



GOVERNMENT OF SINDH
Irrigation and Power Department



BENAZIR BHUTTO SHAHEED
YOUTH DEVELOPMENT PROGRAMM
(BBSYDP)

Corrected PC-1
(September 2008)

ESTIMATED COST RS: 36.23 MILLION

Project Management Unit (PMU)
Irrigation and Power Department
Hyderabad

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PROJECT BRIEF

The training programme has been designed as per requirements of Irrigation and Power Department Government of Sindh. Out of 350 trainees each year following young and needy persons will be trained at various institutes throughout Sindh:

- ? 25 Assistant Engineers,
- ? 75 Sub-Engineers,
- ? 100 Accounts Clerks,
- ? 50 No. Motor Mechanics ,
- ? 50 No. Welders
- ? 50 No. Machine (Hydraulic Excavator) operators,
(For detail please refer Annexure-A)

Training of 25 Graduate Engineers and 75 Diploma holders in Irrigation and Water industry.

Training for Graduate Engineers, Diploma Engineers will be initially done at Irrigation and Drainage Institute Mehran Engineering University Jamshoro. The explanation of training module is detailed at page -17 Annexure-H.

The Engineering trainees will be provided 02 months training at training center as mentioned above to refresh theoretical knowledge and remaining 02 months they will be posted in various field offices of Provincial and District governments in 2 stages of 1 months each e.g. 1 months field attachment, 1 months office attachment according to their various disciplines. The Field trainings will be supervised by the Mehran University staff. The syllabus of training will be adopted according to the Government Engineering Academy Thokar Niaz Baig Lahore, Punjab (Syllabus attached as Annexure- H).

Training of Accounts Clerks

The 100 Nos. Accounts Clerks will be trained for the period of 3 months at Irrigation Institute Kali Mori Hyderabad. EOI will be invited for training of the Accounts Clerks according to the training module already adopted by the Works and Services Department for the same trade (Syllabus attached as Annexure - L).

Training of 50 Motor Mechanics , 50 Welders, and 50 Hydraulic Excavator Operators

The training of 50 Nos. Motor Mechanics, 50 Nos. Welders and 50 Nos. Excavator Operators will be conducted in the existing irrigation department 4Nos. workshops located in Jamshoro, Kotri, Sukkur and Guddu @Sukkur. These Workshops have facilities to accommodate, train and provide practical experience to the trainees of all three trades. The qualified trainers will be outsourced from reputable and certified institutes through E O I. These skilled people will also be provided opportunity to gain field experience (Syllabus for Motor Mechanic , Welders, and Hydraulic Excavator operator is attached as (Annexure – I,J,and K).

PROJECT DIGEST

1. Name of Project Benazir Bhutto Shaheed Youth Development Programme.

2. Sponsoring Agency Government of Sindh.

3. Executive Agency Irrigation and Power Department Government of Sindh.

4. Location Province of Sindh.

5. Estimated Cost.
 - i). Local **Rs: 36.23 Million**
 - ii). Foreign Rs: ----- Million
6. Cost component Same as above

7. Period of Implementation 12 months (Months)
8. Plan Provision.
9. Estimated Annual Recurring Expenditure
 - (a). During the execution of the Scheme.
 - (b). After completion

10. Source of financing and estimates of annual phasing (Total / FEC)

S.No	Description	Year 2008-09	Total
A	Trainee Stipend		
a.1	Payment of trainees (Annexure – A)	Rs: 9.63	Rs: 9.63
B	Training Cost		
b.1	Payment of trainers (Annexure – B)	Rs: 18.80	Rs: 18.80

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Additional Secretary (Tech.)
Irrigation and Power Department
Government of Sindh,
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Recommended for
approval of competent
Forum **Shuja Ahmed Junejo**
Secretary to Government of Sindh,
Irrigation and Power Department
Government of Sindh,
Karachi.

Annexure A

Benazir Bhutto Shaheed Youth Development Programme.

TRAINEE ABSTRACT (FOR 01 YEARS)

		Rs. in millions
i)	25 Graduate Engineers. @ Rs: 7000/- per month for a period of 4 months (25 x 7000 x 4)	Rs: 0.70
ii)	75 Nos: Diploma Holders, Associate Engineers (Civil) for a period of 4 months (75 x 5000 x 4)	Rs: 1.50
iii)	100 Nos: Accounts Clerk @ Rs: 5000/- per month for a period of 3 months. (100 x 5000 x 3) (minimum qualification intermediate)	Rs: 1.50
iv)	50 Nos: Motor Mechanics @ Rs: 4000/- per month for a period of 6 months. (50 x 4000 x 6) (minimum qualification Metric)	Rs: 1.50
v)	50 Nos: Welders @ Rs: 4000/- per month for a period of 6 months (50 x 4000 x 6) (minimum qualification Metric)	Rs: 1.20
vi)	50 Nos: Machine (excavator operators) @ Rs: 4000/- per month for a period of 6 months. (50 x 4000 x 6) (minimum qualification Metric)	Rs: 1.20
		Total cost Rs: 7.60
	Lodging and Boarding allowance for internees calculated on the basis of outer districts arrangements. <i>(Calculation sheet attached as annexure A1)</i>	Rs: 2.06
		Grand Total for 1 year Rs: 9.63

BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT PROGRAMME.**Calculation for LODGING / BOARDING for Out of District Candidates**

S.No	District	(25 Seats) Graduate Engineer	(75 Seats) Diploma Holders / Associate Engineers	(100 Seats) Accounts Clerk	(50 Seats) Motor Mechanic	(50 Seats) Excavator Operator.	(50 Seats) Welder s	Total Seats	Total Share
1	Karachi	4	11	15	7	7	7	51	15
3	Matiyari	1	2	2	1	1	1	7	2
4	Tando Allahyar	1	2	2	1	1	1	7	2
5	Tando Muhammad Khan	1	2	2	1	1	1	7	2
6	Badin	1	4	5	2	2	2	16	5
7	Thatta	2	7	9	4	4	4	30	9
8	Dadu	1	3	4	2	2	2	14	4
11	Khairpur	2	5	7	3	3	3	23	7
12	Nausheroferoze	1	4	5	2	2	2	16	5
13	Ghotki	1	4	5	2	2	2	16	5
14	Nawabshah	1	2	3	2	2	2	12	3
15	Larkana	1	2	3	2	2	2	12	3
16	Kambar	1	2	3	1	1	1	9	3
17	Shikarpur	1	2	3	1	1	1	9	3
18	Jacobabad	1	2	3	2	2	2	12	3
19	Kashmore	1	2	3	2	2	2	12	3
20	Mirpurkhas	1	3	4	2	2	2	14	4
21	Umerkot	1	2	3	2	2	2	12	3
22	Sanghar	2	5	6	3	3	3	21	6
23	Tharparkar	1	2	3	2	2	2	12	3
		23	68	90	44	44	44	312	100
		23x4= 92	68x4= 272	90x3= 270	44x3= 132	44x3= 132	44x3= 132	1030	

TOTAL OUT OF DISTRICT MONTHS = 1030

Total out of Districts for lodging and Boarding = 1030 x 2000

= Rs: 2,060,000.0

Say 2.06 Millions

Annexure-B

Benazir Bhutto Shaheed Youth Development Programme.

TRAINERS ABSTRACT (FOR 01 YEAR)

Rs. in millions

i)	At Institute of Irrigation and drainage Engineering, Mehran University of Engineering and Technology Jamshoro. Cost Estimate provided by Institute of Irrigation and drainage Engineering, Mehran University of Engineering and Technology Jamshoro attached as annexure-E	Rs: 3.88
ii)	Accounts Clerks at Irrigation Institute Kali Mori Hyderabad 4 (classes) x 4 (days) x 5 (hours) = 80 hours for one week For 26 weeks = 26 x 80 = 2080 hours @ Rs. 1000/- per hour	Rs: 2.08
iii)	At irrigation workshops at 4 locations. a) For Motor Mechanics, Monday to Thursday 9 am to 1.00 pm in 2 classes at each location = 8 classes. 8 (classes) x 4 (Days) x 5 (hours) = 160 hours for one week 26 weeks = 26 x 160 = 4160 hours b)For Welders. 8 (classes) x 4 (days) x 5 (hours) = 160 hours for one week For 26 weeks = 26 x 160 = 4160 hours c)For Excavator Operators 8 (Classes)x4(days)x5(hours) = 160 x 26 weeks= 4160 Total hours 12480 @ Rs: 1000per hour	Rs: 12.480
v)	Total	Rs: 18.44
vi)	Conveyance and miscellaneous charges @ 2%	Rs: 0.370
	Grand Total	Rs: 18.80

ANNEXURE-C

Benazir Bhutto Shaheed Youth Development Programme.

EQUIPMENT ABSTRACT

S#	Title of Equipment	QTY	Total Cost (in Millions)
i)	Multimedia @ Rs: 135000/- Each (Hyderabad, PMU)	01	Rs: 0.135
ii)	Laptop @ Rs: 142000/- Each (Hyderabad) 1 for Project Directorate 1 for PMU	02	Rs: 0.284
iii)	Photo Copier @ Rs: 2,25,000/- Each for PMU	01	Rs: 0.225
iv)	Over Head Projector @ Rs: 30000/- Each (Hyderabad) for PMU	01	Rs: 0.030
v)	Motorized Projection Screens @ Rs: 15000/- (Hyderabad PMU)	02	Rs: 0.030
vi)	Multi-core Latest Computer (fully equipped with trolley on turnkey basis) with printing/ scanning facility 105000/- (Hyderabad, PMU) For irrigation institute Hyderabad	05	Rs: 0.525
vii)	Fax & Phone Machine @ Rs: 15000/- Each (Hyderabad PMU) and PD	02	Rs: 0.030
viii)	Internet Facility (DSL modem, internet) L.S. Rs: 200000/- (Hyderabad Project Directorate) including networking arrangements	01	Rs: 0.200
	Total		Rs: 1.459

This is certified that this equipment will be handed over to the Irrigation Institute Kali Mori Hyderabad officially to be used for future trainings.

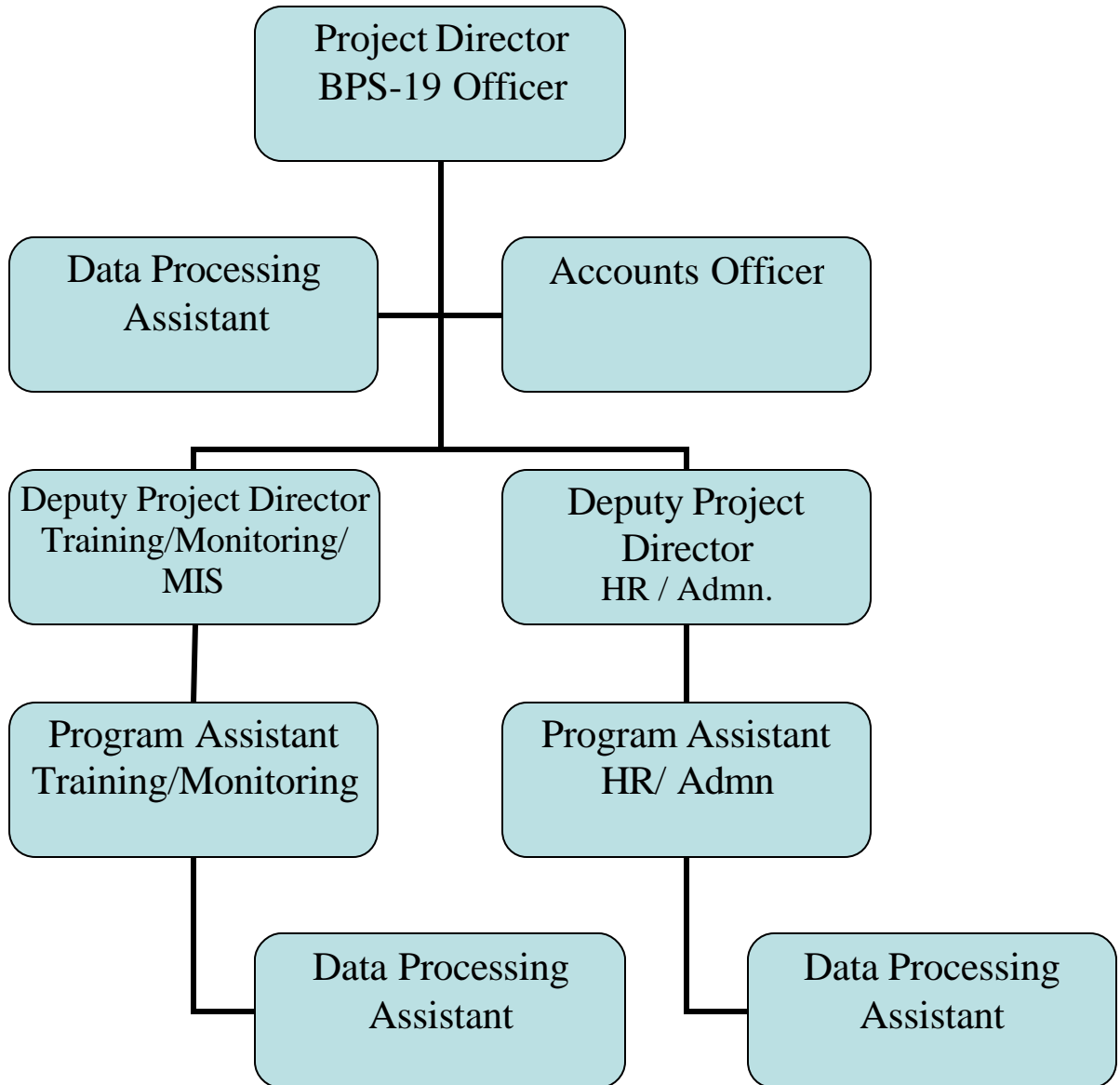
Annexure-D

Benazir Bhutto Shaheed Youth Development Programme.

STAFF ABSTRACT

Rs: in millions

i)	1 No: Project Director serving officer of BPS-19 from the department @ 40% of Basic pay of Rs: 39100/- months for 12 months	Rs: 0.657
ii)	2 Deputy Project Directors @ 50,000/- per month for a period of 12 months	Rs: 1.20
iii)	Accounts Officer @ 25,000/- per month for a period of 12 months	Rs: 0.30
iii)	2 Program Assistants @ 12,000/- month for a period of 12 months	Rs: 0.288
iv)	3 Data Processing Assistants @ 8,000/- month for period of 12 months	Rs: 0.288
	Total	Rs: 2.733



Annexure -E

Benazir Bhutto Shaheed Youth Development Programme.

Maintenance and Operating Expenditure (PER MONTH) Details

S.no	Details	Telephone/ Fax	Stationary	Other Misc. Charges. Conveyance, Furniture, etc.	Amount/month	Amount/year
1.	Hyderabad PMU	25,000.0	25,000.00	30,000.00	80,000.00 x for 12 months	9,60,000.00
2.	4 Workshop Locations in Sindh for Mechanical Trades	4 x 5000.0	4 x 5,000.0	4 x 50,000.00	2,00,000.00 x for 6 months	12,00,000.00
3.	At Irrigation Institute Kali mori Hyderabad for Accounts Clarks	4 x 5000.0	4 x 5000.0	4 x 100,000.0	4,00,000.00 x for 3 months	12,00,000.00
						33,60,000.00

Rs. 3.36 (Million) per year



Mehran University of Engineering and Technology, Jamshoro (Annexure –F)

Institute of Irrigation and Drainage Engineering

Cost Estimation for Training of 100 Trainee Engineers (25 Graduates and 75 Diploma holders)



S. No	Particulars	Unit Description	Unit Rate (Rs.)	No. of Days	Total Units	Cost (Rs.)
Class Duration: 8 weeks, 5 days per week and 4 hrs per day						
1	Honorarium for Resource Persons	per hour	1250		160	200,000
2	Refreshment for participants	per trainee for 40 days	40	40	25	40,000
3	Transportation during classes at MUET (Hyderabad-Jamshoro-Hyderabad)	per trainee for 40 days	100	40	25	100,000
4	Handouts	per trainee	2500		25	62,500
5	Stationery: Transparencies, Markers etc.	per group of 25 trainees				20,000
6	Miscellaneous etc	per group of 25 trainees				15,000
				Sub-Total (for 25 Nos. trainees)		437,500
				Sub-Total (for 50 Nos. trainees)		875,000
			Unit Cost	Unit	Days	
7	Honorarium for one Course Coordinator	for 100 trainee engineers	750	1	40	30,000
8	Honorarium for two Assistants/Clercks	for 100 trainee engineers	250	2	40	20,000
9	Honorarium for four Peons	for 100 trainee engineers	200	4	40	32,000
10	Inauguration and closing ceremony					50,000
				Sub-Total (for 50 Nos. trainees)		1,007,000

Field Visit Duration: 4 weeks, 4 days per week			Unit Cost	Unit	Days	
11	Honorarium for Resource Persons	per day	2500	2	16	80,000
12	Transportation for Field visits	per 3 Hiaces per visit	7000	3	16	336,000
13	Refreshment	per trainee	40	50	16	32,000
				Sub-Total (for 50 Nos. trainees)		448,000
				Sub-total (Rs.)		1,455,000
14	University Charges (33%)					485,000
	Cost for two groups (50 trainee engineers)			Total Cost (Rs.)		1,940,000
	COST FOR FOUR GROUPS (100 Trainee Engineers)			Total Cost (Rs.)		3,880,000

Benazir Bhutto Shaheed Youth Development Programme.
Activity planning chart for year 2008 - 09

S.No	Description	July 08	August 08	September 08	October 08	November 08	December 08	January 09	February 09	March 09	April 09	May 09	June 09
1	Prepartition and approval process	Notified as PD BBSYDP by IPD GOS	Submitted PC -1 and discussion with Technical Committee Observations raised	Corrected PC-1 under process and Will be submitted	Approval of PC-1 Process								
2	Training of Phase -1 Engineers						Training at Mehran University-Irrigation and Drainage Institute (Schedule aatached)						
4	Training of 100 Nos Accounts Clarks At Irrigation Institute Kali Mori Hyderabad							2 months Coursework and 1 month Field Training					

S.No	Description	July 08	August 08	September 08	October 08	November 08	December 08	January 09	February 09	March 09	April 09	May 09	June 09
5	Training of 50 No. Motor Mechanics at Irrigation Workshops							Training to be provided at Irrigation Department 4 Workshop Facilities 12 trainees at 3 locations and 13 at 1, 2 months in house training and 4 months field training					
6	Training of 50 No. Welders at Irrigation Workshops							Training to be provided at Irrigation Department 4 Workshop Facilities 12 trainees at 3 locations and 13 at 1, 2 months in house training and 4 months field training					
7	Training of 50 No. Machine(excavator)Operators Irrigation Workshops							Training to be provided at Irrigation Department 4 Workshop Facilities 12 trainees at 3 locations and 13 at 1, 2 months in house training and 4 months field training					

BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT PROGRAM
(BBSYDP)

Training Program for Skill Development under IPD Sindh

1. The Training Program

Total duration for the training under the above captioned program will be for four months. The training program will be divided into three phases; viz. indoor training (lecturing), field visits and conduct of practical, and office attachment. Indoor training will last for 2 months, field visits and conduct of practical for one month and office attachment for one month. The first two phases of the program will be organized by the Institute of Irrigation and Drainage Engineering (IIDE) of the Mehran University of Engineering & Technology (MUET), Jamshoro.

Total number of trainee engineers inducted will be 100, of which 25 will be graduate engineers with bachelor's degree and 75 non-graduate engineers with diploma.

The selected trainees will be invited in two groups; with 50 Nos. in each group/batch. First group will comprise of 25 graduate engineers and 25 diploma holders, while the second group will be all diploma holders. The first batch will be engaged with MUET for 3 months and later will be dispatched to their district headquarters for office attachment of relevance. After departure of the first batch, trainees of the second batch will be invited to complete the process. An activity bar chart of the tentative training schedule is shown in following Table.

Batch No.	Activity	Dec. 08	Jan. 09	Feb. 09	Mar. 09	Apr. 09	May. 09	Jun. 09
First	Indoor training sessions							
	Field visits and practical demonstration							
	Office attachment							
Second	Indoor training sessions							
	Field visits and practical demonstration							
	Office attachment							

In the program, there will five days lecturing from Monday to Friday; on each day four lectures of 1 hour duration will be delivered. Therefore, total lecture hours delivered to a single group will be $8 \times 5 \times 4 = 160$ hours. The trainees will be led for field visits and on-site practical demonstrations four days per week; therefore making 16 days per month outdoor visits.

Maximum 25 trainees will be placed in a class.

Note: Detailed schedule of the training program will be issued just before its commencement.

2. Contents of Syllabus for the Training Course

2.1 Outlines of contents of syllabus for Graduate trainee engineers

- ✍ Introduction to Telemetry System
- ✍ Lining of Canals
- ✍ Surveying and Leveling
- ✍ Civil Engineering Materials
- ✍ Soil Mechanics
- ✍ Concrete Technology
- ✍ Quantity Survey and Estimation
- ✍ Open Channel Hydraulics
- ✍ Irrigation Engineering and Management
- ✍ Micro Irrigation Systems
- ✍ Drainage Engineering
- ✍ Computer and Its Application
- ✍ Management and Public Administration
- ✍ Project Planning and construction
- ✍ Existing Infrastructure and Plans for the Future

2.2 Outlines of contents of syllabus for Non-graduate trainee engineers

- ✍ Surveying and Leveling
- ✍ Civil Engineering Materials
- ✍ Concrete Technology
- ✍ Quantity Survey and Estimation
- ✍ Open Channel Hydraulics
- ✍ Irrigation Engineering and Management
- ✍ Lining of Canals
- ✍ Drainage Engineering
- ✍ Introduction to Telemetry System
- ✍ Existing Infrastructure and Plans for the Future

Note: Details of the contents of syllabus will be provided just before implementation of the program.

Annexure -I

BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT PROGRAMME.

Syllabus For Training Of Hydraulic Excavator Operator.

1. Introduction to Hydraulic Excavator.
2. Types of Excavators and there uses.
3. Uses and utilizes of Excavators.
4. Basic parts of Excavators.
5. Introduction to Engine.
6. Introduction to Hydraulic Pump.
7. Drive train / wheel type, chain type.
8. Cabin control levels.
9. Balancing and using support Jacks.
10. Operating the machine.
11. Using extra attachments and tools.
12. Maintenance of machine.
13. Oiling and greasing.

Annexure-J

BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT PROGRAMME.

Syllabus For The Training Of Welders.

1. Modern types of welding.
2. Common types of welding.
3. Safety.
4. Work Shop Hand Tools used in welding.
5. Engineering materials and Alloys.
6. Gas welding types tools and Techniques.
7. Arc welding Tools.
8. Welding joints and treatments.
9. Welding Inspector and Quality Control.

BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT PROGRAMME.

Syllabus For The Training Of Motor Mechanic.

1. Basic structure of Automobile.
2. Types of Engine (Diesel / Petrol).
3. Parts of Engine and working.
4. Work shop Tools.
5. Transmission / Gear Box.
6. Axle / Drive train.
7. Breaking system.
8. Electric system.
9. Hydraulic system.
10. Common problem / faults.
11. Common Adjustments.
12. Overhauling of engines.

BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT PROGRAMME.

SYLLABUS FOR OF ACCOUNTS CLERK

1. Audit Code.
2. CPWA Code.
3. Delegation of Powers 1962.
4. Sindh Financial rules Vol. I & II.
5. Audit / Draft Para.
6. Works abstract.
7. Monthly account.
8. Contractor ledger.
9. PWD deposit register.
10. From 78.
11. Out turn Statement.
12. Inward / outward register.
13. Functions of E.D.O and D.O
14. Responsibilities of Chief Engineer, Superintendent Engineer, Executive Engineer.
15. Difference between Rough Cost Estimate and Detailed Working Estimate.
16. Manufacture Estimate.

**BENAZIR BHUTTO SHAHEED YOUTH DEVELOPMENT
PROGRAMME.**

DISTRICT PLACEMENT PLAN

S.No	District	(25 Seats) Graduate Engineer	(75 Seats) Diploma Holders / Associate Engineers	(100 Seats) Accounts Clerk	(50 Seats) Motor Mechanic	(50 Seats) Excavator Operator.	(50 Seats) Welders	Total Seats	Total Share
1	Karachi	4	11	15	7	7	7	51	15
2	Hyderabad	1	2	3	2	2	2	12	3
3	Matiyari	1	2	2	1	1	1	7	2
4	Tando Allahyar	1	2	2	1	1	1	7	2
5	Tando Muhammad Khan	1	2	2	1	1	1	7	2
6	Badin	1	4	5	2	2	2	16	5
7	Thatta	2	7	9	4	4	4	30	9
8	Dadu	1	3	4	2	2	2	14	4
9	Jamshoro	1	2	3	2	2	2	12	3
10	Sukkur	1	3	4	2	2	2	14	4
11	Khairpur	2	5	7	3	3	3	23	7
12	Nausheroferoze	1	4	5	2	2	2	16	5
13	Ghotki	1	4	5	2	2	2	16	5
14	Nawabshah	1	2	3	2	2	2	12	3
15	Larkana	1	2	3	2	2	2	12	3
16	Kambar	1	2	3	1	1	1	9	3
17	Shikarpur	1	2	3	1	1	1	9	3
18	Jacobabad	1	2	3	2	2	2	12	3
19	Kashmore	1	2	3	2	2	2	12	3
20	Mirpurkhas	1	3	4	2	2	2	14	4
21	Umerkot	1	2	3	2	2	2	12	3
22	Sanghar	2	5	6	3	3	3	21	6
23	Tharparkar	1	2	3	2	2	2	12	3
		25	75	100	50	50	50	350	100