAA, JIAP, Karachi.

◆ Mr. Muhammad Faheem Ahmed, Deputy Director, RMC Peshawar attended a meeting of local steering Committee for the Project title “A Collaborative multi agency platform for building resilient Communities” held at PDMA, Civil Secretariat Khyber Pakhtunkhwa on 16-11-2017.

- ◆ Mr. Muhammad Faheem Ahmed, Deputy Director attended one day workshop on “How to enhance Resilience of communities through exploring the effects of Climate Change on rainfall patterns and existing rainwater management and livelihood practices of communities in KPK Province” held at University of Agriculture Peshawar on 22-12-2017.

- ◆ Thirty students of different universities have completed Internship Program at Met. HQs. Camp office Met. complex Karachi, during the quarters (October-December, 2017). The Internship Certificates have been Issued to them.

PROMOTION:

The following promotion were made during the quarter:-

- ◆ Ms. Humaira Hafeez, Sr. Electronic Engineer (BS-19)
- ◆ Mushtaq Mehmood, Assistant Programmer promoted to the post of Programmer (BS-17).
- ◆ Sadaqat Ali, Assistant Met. (BS-16) promoted to the post of Meteorologist (BS-17).
- ◆ Muhammad Saeed & Arif Khan, Sub Engineer (BS-13) promoted to the post of Assistant Electronic Engineer (BS-16).
- ◆ Muhammad Nazeef, CDEO promoted to the post of Assistant Programmer (Bs-16).
- ◆ Muhammad Tyab Tahir, Observer promoted to the post of Sr. Observer (BS-09).
- ◆ Muhammad Imran, Mechanic Gr-I promoted to the post of Chief Mechanic (BS-07).
- ◆ Muhammad Nafees Akhtar & Muhammad Saleem Khan, Mechanic Gr-II promoted to the post of Mechanic Gr-I.
- ◆ Tanveer Ahmed, NQ ptomoted to the post of Daftary.

RETIREMENT:

The following employees retired during the quarter:-

- ◆ Abu sad Khan, Met. Assistant (BS-14) retired w.e.f 29-10-2017.
- ◆ Muhammad Saleem Qazi, CDEO retired w.e.f 26-12-2017.
- ◆ Mshmood Ahmed, CDEO retired w.e.f 06-12-2017.
- ◆ Khan Afsar, Chowkidar retired w.e.f 09-11-2017.
- ◆ Shamim Ahmed, Assistant Programmer (BS-16) retired w.e.f 01-11-2017.
- ◆ Muhammad Yamee, Assistant Programmer (BS-16) retired w.e.f 14-10-2017.

- ◆ Mamood Ahmed CDEO retired w.e.f 06-12-2017.

L.P.R:

The following employees has been granted LPR during the quarter:-

- ◆ Muhammad Arfeen, Naib Qasid has been granted 210 days LPR from 11-12-2017 to 08-07-2018.
- ◆ Shafi Muhammad Balloon Maker has been granted 365 days LPR from 26-01-2018 to 25-01-2019.
- ◆ Muhammad Aslam, Workshop Engineer has been granted 365 days LPR from 15-10-2017 to 14-10-2018.
- ◆ Nishat Ahmed Met. Assistant has been granted LPR w.e.f 01-11-2017.

DEATH:

The following officials were died during quarter:-

- ◆ Late Nizamuddin, Ex-CDEO died during service on 07-12-2017.
- ◆ Muhammad Imran Nasir, Sub Engineer died during service on 23-12-2017.

Following tender notices have been published in the newspapers Roznama Jang, Karachi and Daily Dawn, Karachi during October-December, 2017 and available on the websites of PPRA and PMD.

Sr. Nos.	Description of items	Quantity	Opening Dates & time
Items to be purchased on F.O.R. Karachi Basis			
01.	Ferrosilicon	6,000 Kgs.	09-01-2018 at 11:30 a.m.
02.	Caustic Soda in flakes	7,000 Kgs.	
03.	Workshop Materials	Different items	
04.	Brass Rods	Different types	
05.	Woods	Different types	
06.	Paints	Different types	
07.	CISCO Router 1921 SEC/K9 with IP Sec VPN Support	01 No.	
08.	Laser Jet Printers	05 Nos.	
09.	Dry Batteries (Different types)	115 Nos.	
10.	Airconditioners (Split type)	06 Nos.	
11.	Digital Weighing Machine (to weight upto 500 Kgs.)	01 No.	
12.	Solar System (with complete accessories)	01 Set.	
13.	Digital Photocopier Machine	01 No.	
14.	i) Photostat Papers (Branded), A4 Size, 80 Gsm.	500 Reams	
	ii) Photostat Papers (Branded) , Legal Size, 80 Gsm.	175 Reams	
15.	Computer Continuous Sheets (80 Columns)	200 Boxes	
16.	Office Stationery	Different types	
17.	Toner for different Photocopiers	Different types	
18.	Printer Toner , Cartridges and Ribbons	Different types	
Items to be purchased on FOB basis (By opening L/C)			
01.	i) Met. Balloons (30 Gms.)	10,000 Nos.	23-01-2018 at 11:30 a.m.
	ii) Met. Balloons (100 Gms.)	8,000 Nos.	
	iii) Met. Balloons (200 Gms.)	150 Nos.	
02.	Vaisala Radiosonde RS41-SG Transmitters (FOB/CIP)	90 Nos.	
03.	Munro Electrical Anemometer or Equivalent	01 Set.	
04.	TAMAYA Digital Balloon Theodolite or Equivalent	01 Set.	
05.	Automatic Weather Station (AWS)	01 Set.	
06.	Sunshine Recorder "Campbell" or Equivalent	06 Nos.	

(Contributed by Met. I & P, Karachi)

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