



P.C.I

**For
The establishment
Of**

**Pakistan
Museum
Of
Natural
History**

(Phase II)

September, .1984

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C O N T E N T S

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Code Number for Project

(To be filled in by Planning Commission).

PART "A"

PROJECT DIGEST

1. Name of Project: Establishment of the Pakistan Museum of Natural History, Islamabad. Phase - II.
2. Authorities responsible for:
 - i) Sponsoring: Ministry of Science and Technology.
 - ii) Execution: Pakistan Science Foundation.
 - iii) Operation and maintenance: Pakistan Museum of Natural History.
3. Time required for completion of project (in months): 60 months.
4. Plan Provision:
 - i) If the Project is included in the current five year plan, specify actual allocation: Included in the total allocation of Rs. 200 million to P.S.F. in addition to Rs. 80 million for the Science Centres.
 - ii) If not included in the current plan, how is it now proposed to be accommodated (Inter/Intra-sectoral adjustments in resources may be indicated: Not applicable.
 - iii) If the Project is proposed to be financed out of block provision for a programme indicate: Not applicable.
 - iv) If the Project is not in the plan. What warrants its inclusion in the plan. Not applicable.
5. Relationship of the project with the objectives of the Sector: The Project is part of the programme for promotion of the Science and Technology in the country and dissemination of scientific knowledge.

6. Capital Cost of the Project:

Local cost: Rs. 53.69 million

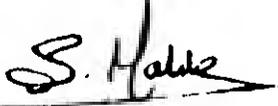
Foreign Exchange: Rs. 25.00 million

Total:- Rs. 78.69 million (See Page 32
Sr.No.13-A)7. A) Annual Recurring Expenditure
after completion of Phase - IRs. 4.57 million (See page-32
Sr. No. 13-B)B) Annual Recurring Expenditure
after completion of Phase-II

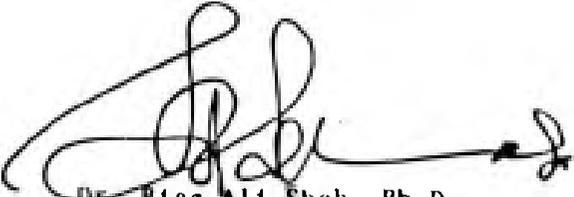
i) Local cost: Rs. 13.61 million

ii) F. E. cost: Rs. 0.55 millionTotal:- Rs. 14.16 million (See page-33
Sr. No. 15).8. Name & Designation of
Officers Responsible
for Preparation of
this Form:

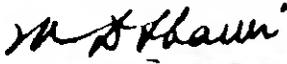
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 Islamabad.

PROJECT DESCRIPTION & FINANCE9. Location of Project:

- a) Give name of place & administrative district in which the service centre will be located. Islamabad (Map enclosed).
- b) Indicate total area which will be served: Whole of Pakistan.

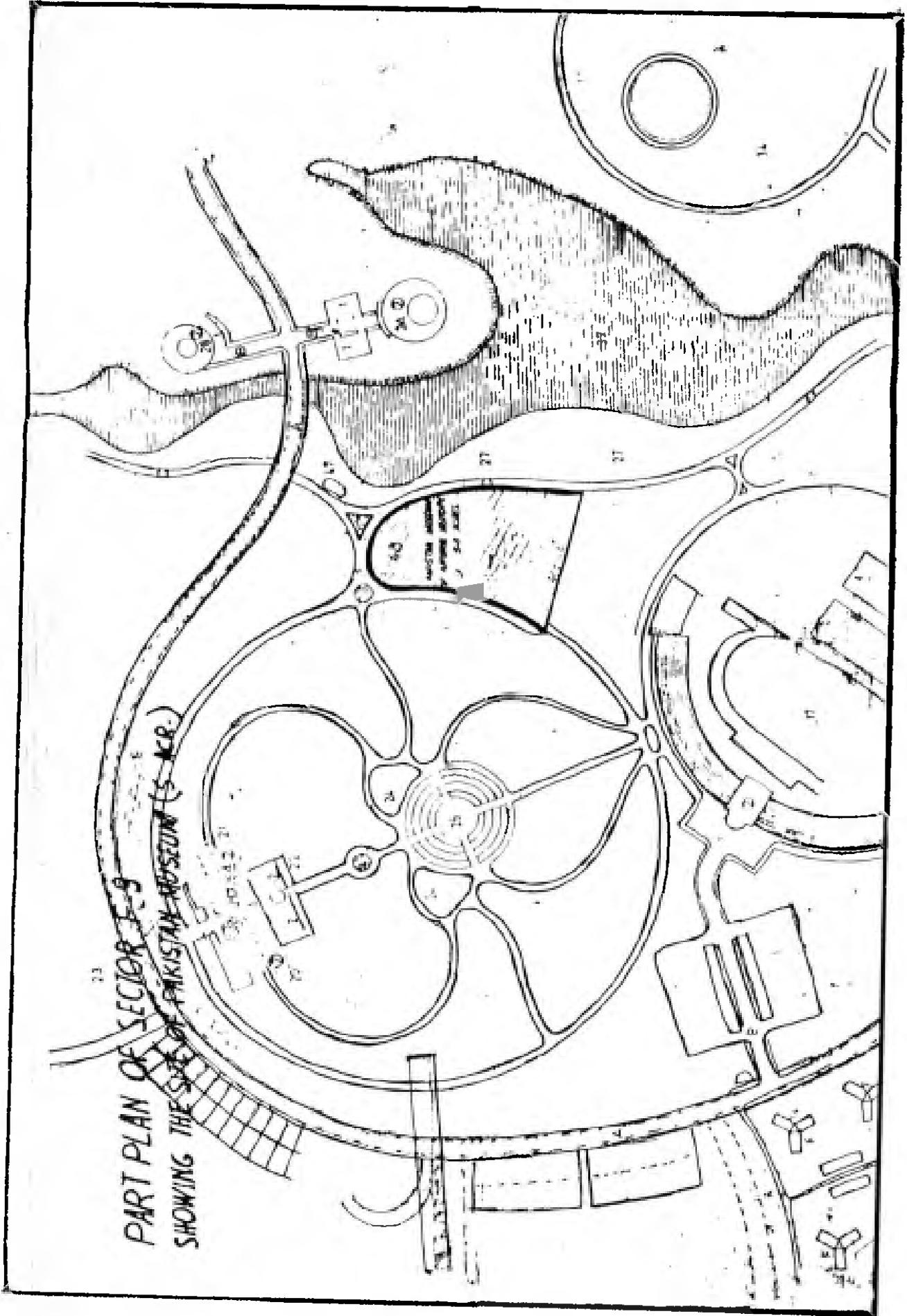
10. Existing Facilities:

Phase-I of the Pakistan Museum of Natural History has already been completed. Zoological, Botanical, Paleontological and Ores & Minerals specimens have been displayed in the form of novel and beautiful Dioramas. Three divisions viz Botanical Sciences, Earth Sciences & Zoological Sciences Division have been established in a rented building/ ^{Annex VIII} Large collection of specimens for research as well as for display has been made. About 43 scientists and 31 technicians and designer/artists have been employed and trained locally as well as abroad. Break down of present strength as follows:-

a)	<u>Research Staff;:</u>		
	<u>Name of the post:</u>	<u>Grade:</u>	<u>Number of Posts:</u>
	P.D.G.	21	1
	Director	20	3
	Curator	19	3
	Associate Curator	18	12
	Research Associates	17/Fixed	24
			43
b)	<u>Technical Staff;</u>		31
c)	<u>Supporting Staff;</u>		39
		<u>Total:-</u>	<u>113</u>

Research work on the collected specimens in all the three disciplines is being carried out by the scientists. A number of projects in collaboration with foreign and local organizations have been undertaken. The preparation and storage of specimens is proceeding at a rapid pace. Exchange of specimens with other Museums of the world have been made. A small workshop has also been established.

For Phase-II the possession of land measuring 5 acres in F-9/3 has been taken. Pakistan PWD has prepared the line diagram of the proposed building which is enclosed. The site investigation and architectural design of the building will be undertaken this year after the project is approved. A provision of Rs.5.00 million exists in the A.D.P. of 1984-85.



11. PROJECT DESCRIPTION

All over the world Museums play an important role in the development of a nation. This is particularly true for Pakistan in relation to the natural heritage of this country.

A Natural History Museum is an irreplaceable national asset not only for carrying out research but also for public enlightenment and education. The Natural History Museums are the only source which can illustrate through carefully maintained collections of biological and geological specimens, the destruction of the environment by the industrial and mining developments.

A museum provides a progressive nation with more broad based scientific education than any newly founded university. A Museum means an open doored school for all classes of man. It must be realized how important the objectives of a major institution like a museum are for scholarship in the natural sciences and to the scientific, educational and cultural progress of a community and of a nation.

It is important to document the flora, fauna and geology not only of Pakistan but also of the world in order to understand their characteristics factors and forces that effect them. This is essential in order to create in the world's population knowledge and a responsibility for its relationship to nature and to educate the young for their role in tomorrow's world. A Natural History Museum of stature can and should be a major force in doing so, with a role different from but supplemental to that of schools and universities. The staff of the museum will play an important major role in assisting a free exchange of scientific and cultural knowledge and artifacts throughout the world, in which Pakistan will surely share and benefit.

The need for a museum in Islamabad has been highlighted by recent discoveries of two paleobiological expeditions which the Smithsonian sponsored in collaboration with the Pakistan Geological Survey. One group from Yale University has been investigating the area on both sides of the Indus around Dera Ismail Khan. Both groups

have already made significant finds. These and other existing paleobiological specimens form a worthy nucleus around which a new Museum in Islamabad can be built.

It is also for the Natural History Museum to arrange biological exhibits which show the principles and processes that are going on in the human body as well as in a green plant cell. With these objectives in mind the Pakistan Museum of Natural History has been established in a rented building.

a) i) BRIEF HISTORY:

Shortly after the creation of a separate Ministry of Science & Technology by the Government, a meeting of experts and scientists working in the field of Natural History was convened at Islamabad in 1972. In pursuance of the decision taken at this meeting, two committees were constituted which submitted their reports for the establishment of Pakistan Museum of Natural History. The Pakistan Science Foundation submitted a PC-I in September, 1975 to the S & T. R. Division for obtaining Government approval.

In the meanwhile, Dr. Pillbeam, Professor of Geology at Yale University USA and Dr. Taseer Hussain, Palaeontologist, Howard University, USA addressed a letter dated 6.1.1976 to the then Prime Minister, bringing out the wealth of palaeontological material in Pakistan and stressing the need for the establishment of a National Museum of Natural History where collections made by the Pakistani Scientific workers and the visiting scientists could be preserved for study and exhibition. Under the then Prime Minister's directive an anticipatory grant of Rs. 0.187 million was released to the Foundation for immediate setting of Natural History, pending approval of the PC-I which was under consideration of the Planning Division.

The Planning Division made certain observations on the scheme which interalia suggested that (i) a survey of the facilities already available in the

country be carried out and (ii) an interministerial meeting be called by the S & T. R Division to revise the programme envisaged in the PC-I of the scheme.

In pursuance of the observations of the Planning Division a survey was got carried out by the Pakistan Science Foundation. The survey report (PC-I Phase-I) along with a note (PC-I, Phase-I, Appendix-II) on other observations of the Planning Division was considered in the interministerial meeting as advised by the Planning Division the following decisions were made :-

- The Survey Report was examined and the consensus was that (a) the need existed for the establishment of a National Natural History Museum and Herbarium at Islamabad, (b) there was no duplication involved and (c) the processing of the scheme be expedited to implement the Prime Minister's directive.
- The scheme be revised in the light of discussions at the meeting and resubmitted to the Planning Division for approval.

In the light of above decisions and the advice of the International experts on Museums such as Dr. W. W. Bilbishop, Dr. Bonner & Dr. R. D. Pilbeam, the scheme was revised wherein the cost estimates of building part of the project were reduced to Rs. 37.8 million (1977) as against the original estimate of Rs. 52.8 million. The cost of the building since 1977 has escalated to a considerable extent. The estimates as prepared by Pakistan P.W.D. have been included in this PC-I Phase-II. Further it was decided that the name of the project should be 'Pakistan Museum of Natural History' and the word Herbarium need not be mentioned separately since it is always an integral part of Natural History Museums.

The revised PC-I was submitted to the Government for approval on 8th April, 1977. A pre-CDWP meeting was held on 8.10.1977 to consider the revised project wherein it was decided that due to current severe constraint in resources, the PC-I be modified deferring the physical building part of the project while emphasising the training

of staff for the development of proposed Museum initially.

The project was accordingly revised. It was proposed to undertake the total scheme in two phases, out of which Phase-I should be implemented immediately.

Phase-I:

This phase (1978-80) incorporated the following :-

- i) Hiring of building for the Museum.
- ii) Recruitment of most essential staff and their training locally & abroad in collaboration with foreign aid giving agencies such as US-National Science Foundation, Smithsonian Instt., British Natural History Museum, Yale University, USA etc.

In the first phase, three major sections with four sub-sections in each were proposed to be established as under :-

<u>Section :</u>	<u>Sub-section :</u>
1. Botanical Sciences:	1. Higher Plants 2. Lower Plants 3. Economic Botany 4. Palaeobotany
2. Earth Sciences:	1. Palaeontology 2. Minerology 3. Stratigraphy 4. Prehistory
3. Zoological Sciences:	1. Ornithology 2. Mammology 3. Ichthyology/ Herpetology 4. Entomology

ii) JUSTIFICATION OF THE SCHEME :

Almost every country in Europe and America and numerous countries of Asia maintain Museums of Natural History for research and display and as a rule, the size and number of such museums represent the level of scientific achievement of that country. Some of the museums in the western countries are more than two hundred years old. The British Museum of Natural History was established in 1753. The United States National Museum, Washington D.C. came into being in 1846. A few years later was established the famous American Museum of Natural History, New York. Many of Asian countries have also made great progress towards establishing Museums and Natural History collections. In this respect, Japan and India are foremost. Besides the famous Indian Museum and Botanical Gardens and herbarium at Calcutta, there are several provincial Museums which have been established in recent years. The Botanical Gardens and Herbarium at Peradenyia, Ceylon are rated among the world's best Botanical Gardens and Herbaria. It is high time that Pakistan should also have a National Museum of Natural History. A number of messages of goodwill have been received from the presidents and directors of Natural History Museums from many western countries. Some extracts from their letters are given below:-

"The dual functions of research & public education that stem from a Natural History Museum's collection will, I am sure, mean much to your government & your people in the years ahead."

Dr. E. Leland Webber,
President,
Field Museum of Natural
History, Chicago,
U.S.A.

"I feel enthusiastic about the project, more than any other medium suited to be an irreplaceable national asset not only for research but also for public enlightenment and better education."

Professor Dr. W. Engel Hardt,
 General Director,
 der Statlichen Naturwissenschaf
 Eicken Sammlungen Bayerns, &
Munchen W. Germany.

"I have learnt about the plans of your country to create a National Museum of Natural History in Islamabad. I write to give you every encouragement to do so, and to offer you my interest in discussing possible ways in which we might cooperate in helping you to realize that objectives."

Dr. Thomas D. Nicholson,
 Director,
 The American Museum of
 Natural History, New York,
U. S. A.

"In welcoming this new member among the world family of Museums I would like on behalf of the Museum National d' Histoire Naturelle assure you that we are willing to cooperate with you in any possible way."

Jean Dorst
 Le Directeur du Museum National d'
 Histoire Naturelle,
Paris.

"I have just heard from Mr. David Ohaloner, Assistant Secretary for Science at the Smithsonian Institution that the creation of a National Museum of Natural History in Islamabad is being planned.

I should just like to say how welcome this news is and to offer this Institution's best wishes for future development of what will be a national asset for both research and public enlightenment."

Dr. R. H. Hedley,
 Director,
British Museum of Natural History.

Similar letters have been received from :-

Dr. Giles W. Mead,
Director,
Los Angeles California.

Professor Yves Le Grond,
Director,
Museum National D' Histoire
Naturelle, France.

iii) BIOLOGICAL COLLECTIONS:

The study of fauna and flora which provides the foundation on which rests the edifice of biological research, has remained neglected in Pakistan. This is because there does not exist any effective organisation at the national level that could organize and promote taxonomic research. There are no zoological & botanical reference collections in the country. Even the Universities with the exception of few do not have any systematic and sizeable collections like the foreign Universities. Even those small collections which have been built up by some individual scientists entirely through their personal efforts are likely to deteriorate or get lost for lack of a proper natural history museum in the country where these collections could be lodged and properly maintained. There exists an anxiety on part of the investigators who have spent their life time in building up these collections, that since there is no national institution in Pakistan which could serve as a repository for the natural history specimens, the valuable and rare collections may get damaged or destroyed and will be lost to posterity. This anxiety is shared by foreign experts as well.

The collection of zoological specimens (insects and invertebrates) which was brought from India after partition are lying with the Plant Protection Department Karachi, it is imperative that proper arrangements are made expeditiously for the proper storage of this invaluable collections in a Museum. This collection can

only be made use by the research workers and students. The collection which is very large can only be housed in a properly designed building for which PC-1 Phase-II is being submitted.

iv) PALAEONTOLOGY:

The Science of Palaeontology forms the basis of stratigraphy and age determinations in the world of Earth Sciences. Pakistan is a land, full of Palaeobiological activities, and fossils ranging in age from Precambrian to Pleistocene ages may be frequently observed. Many workers have studied the vertebrate and invertebrate fossils found in various formations, but a systematic collection (with proper studies) from Precambrian to Pleistocene ages is still a great need of our times. The age controversy of the Salt Range Formation, previously known as the Saline Series has been a burning topic amongst the well known Palaeontologists of the world. The studies of the vertebrate fossils from the Siwaliks of the Potwar area still require proper attention. For the last 150 years, thousands of vertebrate fossils have been collected from the continental deposits of Pakistan. Some of this material collected from the classic Siwalik beds (2-15 million years old) is in Pakistan and needs to be classified and properly displayed while most of it is scattered in Museums all over the world. The Geological Survey of Pakistan in collaboration with Yale and Howard Universities have recently collected large number of specimens of vertebrate fossils which unfold the history of this land. The vertebrate fossils collected over the years constitute some of the most important and valuable fossils in the world and are fundamental to any understanding of the evolution of mammals, including man. As these are scientifically and educationally valuable "Natural Resources" they should be properly curated and displayed in the Natural History Museum for scientific study and public exhibition.

The environmental sciences are gaining their importance and recognition in the scientific world. The Palaeobiological studies and Palaeo-environmental studies would provide a real base to preserve the present natural environment of our land.

v) MINERALOGY & PETROLOGY :

Pakistan is known to be fairly rich in its mineral resources. Its iron ore deposits at Kalabagh, Copper deposits at Saindak, China Clay deposits at Nagar Parker and Swat, and semiprecious Gemstones in the Northern areas, are attracting the attentions of the world researchers carrying out researches in the field of Mineralogy and Petrology. The geological field work will be organised to collect various minerals found in Pakistan, with their exact stratigraphic and geographic locations. The columnar graphic logs would be made to represent the lithology/mineralogy of the interesting stratigraphical sections. The samples of minerals and rocks collected during the geological field work would be labelled and stored properly in the store house of the Museum. The field samples of rocks and mineral, representing their exact stratigraphical locations and geographical distributions in Pakistan would be made available for museum display and future research work. In addition to the samples collected from the exposed sections, minerals and rock samples of the interesting formations would be collected from the various organisations concerned with oil drilling in Pakistan. The subsurface electric logs of the formations would also be acquired to study the stratigraphical presence of various minerals.

The samples of classical rocks and minerals will be obtained from all around the world for display in the international mineral section of the Museum.

The minerals and rocks collected from the exposed sections, drilled sections and from various international agencies, will be displayed in the museum to disseminate the knowledge of Mineralogy & Petrology. Models depicting various operations for the drilling of mineral "Oil" would also be made to display the drilling techniques for obtaining petroleum.

vi) STRATIGRAPHY :

Pakistan is known as a museum of stratigraphy and museum of geology in all the world & is a place of attraction for reknown geologists of all the

countries. The Formations ranging in age from pre-cambrian to subrecent are frequently exposed in Eastern Salt Range (Gandbala Nala Sections), Middle Salt Range (Kallara Walan Sections near Katta) and Western Salt Range (Khan Zaman Nala Sections near Musakhel) and may be studied within a distance of 1-2 miles, a rare case in the field of geological sciences.

A systematic programme will be implemented to measure the exposed stratigraphic sections to collect the proper museum and research samples and to correlate the various Formations exposed at the surface and drilled in the subsurface. The copies of the existing records (Geological Field Work Reports) about the stratigraphy of different areas of Pakistan would be acquired from the various geological organisations and universities. The subsurface geological and stratigraphical informations would also be obtained from relevant organisations, concerned with drilling. These records would be made available for consultation to the researchers, students, teachers, and geologists as a reference work for a better understanding of stratigraphy.

Finally, stratigraphic models would be prepared representing the geology and stratigraphy of the interesting areas of Pakistan with the help of the exposed surface sections and drilled subsurface boreholes, oil/gas wells and water wells.

vii) BENEFITS:

1. Natural History Museum as Index of Scientific Achievement of a country

Most countries of the world maintain museums of natural history for research and display and as a rule the size and number of such museums represent the level of scientific achievements of the country.

2. Economic Importance of Fauna and Flora:

The fauna & flora of a country constitute an important component of its natural resources. Before these are exploited we must first know what they consist of. Every country of the world today is charged with the

responsibility of knowing its plant and animal wealth. A detailed knowledge of the distribution, identification and biology of the fauna and flora is a pre-requisite for their economic exploitation. The fauna and flora of Pakistan have very little been investigated. There are no reference publications of our plants and animals. The 'Fauna of British India' which was compiled long time ago is obsolete. Moreover, the areas which now constitute Pakistan were poorly surveyed by the British experts who wrote the 'Fauna of British India'.

viii) IMPROVEMENT OF PLANTS & ANIMALS

An upto date knowledge of the plants and animals is a must, particularly for a country like Pakistan which has essentially an agricultural economy. The economic plants and animals so vital for our existence were selection by the early man from his surroundings. By a conscious and unconscious process of selection the early man brought an improvement in their certain qualities and made them visibly look different from their wild ancestors, many of which are still in existence. The cultivated plants and domesticated animals live in artificially created environment and have thus become susceptible to diseases unlike their ancestors. Continued breeding has resulted in genetics homogeneity with the consequent loss of variability. For the improvement of the crop plants and domesticated animals and making them resistant to diseases, it is imperative that the existing source of variability in the form of wild relatives should be kept readily available. Live plants and animals kept in the botanical and zoological gardens and wildlife preserves and the natural history specimens preserved in the museum/herbarium provide the necessary knowledge about variability in natural populations and which could be utilized in the improvement of plants and animals. In several countries considerable research in this direction is being done & fruitful results have been obtained. A large source of variability in the form of wild relatives of crops and vegetables is maintained in several botanical gardens in the U.S.A. The Botanical Garden and the Herbarium at Kew, England house the

largest collections of plants for the purpose of providing detailed information on the genetic variability.

Recent developments in biotechnology and genetic engineering techniques has put added responsibility on the museums of natural history. Not only record of the natural fauna and flora has to be maintained properly but also the man made new plants produced through the technique of tissue culture will also need preservation and full taxonomic record will be kept of all the new species evolved. Similarly a record of new animals which are being produced through genetic engineering will be maintained. Recently a mice which is 3-4 times the size of normal mice has been produced. This technique can be extended to produce large size animals for producing more meat and milk. The work of biological scientist will be extended beyond imagination in years to come and role of the Natural History Museums will become increasingly important.

ix) WILDLIFE CONSERVATION

Because of the non-existence of an institution charged specifically with the responsibility of collecting information on the distribution, identification, habitat and behaviour of wild animals the conservation of wildlife in the country has suffered greatly. No conservation methods will yield the desired results in the absence of this basic scientific information. Several very valuable species in Pakistan, which could be a great source of attraction to tourists, are now scarce and on way to extinction. So little is known about them that not much can be done in the way of conservation. A very rough survey of these rare species and compilation of information on their ecology must be undertaken if these are to be saved from extinction. Little systematic wildlife research is likely to be initiated in the country unless the proposed institution starts this programme. In contrast to this situation, in East Africa alone more than 350 references are available on large East African animals. The staff of the museum has been helping the Wildlife

Department in setting up their exhibits and also technical advice has been given for the protection/propagation of endangered species. Data on the population dynamics, ecological consideration & behaviour of Punjab Uril have been provided.

x) PEST CONTROL

The material importance of taxonomic research done in natural history museum and herbaria lies in many applied fields where an exact knowledge of the identity of the organism is essential to success. It is not an unknown fact that huge sums of money have been wasted in launching pest control operations without success simply because the identity of the pest was not correctly known. There are numerous instances where taxonomic research has come to the rescue of the applied biologist and saved large sums of money from going waste. To cite an example, we may mention malaria control. Till nineteen-thirties it was known that in Europe malaria was spread by a species of mosquito, Anopheles maculipennis. Wherever this mosquito occurred, control measures were applied even in areas where there was no malaria. However as a result of intensive taxonomic research it was revealed, what was till then considered as A. maculipennis was actually an assemblage of several closely related species which looked alike. Not all of the species of this complex are malaria carriers. Therefore, where non-malaria carrying species of this complex occur no control measures need be applied, there will be no outbreak of malaria in those areas. This knowledge of the taxonomy of Anophellog has saved millions of dollars which would have otherwise been spent in eradicating species which actually did not spread malaria. Pest control operations, divorced of taxonomy natural history & ecology will never be able to achieve any success. According to an authority on biological control "A mistake in the identification of the host may result into complete loss of years of work and useless expenditure of the large sums of money.

It is estimated that at least 375000 people are poisoned by pesticides every year out of which 10,000 die. Even greater tragedy is the "pesticide treadmill."

The farmers use pesticides indiscriminately, insects develop resistance or new pests become dominant which can result in the loss of entire crop. The identification of the insects and ecological study of the whole system, therefore, becomes increasingly important. The collection of invertebrates from all over Pakistan and their proper classification is being carried out as a part of the programme outlined in the Phase-I of this project.

xi) SCIENTIFIC & EDUCATIONAL VALUE :

To satisfy the curiosity of the 'Philosophically curious' is also one of the important functions of a natural history museum. The general aim of the research done in such an institution is to collect as much as possible information on identity, natural history distribution and ecology of the plants and animals fossils, rocks minerals, etc. These studies help to elucidate various principles of philosophical importance. It was with this object that most of the natural history museum of the world were originally established. The reason for the establishment of the famous British Museum of Natural History is very aptly expressed in the preamble of the British Museum Act, 1953. It states: "All parts and Sciences have a connection with each other and discoveries in Natural philosophy and other branches of speculative knowledge for the advancement and improvement where of the said museum of Collection was intended, do and may in many instances give help & success to the most useful Experiments and Innovations." It is the responsibility of the Government to provide an opportunity to the public to acquaint and educate themselves about the natural wealth of the country and its economic and aesthetic value to the mankind. This can only be done through the exhibition galleries of a natural history museum. Most of the countries spend huge sums of money for this purpose. The allocation of Rs. 78.69 million, which is being requested for this purpose will only be sufficient for making a reasonable start.

xii) TOURIST TRADE:

Pakistan is gifted with some of the most varied and spectacular wildlife in the world. We must project it to the world through realistic displays in the galleries of natural history museum.

12. OBJECTIVES:

A. Specific to Research Divisions.

Animal & Plant Sciences Divisions.

- To collect, identify & preserve Fauna & Flora of the country.
- To build up National Zoological & Botanical reference collections.
- To acquire private Zoological and Botanical Collections.
- To sponsor research in the taxonomy of Plants & Animals and provide research facilities to post graduate students in the country.
- To advise government on all matters relating to wildlife conservation.

Earth Sciences:

- To collect, identify/preserve fossils, rocks, and minerals of the country.
- To build up a national palaeontological physical anthropological and geological reference collections.
- To acquire private fossil collections.
- To sponsor research in the field of palaeontology, geology and physical anthropology.
- To collect specimens related to the Natural History of Man.
- To interpret and exploit present environment in the light of past environment since man and his use of tools has played a major role in bringing about this change.

B. Common:

- To serve as a repository for the type material.
- To display the specimens to visitors for shaping their taste arousing their curiosity and awakening their creative spirit.
- To arrange expeditions for study and collections of the natural wealth of the country.

- To provide research facilities to visiting scientists from within and outside the country to work at the Museum.
- To provide training facilities in Taxidermy / Modelling/Casting etc.
- To publish popular literature/brochures pamphlets etc. for public awareness.
- To establish liaison with similar institutions abroad.

DETAILS OF THE SCHEME:

i) Location:

The Pakistan Museum of Natural History will eventually be located in Sector F-9/3, at Islamabad. The question of the location of the proposed Museum was discussed thoroughly. After weighing several factors it was recommended by the experts that the Museum should be located at Islamabad, as its climate is most suited for the preservation of fauna, flora and other Exhibits. A plot of land measuring 5 acres has been acquired in sector F-9/3 (See page 4). The site investigation work has been entrusted to Pak. P.W.D. A line diagramme of the proposed museum has been prepared by the Pakistan P.W.D. architects. The services of two experts from the British Museum of Natural History were acquired through the British Council to advise on related matters.

ii) Proposed Buildings:

a) The Museum building will be designed keeping in view Islamic Architecture and modern trends for such prestigious buildings with an area of 1,15,314 sq. ft. with additional area of 6,000 sq.ft. for Mosque & quarters for guards, gardeners and other essential staff. The Cafeteria, Garrages and Record room will occupy an area of 3800 sq.ft. Thus the total covered area will be 1,65,018 sq.ft. This include main vestibule exhibition galleries, research section, taxidermy, skeleton & embalming units, fossils preparation unit, stores,

fumigation of plants unit, drawing and designing unit, library etc. The display area of exhibits for various sections will be 48,000 sq.ft. and the library will occupy an area of 3,960 sq.ft. The space for research section is proposed to be 26,280 sq.ft.

The space allocated to the galleries has been worked out on the basis of the standard formula that 30% of the space is used by exhibits and the rest 70% for the visitors. The galleries should be beautifully designed and exquisitely finished, provided with balconies 10 ft. wide.

The detailed justification of the area required for the staff, exhibition galleries, research section etc is given on page 40-49.

b) SUMMARY OF AREAS:

MAIN BUILDING

1. Exhibition area	48,000	Sq.Ft.
2. Vestibule	14,400	" "
3. Auditorium	2,592	" "
4. Cafeteria	1,200	" "
5. Souvenir Shop	300	" "
6. Research Section	26,280	" "
7. Fumigating, Drying & Mounting Unit	1,872	" "
8. Fossil Preparation & Rock Cutting Unit	846	" "
9. Library	3,960	" "
10. Taxidermy, Skeleton, Embalming Unit.	2,000	" "
11. Photographic UNIT.	500	" "
12. Drawing & Designing Unit.	2,664	" "
13. Workshop.	2,160	" "
14. Printing & Publication Unit.	700	" "
15. Director General Office.	1,496	" "
16. Administration.	2,740	" "
	<hr/>	
	1,11,710	Sq.Ft.
	<hr/>	
17. 40% Circulation area for verandah, staircases thickness of wall etc.	44,684	" "
18. Garrages & Stores.	2,600	" "
	<hr/>	
<u>ANCILLARY BUILDINGS:</u>		
19. Ancillary Buildings.	6.024	" "
	<hr/>	
Grand Total:	1,65,018	Sq.Ft.
	<hr/>	

Organisational Structure:

After completion of the Phase-II, the Pakistan Museum of Natural History will be an autonomous body with a Board of Governors under the Ministry of Science & Technology. The Board of Governors will be responsible for the formulation of policies and administration of the Museum. It may be mentioned here that most of such institutions in foreign countries are administered by Boards of Governors/ Trustees.

The Museum will be headed by a Director General who will be responsible for proper functioning of the Museum. The composition of the Board of Governors will be as under:-

Board of Governors:

- | | | |
|------|---------------------------------------------------------------------------------------------------------------|------------------|
| 1) | Chairman,
Pakistan Science Foundation. | Chairman |
| 2) | Chairman,
University Grants Commission: | Member |
| 3) | Inspector General(Forest): | Member |
| 4) | Chairman,
Capital Development Authority: | Member |
| 5) | Joint Secretary,
Ministry of Science & Technology: | Member |
| 6-8) | One Zoologist, one Earth Scientist
and one Botanist to be nominated
by the Pakistan Science Foundation: | Member |
| 9) | Director General,
Pakistan Museum of Natural History: | Member/Secretary |

2. Tenure of Membership:

- i) Members of the Board of Governors shall hold office for a term of three years and will be eligible for renomination.
- ii) A member may at any time resign his membership by writing under his hand, addressed to the Chairman but the seat of such member shall not be deemed to have fallen vacant unless the resignation has been accepted by the Board of Governors.

3. Meetings:

- i) The Board shall meet at least twice in each year at such times and places as may be appointed by the Chairman.
- ii) 8 members of the Board of Governors shall constitute a quorum.

For day-to-day functioning of the museum and implementation of the policy decisions taken by the Board of Governors, there shall be an Executive Committee.

The Executive Committee shall be the executive body of Pakistan Museum of Natural History and shall take effective measures to implement the approved scheme and exercise general supervision over the affairs of Pakistan Museum of Natural History.

4. Executive Committee:

The Executive Committee shall consist of the following:-

- | | | |
|----|----------------------------------------------------------------------------------------------------------|----------|
| 1. | Director General,
Pakistan Museum of Natural History: | Chairman |
| 2. | Director, Zoological Sciences Div.,
Pakistan Museum of Natural History. | Member |
| 3. | Director, Botanical Sciences Div.,
Pakistan Museum of Natural History. | Member |
| 4. | Director, Earth Sciences Division,
Pakistan Museum of Natural History. | Member |
| 5. | One nominee from Ministry of Science
& Technology, Senior Scientific Adviser
(not below Grade-20). | Member |
| 6. | Member Science,
Pakistan Science Foundation. | Member |
| 7. | Director Finance,
Pakistan Science Foundation. | Member |

One of the Directors of PMNH will act as Member/Secretary of the Executive Committee.

Advisory Committee:

In addition to the above, there shall be an Advisory Committee for the Museum consisting of the following members who will also serve on professional Consultative Committees.

- 1) Director General,
Pakistan Museum of Natural History, Chairman
- 2 - 7) Six eminent working scientists in the fields
of work being carried out by the Pakistan Museum
of Natural History, two scientists for each
discipline.
- 8 - 10) Directors of the Pakistan Museum of Natural
History.

Administrative Structure:

The ultimate Administrative Structure of the Project following staff would be recruited. (For details refer appendix - III).

a)	<u>Research Staff:</u>	<u>Grade</u>	<u>No. of Posts</u>		<u>Additional Posts Phase - II</u>
			<u>Phase-I</u>	<u>Phase-II</u>	
	Director General	21/22	1	1	-
	Director	20	3	3	-
	Curator	19	3	10	7
	Associate Curator	18	12	22	10
	Research Associate	17	24	41	17
			43	77	34
b)	<u>Technical Staff:</u>		31	91	60
c)	<u>Supporting Staff:</u>		39	86	47
			113	254	141

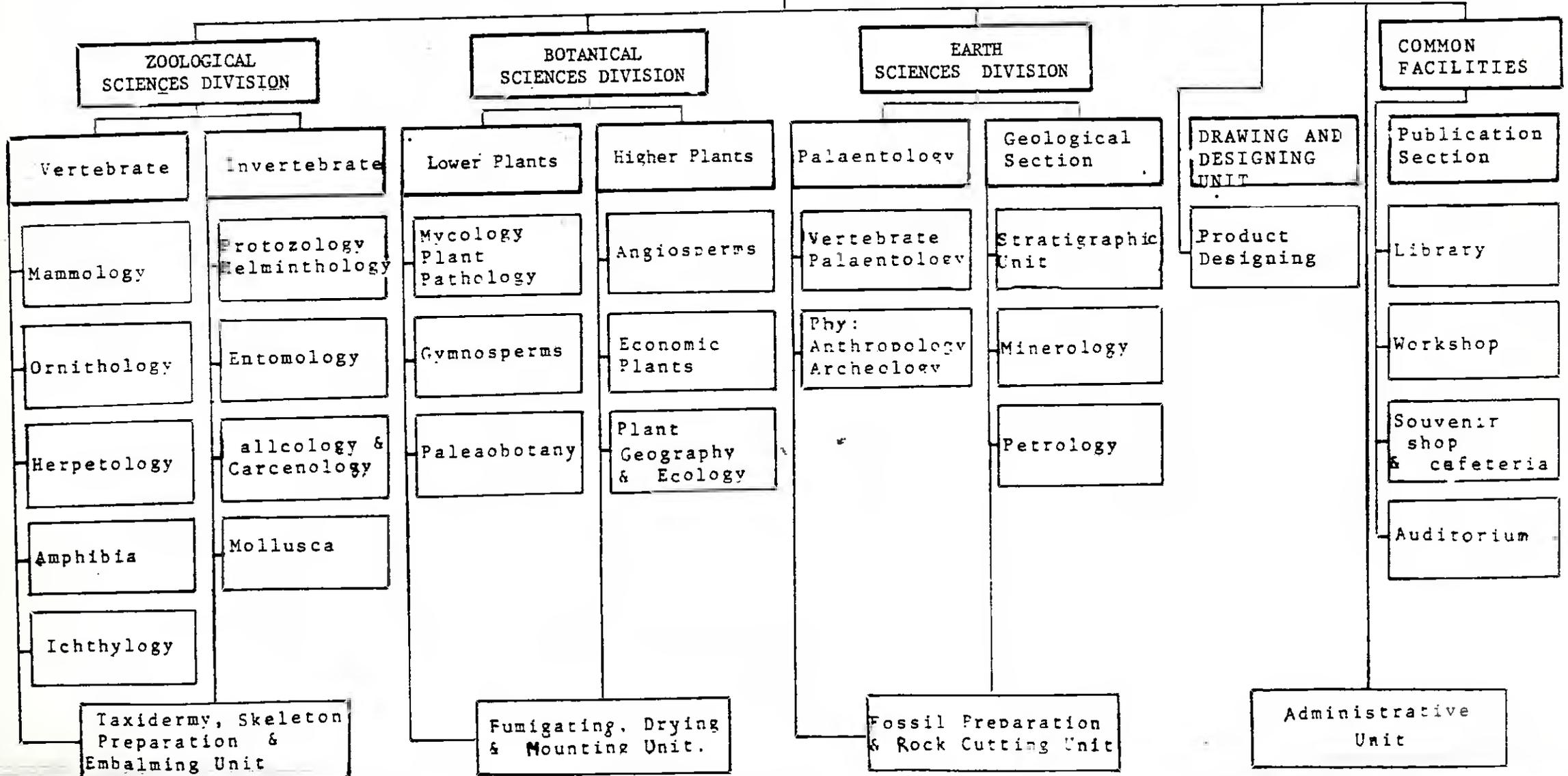
NOTE:

Increase in the number of technical staff is proportionate to the number of Scientists and increase in the research activities.

In the new building the number of gardeners, attendants for the exhibits of the Museum gardeners and sweepers etc. will increase appreciably.

ORGANIZATIONAL STRUCTURE

PAKISTAN MUSEUM OF NATURAL HISTORY



Function of the Museum:

1. **Research:**— Defined as critical and exhaustive investigation or experimentation, having its aim in discovery of new facts their correct interpretation the revision of accepted conclusion, theories or law constitute major activity of the museums. Accordingly, there is a growing tendency among the museums to acquire scientific staff, particularly younger people, qualified to undertake serious research as part of their curatorial duties.

The work undertaken by museums is overwhelmingly academic in nature that its orientation towards applied research is also apparent. The series of scientific and scholarly monographs published by various museums in most cases are of a higher level than published by universities on the same type of work, which is due to the assemblage of specialist who spend their life time in the pursuit of subjects of their choice. The principal difference between the two types of institutions is that the museum also publicises the results of its research through public exhibitions and display to create awareness about the changes in the natural environment, its problems and possible solutions.

In the proposed Pakistan Museum of Natural History as well as the main activity will centre around faunistic, floristic, palaeontological & geological studies and approximately 70% of its staff will comprise of scientific & technical personnels, to undertake research. The research work in each section has started and number of books, monographs and scientific papers will be published as a result of their endeavours.

2. **Conservation & Curation:**

In order to play its social educational and cultural role to full advantage, the Museum will not only collect and study but will also preserve and provide proper curatorial services to the specimens of which it is in possession. This

function is being taken care of by a panel of curators who are incharge of each division.

Display:

For the display of natural history specimens in the museum specially designed exhibition galleries have been set up where-in specimens and models are exhibited. The depiction of groups in natural habitat will be a salient feature of the galleries in the museum building. Besides the natural wealth found in Pakistan, stuffed specimens of some of the more interesting animals occurring in other parts of the world will also be exhibited to give the visitor a better idea of the diversity of the animal life. The value of the plants and animals to man and the destruction caused by them to human property will also be highlighted in the galleries. Some work in this direction has already been undertaken. The Museum will also exhibit the geological history of Pakistan and shall have galleries of Rocks and Minerals. The Museum ultimately shall have following galleries:

1. Mammals.
2. Birds.
3. Reptiles, Amphibians & Fishes.
4. Insects.
5. Invertebrates.
6. Palaeontology.
7. Rocks & Minerals.
8. Natural History of Man and Physical Anthropology.
9. Higher plants, Lower Plants & Herbaria Reference Halls.
10. Environment.

In the first phase, it has been possible to establish a nucleus to achieve the objectives in a hired building. The collections have been built with over 5000 specimens of Zoological nature over 7,000 botanical specimens. Over 200 fossils including the replicas of rare homonid species are being displayed. In addition 200 ores & mineral samples are also exhibited.

Educational & Public Awareness Services:

Another important activity of the proposed Museum will be to arrange special programmes for the school and college students and general public to acquaint them with our natural wealth and its conservation. Under this programme (as envisaged in Phase-1) the students are being taken in groups round the display rooms and special lectures illustrated by slides and movie films are arranged for them. The Museum has been organizing short courses for training in taxidermy, curatorial services casting/modelling, fossils and skeleton preparation in addition to the training of the museum staff itself.

Common Facilities:-

This unit displays specimen aesthetically in various galleries, prepares charts, and drawings. This section has the services of a Product Designer and two artists.

Photographic Unit:

This unit provides services to all the research division and exhibition galleries of the Museum.

Workshop:

A workshop complex is an integral part of the museum and provides a variety of facilities such as preparation of specific display stands, cabinets, containers etc. A small workshop having facilities for metal working and carpentry has been established.

Education Programme/Public Relations Units:

This unit is responsible for executing the educational programmes. Maintaining liaison with other institutions and arranging the guided tours of the Museum. The number of visitors to the museum is increasing day by day.

Publication Unit:

Natural History Museum will bring out research publications in the form of Records, Memoirs and bulletins. It has started publication of popular literature in the form of brochures and pamphlets for public awareness

Provision has been made in the Phase-II for creating facilities for reproduction and printing. These facilities are essential because of the special nature of the publications and their volume.

LIBRARY:

A well equipped reference library is a must for a Natural History Museum wherein major emphasis is on research. The library will have to procure complete sets of a very large number of journals and periodicals dealing with Zoology, Botany, Palaeontology, Geology and Anthropology. A large number of books have been purchased. The journals will be purchased in Phase-II when foreign exchange is made available. Full benefit will however be taken of the facilities available in the PASTIC and due consideration will be given when ordering books and journals.

September, 1984

12. Give date when capital expenditure estimates were prepared: If prepared more than one year ago, confirm if they are still valid.

13. Capital Cost:

a) Give breakdown of capital cost year-wise covering the whole of the investment period, as indicated below:-

<u>Classification:</u>	<u>Local:</u>	<u>(Cost Rupees Million)</u>		<u>Total:</u>
		<u>Foreign Exchange:</u>		
i) Building	44.22	3.50		47.72
ii) Equipment	0.70	19.30		20.00
iii) Books & Journals	0.40	1.20		1.60
iv) Transport	0.90	-		0.90
<u>v) Other Costs:</u>				
a) Foreign Training.	0.60	1.00		1.60
b) Display arrangements.	2.30	-		2.30
Total: (A)	49.12	25.00		74.12

Note: For year-wise details of capital cost please refer Table 1 on Page No. 38.

13. b) Recurring Expenditure during implementation.

45,73,406

Say: (4.57 Million)

<u>Pay & Allowances:</u>	<u>1983-84:</u>	<u>1984-85:</u>	<u>1985-86:</u>	<u>1986-87:</u>	<u>1987-88:</u>	<u>Total</u>
Grand Total: (Page.80)	2739672	4341132	5067961	6218866	6581247	24948878

Less:

Existing Staff Salaries being met from Non-Development Budget.	2739672	3800000	4180000	4598000	5057800	20375472
----------------------------------------------------------------	---------	---------	---------	---------	---------	----------

Recurring Expenditure during implementation: (B)

541132 887961 1620866 1523447 4573406

Say: 4.57 Million

GRAND TOTAL (A+B) (74.12) + 4.57 = 78.69 Million.

14. Basis of cost Estimates: Any construction/development programme comprises scope of the construction and development, its various specifications and the market rates to determine cost estimates. The scope of this project proposal is reflected through out the body of PC-I document, the specifications of works materials and equipment are also given at their respective places and the rates of works materials and equipment tools and plant are provided according to the prevalent market rates. The construction and designing of building will be entrusted to government agencies like PEPAC or Pak. PWD who are resourceful enough to construct the building in time and quite independently.

15. <u>Estimates of annual recurring expenditure after completion of project (To be financed by the Government funds).</u>	<u>(Cost Rupees Million)</u>			<u>Remarks</u>
	<u>L. C.</u>	<u>F.E.C.</u>	<u>Total:</u>	
1. Salaries and Allowances:	6.93	-	6.93	Annexure-VII
2. Field Work:	.25	-	.25	
3. Modernisation and maintenance of Equipment:	.13	-	.13	
4. Books & Journals:	1.00	0.50	1.50	
5. Chemicals and glass apparatus:	0.20	-	0.20	
6. Conference/Semlnars:	0.10	0.05	0.15	
7. Publications:	0.50	-	0.50	
8. Maintenance of Buildings and Exhibits:	1.00	-	1.00	
9. Utilities:	1.00	-	1.00	
10. Contingencies.	1.50	-	1.50	
12. Travels.	0.50	-	0.50	
13. Rent of Boilding & advance for building and car loans:	0.50	-	0.50	
Total:	13.61	0.55	14.16	

16. Unit cost for each category of service or output e.g., for educational institutions, the cost per student and how it compares with cost in other institutions. Not applicable
17. In case of projects for production of goods and services e.g., production of textbooks, give expected income statement (Profit & Loss accounts) for ten years or until normal capacity is reached: Rate of depreciation and salvage value of property should be given. Not applicable

Physical work(Building)	Percentage	Year	Financial Requirements		Rs.
			Local	F. E. C.	million
1. Planning, Surveying of Museum Building, Equipment Quotations:	12.18%	1984-85	5.39	0.42	5.81
2. Foundation, Pillar contractor, Orders for import of Equipment.	29.37%	1985-86	12.99	1.03	14.02
3. Orders or Equipment to be installed Construction of Museum Building.	29.37%	1986-87	12.99	1.03	14.02
4. Interior designing Installation of furniture & fixture, Equipment.	15.05%	1987-88	6.65	0.53	7.18
5. Installation of A.C. Unit telephone, Electrification Plumbing and landscaping Equipment.	14.03%	1988-89	6.20	0.49	6.69
	100%	1989	44.22	3.50	47.72

19. Foreign Exchange Expenditure:

Year	Material	Consultants	Others	Total
1984-85	0.36	Nil	0.06	0.42
1985-86	1.01	-	0.02	1.03
1986-87	1.01	-	0.02	1.03
1987-88	0.52	-	0.01	0.53
1988-89	0.48	-	0.01	0.49
	<u>3.38</u>		<u>0.12</u>	<u>3.50</u>

20. a) Likely sources & amount of Foreign Exchange Cost of the Project: Government of Pakistan (Rupees 3.50 million)
- b) Present Position regarding availability commitment or negotiations: Not applicable.

21. Indicate sources & amount of rupees component of Project:
- | | Capital: | Recurring: |
|--------------------------------|-------------|-------------|
| Direct Government Expenditure: | 78.69 mill. | 14.16 mill. |

22. Results of the Project:

- 1) Direct benefits NIL
- ii) Indirect & other benefits See page No. 16.

23. a) Approximate number and categories of job opportunities likely to be created indirectly as a result of:-

- i) Implementation. 254
- ii) Operation of Project 254

b) Economic life of components of project (Buildings, Equipments etc.)

Buildings	100 years.
Equipment	10 years.
Exhibits	25-100 years.
	(Depending on Nature of Exhibits).

PART - 'C'

Project Requirements

24. a) Availability of Manpower:

Some trained persons in Biological Sciences, Earth Sciences and Social Sciences are available in the country. However, to meet the full requirements of the complete institution an extensive programme of training within and outside the country will have to be undertaken in collaboration with foreign agencies such as Smithsonian Institute National Science Foundation. The retired scientists who are specialists in their field of research and physically fit, may be given contract assignments and also train young scientists. Similarly the services of the scientists employed in the universities and other research institutions may also be obtained on deputation. Very close collaboration will be maintained with the research organizations like the National Institute of Oceanography, Pakistan Council of Scientific and Industrial Research, Zoological Survey Department, World Wildlife Organisations Pakistan Agricultural Research Council and specialists in the universities and scientists from other museums. Similarly the specialists working in the museum will also carry out research projects in museums abroad.

1. <u>Professional & Technical:</u>	171
2. <u>Administrative, Executive and managerial:</u>	83
	<u>254</u>

b) Likely shortage of Manpower by occupation. None

c) Steps to be taken to Assure availability of manpower.

a) Local training by local or foreign experts.

b) Foreign training in specialized fields in a Museum of Natural History.

d) Approximate number of persons required to be trained per year (Locally and abroad) and the kind skills to be learnt:

See training programme (Approximately page No.61 Annexure-IV. 12 persons would be trained annually in different fields including designing and Taxidermy.

e) Give total capital outlay give the capital cost of mobilizing one worker for one shift. N i 1

25. Physical and other facilities required for project For detail please see page 41 - 42.

- a) Housing by type:
- b) Power Supply:
- c) Water & Other Utilities
- d) Others

26. Materials Supplies and Equipment requirement:

A. I. Minimum total requirements for execution:

To be completed only for major items costing more than 10% of the total cost.

A list of Laboratory Equipment
 Audiovisual Equipment Workshop
 Foundry Equipment and Photographic
 Equipment is Annexed at Page 57.

A. 11 Materials, spares and supplies and equipment
for operation of Project:

N I L

27. In the case of imported material
and Equipment for Execution. Indi-
cate.

- a) Justification for imports.
- b) Proposed source/sources of
supply.

N I L.

TABLE -I

YEAR-WISE DETAILS OF CAPITAL COST1984 - 1989

Item:	1984-85:	1985-86:	1986-87:	1987-88:	1988-89:	Total:	Classification	
							Local	F.E.
Building for details refer Annex.I. Page No.39.	5.81	14.02	14.02	7.18	6.69	47.72	44.22	3.50
Equipment for details refer Annex-III Page.57.	2.44	5.87	5.87	3.01	2.81	20.00	0.70	19.30
Books & Journals Annex-IV Page.61.	0.20	0.47	0.47	0.24	0.22	1.60	0.40	1.20
Transport Annex-IV Page.61.	0.11	0.26	0.26	0.14	0.13	0.90	0.90	
<u>Other Costs:</u>								
a) Foreign Training Annex-V.	0.20	0.47	0.47	0.24	0.22	1.60	0.60	1.00
b) Display arrange- ments Annex-IV Page:61.	0.28	0.68	0.68	0.34	0.32	2.30	2.30	
Grand Total:	9.04	21.77	21.77	11.15	10.39	74.12	49.12	25.00

ANNEXURE - 1

S.No.	DESCRIPTION	QTY	RATE	UNIT	AMOUNT
1.	Building			B. F.	Rs. 2,80,93,950/-
2.	Water Supply & Sanitation:				Rs. 60,93,398/-
3.	Electrification;				Rs. 51,96,166
4.	Gas work:				Rs. 10,39,233
5.	Air Conditioning:	10576 Sq. ft.		Sq.Ft.	Rs. 17,73,992
6.	Fittings & Fixtures:				Rs. 34,64,110
7.	Compound Wall:	2000 Sq.ft.		Sq.Ft.	
	Land Scaping:				
	Roads & Paths:				Rs. 13,63,712
8.	Horticulture:				Rs. 6,92,822
Total :-					Rs. 4,77,17,443/-
Say:-					Rs. 47.72 million

COST ESTIMATE

DETAILED COST ESTIMATE

OF

BUILDING CONSTRUCTION AT ISLAMABAD

S.No.	Description:	Qty.	Rate:	Unit	Amount:
Buildings::					
a)	Auditorium	2592	3629 S.ft.	Rs. 230/-	Sq.ft. Rs. 834670/-
	Total 2592 + 40%				
b)	Museum.	48000	S.ft.		
c)	Vestibule	5000	"		
d)	Toilet	5000	"		
e)	Cafeteria	1200	"		
f)	Children Discovery	4400	"		
	Total:	63600 S.ft.	89040 S.ft.	Rs. 180/-	" Rs. 16027200/-
		+ 40 %			
g)	Administration	2740	S.ft.		
h)	D.G. Office	1496	"		
i)	Publication Unit	700	"		
j)	Taxidermy Skeleton and Embalming Unit:	2000	"		
k)	Fossil Preparation and rock cutting Unit:	846	"		
m)	Drawing & Design Section:	2664	"		
n)	Workshop	2160	"		
o)	Photographic Unit	500	"		
p)	Research Section	26280	"		
q)	Fumigating, Drying & Mounting Unit:	1872	"		
	Total:	41258 S.ft.	57761 S.ft.	Rs. 160/-	" Rs. 9241760/-
		+ 40 %			
r)	Library	3960	S.ft.		
s)	Souvenir Shop	300	"		
	Total:	4260 + 1704 = 5964 S.ft.	Rs. 140/-	"	Rs. 834960/-

S.No.	Description:	Qty:	Rate:	Unit:	Amount:
t)	Category IV 1 Nos.	1000 S.ft.			
	Category V 4 Nos.	2424 "			
	Category VI 5 Nos.	2600 "			
	Total:	6024 S.ft.	140/-	S.ft.	Rs. 8,43,360/-
u)	Garrages & Stores:	2600 S.ft.	120/-	S.ft.	Rs. 3,12,000/-
	Total:	1,65,018 S.ft.			Rs. 2,80,93,950/-
					Say : Rs. 2,81,00,000/-

Break up of the cost of construction and fittings

A.			
	i.	Building	Rs. 2,80,93,950/-
	ii.	Water supply and sanitary Installations	Rs. 24,78,237/-
		Total	Rs. 3,05,72,187/-
		Add. 5% Contingencies	Rs. 15,28,609/-
			Rs. 3,21,00,796/-
		Add. 6½% D.C.	Rs. 20,86,552/-
			Rs. 3,41,87,348/-
			Rs. 3,41,87,348/-
B.			
		Electrification	Rs. 46,46,694/-
		Add. 5% Contingencies	Rs. 2,32,335/-
		Total	Rs. 48,79,029/-
		Add. 6½% D.C.	Rs. 3,17,137/-
			Rs. 51,96,166/-
			Rs. 51,96,166/-
C.			
	i.	Roads and Paths	Rs. 6,19,559/-
	ii.	Compound Wall	Rs. 3,00,000/-
	iii.	Land Scaping etc.	Rs. 3,00,000/-
		Total	Rs. 12,19,559/-
		Add 5% Contingencies.	Rs. 60,978/-
		Total	Rs. 12,80,537/-
		Add 6½% D.C.	Rs. 83,235/-
			Rs. 13,63,772/-
			Rs. 13,63,772/-
D.			
		Horticulture.	Rs. 6,19,559/-
		Add 5% Contingencies.	Rs. 30,978/-
			Rs. 6,50,537/-
		Add 6½% D.C.	Rs. 42,285/-
			Rs. 6,92,822/-
			Rs. 6,92,822/-

E.

Fittings and Fixtures		Rs.	38,97,796/-
Add. 5% Contingencies		Rs.	1,54,890/-
	Total	Rs.	32,52,686/-
Add. 6½% D.C.		Rs.	2,11,424/-
	Total	Rs.	34,64,110/-
		Rs.	34,64,110/-
		B.F. Rs.	4,49,04,218/-

F.

Cass Installation		Rs.	9,29,339/-
Add. 5% Contingencies		Rs.	46,467/-
	Total	Rs.	9,75,806/-
Add. 6½% D.C.		Rs.	53,427/-
	Total	Rs.	10,39,233/-
		Rs.	10,39,233/-

G.

Air Conditioning		Rs.	15,86,400/-
Add. 5% Contingencies		Rs.	79,320/-
	Total	Rs.	16,65,720/-
Add. 6½% D.C.		Rs.	1,08,272/-
	Total	Rs.	17,73,992/-
		Rs.	17,73,992/-

Total:- Rs. 4,77,17,443/-

Say:- Rs. 47.72 million

ESTIMATE FOR ANNUAL AND SPECIAL REPAIRCONSTRUCTION OF MUSEUM AT ISLAMABAD

S.No.	Items	Capital Cost	Percentage	Estimated cost of A/R	Percentage	Estimated cost of S/R	Total Rs. Million
A.	Building 1/c W/s and S/I	34187348	3.5%	1196557	1%	341873	1538430
B.	Electrification	5196166	13%	675502	1%	51962	727464
C.	Road, Paths & Compound Wall.	1363772	2.5%	34094	1.8%	24548	58642
D.	Horticulture	692822	6%	-	-	-	41569
E.	F. F.	3464110	-	-	6%	-	207847
F.	Cas.	1039233*	-	-	6%	-	62354
G.	Airconditioning	1773992	-	-	6%	-	106440
4,77,17,443							27,42,746

Say:- 47.72 million

- 45 -

SUMMARY OF AREAS

The areas have been worked out in consultation with PEPAC, Pakistan PWD and two experts from the British Museum of Natural History (Dr. G. C. S. Clarke & D.C. Gosling).

EXHIBITION AREAS:

1.	Exhibit on Man:	6,000	Sq. ft.
2.	Exhibit on Agriculture:	6,000	"
3.	Exhibit on Ecology:	6,000	"
4.	Exhibit on Diversity of life:	24,000	"
5.	Exhibit on Geology:	6,000	"
		<hr/>	
		48,000	Sq. ft.
		<hr/>	

VESTIBULE:

1.	Temporary Exhibits:	5,000	Sq. ft.
2.	Toilets etc.	5,000	"
3.	Children Assembly, Discovery and Teacher's Office:	4,400	"
		<hr/>	
		14,400	Sq. ft.
		<hr/>	

PUBLIC SERVICES:

1.	Auditorium:	2,592	Sq. ft.
2.	Cafeteria:	1,200	"
3.	Souvenir Shop	300	"
		<hr/>	
		4,092	Sq. ft.
		<hr/>	

RESEARCH AREAS:

1.	Research Section:	26,280	Sq. ft.
2.	Fumigating, Drying and Mounting Unit:	1,872	"
3.	Fossil Preparation & Rock Cutting Unit:	846	"
4.	Library:	3,960	"
5.	Taxidermy, Skeleton Embalming Unit:	2,000	"
6.	Photographic Unit:	500	"

7.	Drawing and Designing Unit;	2,664	Sq. ft.
8.	Workshop:	2,160	"
9.	Printing and Publication Unit:	700	"
10.	Director General's Office:	1,496	"
11.	Administration:	2,740	"
		<u>45,218</u>	<u>Sq. ft.</u>

Grand Total: 1,11,710 Sq. ft.

N. B. The space allocated to the galleries has been worked out on the basis of the standard formula that 30% of the space is used by exhibits and the rest 70% for the visitors. The galleries should be beautifully designed and exquisitely finished, provided with balconies 10 ft. wide.

12.	40% Circulation area for verandah, staircases thickness of wall etc.	44,684	Sq. ft.
13.	Garages & Stores.	2,600	"
14.	Ancillary Buildings:	6,024	"
		<u>53,308</u>	<u>Sq. ft.</u>

Grand Total: 1,65,018 Sq. ft.

DETAIL OF AREAS

I. EXHIBITION AREAS:

1.	Exhibit on Man:	6,000	Sq. ft.
2.	Exhibit on Agriculture:	6,000	"
3.	Exhibit on Ecology:	6,000	"
4.	<u>Exhibit on Diversity of Life:</u>		
a)	Mammals	8,400	"
b)	Birds	3,600	"
c)	Reptiles & Amphibians	3,600	"
d)	Fishes	2,400	"
e)	Insects	2,400	"
f)	Other Invertebrates	1,200	"
g)	Higher Plants/Lower Plants	2,400	"
5.	Exhibit on Geology:	6,000	"
<u>Total:-</u>		<u>48,000</u>	<u>Sq. ft.</u>

II. VESTIBULE:

1.	Temporary Exhibits:	5,000	Sq. ft.
2.	Toilets etc.	5,000	"
3.	<u>Children Assembly, Discovery and Teacher's Office:</u>		
a)	Teacher's guide room: 2 x 100	200	Sq. ft.
b)	Class Room: 2 x 600	1,200	"
c)	Discovery Room: 3 x 1000	3,000	"
<u>Total:-</u>		<u>14,400</u>	<u>Sq. ft.</u>

III. PUBLIC SERVICES:

1.	Auditorium 48(15)	36 x 72 (1)	2,592	Sq. ft.
2.	<u>Cafeteria:</u>			
a)	Dining Hall	16 x 48	768	"
b)	Kitchen & Pantry.	18 x 24	432	"
c)	Souvenir Shop:		300	"
<u>Total:-</u>			<u>4,092</u>	<u>Sq. ft.</u>

IV. RESEARCH AREAS:

1.	<u>Research Section:</u>			
a)	Director's Office cum Laboratories;	18 x 24 (3)	1,296	Sq. ft.

b)	Curator's Office cum Laboratories:	18 x 18 (12)	3,888 Sq. ft.
c)	Associate Curators Office cum Laboratories	12 x 12 (24)	3,456 "
d)	Halls for storage of Animals Collections:	36 x 48 (3)	5,184 "
e)	Halls for Storage of Plant material:	36 x 48 (3)	5,184 "
f)	Hall for Storage of Lower Plants:	36 x 48 (1)	1,728 "
g)	Halls for storage of fossils, Rocks, Minerals:	36 x 48 (2)	3,456 "
h)	Halls for storage of Archaeological Collections	36 x 48 (2)	3,456 "
i)	Offices for other Staff:	12 x 12 (16)	2,332 "
			<u>Total: 29,980 Sq. ft.</u>

2. Fumigating Drying
and Mounting Unit:

a)	Fumigation Unit:	12 x 12 (1)	144 Sq. ft.
b)	Drying & Mounting Unit:	24 x 36 (2)	1,728 "
			<u>Total: 1,872 Sq. ft.</u>

3. Fossil Preparation
Rock Cutting Unit:

a)	Fossil Preparation Unit:	18 x 24 (1)	432 Sq. ft.
b)	Rock Cutting Unit:	18 x 24 (1)	432 "
			<u>Total: 864 Sq. ft.</u>

4. Library::

a)	Hall:	36 x 72 (1)	2,592 Sq. ft.
b)	Reading Room:	24 x 36 (1)	864 "
c)	Library Office:	12 x 18 (1)	216 "
d)	Other Offices:	12 x 12 (2)	228 "
			<u>Total: 3,960 Sq. ft.</u>

5. Taxidermy, Skeleton,
and Embalming Unit:

a)	Taxidermy Laboratory	24 x 24 (1)	576 Sq. ft.
b)	Skeleton Preparation Laboratory:	24 x 36 (1)	864 "
c)	Embalming Unit:	12 x 12 (1)	144 "
d)	Cold Storage:	24 x 24 (1)	576 "
			<u>Total: 2,160 Sq. ft.</u>

6.	a)	Office of the Administrative Officer	12 x 12 (1)	144 Sq. ft.
	b)	Office of the Accounts Officer	12 x 12 (1)	144 "
	c)	Office Superintendent:	12 x 8 (1)	96 "
	d)	Office of the P.R (Educational Programme Organizer)	12 x 16 (1)	192 "
	e)	Office of the Budget & Accounts Officer:	12 x 12 (1)	144 "
	f)	Cashier :	10 x 8 (1)	80 "
	g)	Rooms for UDC/Stenos:	12 x 12 (6)	864 "
	h)	Building Maintenance Staff	12 x 12 (6)	864 "
	i)	Books/Services Shop:	12 x 18 (1)	216 "
Total:				2,744 Sq. ft.

7. Drawing & Designing Unit:

a)	Product Designer Room and Artist:	12 x 18 (3)	648 Sq. ft.
b)	Drawing & Designing Room:	24 x 24 (3)	1622 "
c)	Modelling & Casting	24 x 36 (1)	864 "
Total:			3134 Sq. ft.

8. Photographic Unit:

a)	Studio	18 x 12 (1)	216 Sq. ft.
b)	Dark Room	12 x 12 (1)	144 "
c)	Photographer's Room:	12 x 12 (1)	144 "
Total:			504 Sq. ft.

9. 40% Circulation area for verandah, Staircases, thickness of walls etc. Sub- Total: 1,11,710 Sq. ft.
44,684 Sq. ft.

10. Garrages & Stores: 2,600 Sq. ft.

11. Ancillary Building:

Staff Quarter: IV=1 V=4 6,024 Sq. ft.

Grand Total: 1,65,018 Sq. ft.

ANNEXURE - 11

STAFF REQUIREMENTS

(Actual Budget)

<u>Name of Post</u>	<u>Grade</u>	<u>Strength 82-83</u>	<u>83-84</u>	<u>84-85</u>	<u>85-86</u>	<u>86-87</u>	<u>87-88</u>
Director General	22/21	1	1	1	1	1	1
Personal Secretary	16	-	-	1	1	1	1
Personal Assistant	15	1	1	1	1	1	1
Naib Qasid	1	1	1	2	2	2	2
		<u>3</u>	<u>3</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>

BOTANICAL SCIENCES DIVISION

Director	20	1	1	1	1	1	1
Stenographer	15	-	-	1	1	1	1
Naib Qasid	1	2	2	2	2	2	2
		<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>

DEPARTMENT OF HIGHER PLANTS

Curator	19	1	1	1	1	1	1
Associate Curator	18	1	1	2	2	2	2
Research Associate	17	2	2	3	4	4	4
		<u>4</u>	<u>4</u>	<u>6</u>	<u>7</u>	<u>7</u>	<u>7</u>

DEPARTMENT OF LOWER PLANTS

Curator	19	-	-	-	-	1	1
Associate Curator	18	-	1	1	1	2	2
Research Associate	17	2	2	2	3	3	3
		<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>6</u>

DEPARTMENT OF ECONOMIC PLANTS

Curator	19	-	-	-	-	1	1
Associate Curator	18	1	1	1	1	2	2
Research Associate	17	2	2	2	2	2	2
		<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>5</u>	<u>5</u>

DEPARTMENT OF PALAEOBOTANY

Curator	19	-	-	-	-	1	1
Associate Curator	18	1	1	1	1	2	2
Research Associate	17	1	1	1	1	1	1
		<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>4</u>	<u>4</u>

<u>Name of Post</u>	<u>Grade</u>	<u>Strength 82-83</u>	<u>83-84</u>	<u>84-85</u>	<u>85-86</u>	<u>86-87</u>	<u>87-88</u>
<u>SUPPORTING STAFF</u>							
U.D.C.	7	-	-	4	4	4	4
Fumigating/Drying Assistant	7	2	2	2	2	2	2
Collection Incharge	7	1	1	2	3	3	3
Field Assistant	5	4	4	6	7	8	8
Lab. Assistant	1	-	-	6	7	9	9
Naib Qasid	1	1	1	3	3	3	4
		<u>8</u>	<u>8</u>	<u>23</u>	<u>26</u>	<u>29</u>	<u>30</u>

ZOOLOGICAL SCIENCES DIVISION

Director	20	1	1	1	1	1	1
Stenographer	15	-	-	1	1	1	1
Naib Qasid	1	2	2	2	2	2	2
		<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>

DEPARTMENT OF MAMMALOGY

Curator	19	1	1	1	1	1	1
Research Associate	17	1	1	1	1	1	1
		<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>

DEPARTMENT OF ORNITHOLOGY

Associate Curator	18	1	1	1	1	1	1
Research Associate	17	1	1	1	1	1	1
		<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>

DEPARTMENT OF HERPETOLOGY (Including Amphibia)

Associate Curator	18	-	-	-	-	1	1
Research Associate	17	1	1	1	1	2	2
		<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>3</u>

DEPARTMENT OF ICHTHYOLOGY

Curator	19	-	-	-	1	1	1
Associate Curator	18	1	1	1	2	2	2
Research Associate	17	1	1	1	2	2	2
		<u>2</u>	<u>2</u>	<u>2</u>	<u>5</u>	<u>5</u>	<u>5</u>

DEPARTMENT OF ENTOMOLOGY (Insects)

Curator	19	-	-	1	1	1	1
Associate Curator	18	1	1	1	2	3	3
Research Associate	17	2	2	2	2	2	2
		<u>3</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>6</u>

<u>Name of Post</u>	<u>Grade</u>	<u>Strength 82-83</u>	<u>83-84</u>	<u>84-85</u>	<u>85-86</u>	<u>86-87</u>	<u>97-88</u>
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DEPARTMENT OF MINERALOGY AND PETROLOGY
SEDIMENTOLOGY AND GEOCHEMISTRY

Curator	19	1	1	1	1	1	1
Associate Curator	18	2	2	2	2	2	2
Research Associate	17	4	4	4	4	4	4
		<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>

SUPPORTING STAFF

Sr. Fossil Preparator	17	-	-	1	1	1	1
Senior Surveyor	17	-	-	1	1	1	1
Section Cutter	11	2	2	2	2	2	2
Junior Fossil Preparator	11	2	2	2	2	2	2
Collection Incharge	7	2	2	2	3	3	3
L.D.C.	5	1	1	2	2	2	2
Field Assistant	5	4	4	5	6	6	6
Laboratory Attendent	1	-	-	2	2	2	2
Naib Qasid	1	1	1	2	2	2	2
		<u>12</u>	<u>12</u>	<u>19</u>	<u>21</u>	<u>21</u>	<u>21</u>

PUBLIC SERVICES DIVISION (Operation)

Director (Scientist)	19	-	-	-	-	-	1
Stenographer	15	-	-	-	-	-	1
Helper	1	-	-	-	-	-	2
		-	-	-	-	-	<u>4</u>
Operational Manager (3 Dimensional Designer)	19	-	-	-	-	1	1
Helper	1	-	-	-	-	1	1
		-	-	-	-	<u>2</u>	<u>2</u>

EXHIBIT DEVELOPMENT

Exhibit Designer (3 Dimensional Designer)	18	-	1	1	1	1	1
Teacher Scientist	17	-	-	1	1	1	1
Teacher Guides	16	-	-	1	1	1	1
Editor: Copywriter (Scientist)	17	-	-	1	1	1	1
Helper	1	-	-	1	1	1	1
		-	<u>1</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>

<u>Name of Post</u>	<u>Grade</u>	<u>Strength 82-83</u>	<u>83-84</u>	<u>84-85</u>	<u>85-86</u>	<u>86-87</u>	<u>87-</u>
<u>EXHIBIT EXECUTION INSTALLATION & MAINTENANCE</u>							
Incharge Exhibition Installation, Maintenance: Artist/Graphic Designer	18	-	-	1	1	1	1
Artist	17	1	1	2	2	2	2
Graphic Designer	17	-	-	-	-	1	1
Calligrapher	15	-	-	1	1	1	1
Printer	16	1	1	2	2	2	2
Helper	1	1	1	2	2	2	2
		<u>3</u>	<u>3</u>	<u>8</u>	<u>8</u>	<u>9</u>	<u>9</u>
<u>PHOTOGRAPHY</u>							
Incharge Studio	17	-	-	-	1	1	1
Photographer	16	1	1	1	2	2	2
Helper	1	1	1	1	1	1	1
		<u>2</u>	<u>2</u>	<u>2</u>	<u>4</u>	<u>4</u>	<u>4</u>
<u>MODEL MAKING AND TAXIDERMY</u>							
Taxidermist	16/17	1	1	1	1	1	1
Asstt. Taxidermist	7	-	-	1	1	1	1
Modeller	17	-	-	-	-	-	1
Asstt. Modeller	16	1	1	1	1	1	1
		<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>
<u>WORKSHOP</u>							
Mechanical Engg./Civil Electrical	17/18	-	-	1	1	1	1
Foreman	16	-	-	1	1	1	1
Draughtsman	15	-	-	1	1	1	1
Mechanic	14	-	-	1	1	2	2
Carpenter	14	-	-	1	1	1	1
Bench Fitter	11	-	-	1	1	1	1
Turner	11	-	-	1	1	1	1
Welder	11	-	-	1	1	1	1
Mason/Electrition	7	-	-	1	1	1	1
Helper	1	-	-	1	1	1	1
		<u>-</u>	<u>-</u>	<u>10</u>	<u>10</u>	<u>11</u>	<u>11</u>
<u>INSTRUMENTATION</u>							
Technician	14/16	-	1	1	1	2	2
Helper	1/3	1	1	1	1	1	1

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>82-83</u>	<u>83-84</u>	<u>84-85</u>	<u>85-86</u>	<u>86-87</u>	<u>87-88</u>
<u>ADMINISTRATIVE SERVICES (Accounts)</u>								
Accounts Officer	17/18	-	-	1	1	1	1	1
Accountant/A/cy Supdt.	15/16	-	-	1	1	1	1	1
Accounts Assistant	11	-	-	1	1	1	1	1
Cashier	11	1	1	1	1	1	1	1
Stenotypist	12	1	1	1	1	1	1	1
L.D.C.	5	1	1	1	1	1	1	1
		<u>3</u>	<u>3</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>
<u>SECURITY</u>								
Security Officer	14/16	-	-	1	1	1	1	1
Security Guard	1	4	4	6	6	9	9	9
Telephone Operator	7	-	-	2	2	2	2	2
		<u>4</u>	<u>4</u>	<u>9</u>	<u>9</u>	<u>12</u>	<u>12</u>	<u>12</u>
<u>HOUSE KEEPING</u>								
Guides	5	-	-	2	3	4	4	4
Head Mali	5	-	-	1	1	1	1	1
Mali	1	-	-	2	4	5	5	5
Sweeper	1	2	2	4	4	4	6	6
		<u>2</u>	<u>2</u>	<u>9</u>	<u>12</u>	<u>14</u>	<u>16</u>	<u>16</u>
<u>TRANSPORT</u>								
Driver Staff Car	7	-	-	1	1	1	1	1
Driver	4	3	3	4	4	4	4	4
Junior Despatchrider	4	-	-	1	1	1	1	1
		<u>3</u>	<u>3</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>
<u>SOUVENIR SHOP</u>								
Shop Manager	15/16	-	-	1	1	1	1	1
Salesman	7	-	-	1	1	1	1 +	1 +
		<u>-</u>	<u>-</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
<u>STORE/PURCHASE</u>								
Purchase Officer	16	-	-	-	1	1	1	1
Senior Storekeeper	11	-	-	1	1	1	1	1
U.D.C.	7	1	1	1	1	1	1	1
		<u>1</u>	<u>1</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
<u>ADMINISTRATION</u>								
Administrative Officer	17	-	-	-	1	1	1	1
Asstt. Administration	11	1	1	1	1	1	1	1
L.D.C.	5	1	1	1	1	1	1	1
Naib Qasid	1	1	1	1	1	1	1	1
		<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
<u>LIBRARY</u>								
Librarian	17/18	-	-	1	1	1	1	1
Asstt. Librarian	16	-	-	1	1	1	1	1
Cataloguer	11/14	-	-	1	2	2	2	2
L.D.C.	5	-	-	1	1	1	1	1
		<u>-</u>	<u>-</u>	<u>4</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>

STAFF REQUIREMENT

<u>DIRECTOR GENERAL OFFICE</u>	Total Staff:	05
<u>ZOOLOGICAL SCIENCES DIVISION</u>	Total Staff:	58
<u>BOTANICAL SCIENCES DIVISION</u>	Total Staff:	56
<u>EARTH SCIENCES DIVISION</u>	Total Staff:	39
<u>PUBLIC SERVICES DIVISION</u>	Total Staff:	42
<u>ADMINISTRATIVE SERVICES:</u>	Total Staff:	54

Total Museum Staff: 254

TOTAL MUSEUM STAFF: 254

ANNEXURE - IIISUMMARY OF THE EQUIPMENT

II. <u>LABORATORY EQUIPMENT</u>	Total Amount(\$)	Total Amount(Rs.)
A) Botanical Sciences Division	261389.63	33,98,065.35
B) Earth Sciences Division	697403.53	90,66,246.00
C) Zoological Sciences Division	3188514.51	41,40,688.79
Total	1277307.67	1,66,05,000.14
=====		
2. Library Equipment:	Rs. 9,00,000.00	
3. Photographic equipment	Rs. 6,10,000.00	
4. Audiovisual equipment/Aid	Rs. 8,90,000.00	
5. Workshop equipment	Rs. 3,70,000.00	
6. Carpentry	Rs. 55,000.00	
7. Foundry	Rs. 1,20,000.00	
8. Office equipment	Rs. 3,15,000.00	
Total	Rs. 32,60,000.00	
=====		
Grand Total	1,98,65,000.14	

LABORATORY EQUIPMENT (A)
Botanical Sciences Division.

S.No:	Items:	Catalogue/Model No:	Cost in D. M.	Qty:	Total Amount in Rupees:
1.	Carl Zeiss Laboratory Microscope	Karl Kolb/278-320	2839	2	28390.00
	<u>Accessories:</u>				
	i) Wooden Cabinet	-do- /278-323	224	1	1120.00
	ii) Optics for bright field.	-do- /278-332	999	1	4995.00
2.	Carl Zeiss Laboratory Microscope.	-do- /278-510	5563	2	55630.00
	<u>Accessories:</u>				
	i) Septuple nose piece	-do- /278-513	663	1	3315
	ii) Optic for phase contrast, Dark field or Bright field with objective.	-do- /278-547	7640	1	38200.00
3.	Carl Zeiss Laboratory Microscope.	-do- /278-305	2806	1	19030.00
	<u>Accessories:</u>				
	Achromatic objective	-do- /282-000	37	1	185.00
4.	Stereo magnifier on stand.	Karl Kolb/286-160	77100	1	385500.00
	<u>Accessories:</u>				
	i) Reflected light illuminator.	-do- /286-170	13100	1	65500.00
	ii) Eye piece Widefield 10x	-do- /286-182	8700	1	43500.00
	iii) Wooden Cabinet	-do- /286-180	8400	1	42000.00
5.	Routine and Laboratory Microscope Binocular.	-do- /283-030	3069	1	15345.00
6.	<u>Routine and Laboratory Projection Microscope.</u>	-do- /283-070	5780	2	57800.00
7.	Student and Laboratory Microscope Binocular.	-do- /283-100	2903	1	14515.00
8.	<u>Dissecting Microscope.</u>	-do- /286-210	44400	1	222000.00
	<u>Accessories:</u>				
	Magnifier 12 x.	-do- /286-212	4115	2	39000.00
9.	Stereo Scopic Microscope.	-do- /286-300	166400	1	832000.00
	<u>Optinal Accessories:</u>				
	Attachable Mechanical Stage.	-do- /286-312	2000	1	10000.00
10.	Environmental Chamber	Carolina Biol. supp. com. 82-83/66-6800	\$1425.00	1	21375.00

11.	Mark 1 CO ₂ Incubator with electric regulator, humidity device.	Siemssen/0031-010	8445.00	1	42225.00
12.	Autoclave	Karl Kolb/425-800	12963	1	64815.00
13.	Incubator for Tissue Culture Model.	Siemssen/0016-005	5060-EK/CO ₂	1	54050.00
14.	Drying & Sterilizing oven.	" /0017-130	10,810.00	1	8867.50
15.	Water distilling Apparatus (fully automatic)	-do- /394-650	1773.50	1	3820.00
16.	Freeze drying apparatus, Model DELTA - 1 -65C ⁰	-do- /2-3-750	23778.00	1	118890.00
17.	Ditto with water Cold Refregirator.	-do- /263-755	24824	1	124120.00
18.	Refregerated incubator.	-do- /325-150	6146.00	1	30830.00
19.	High speed refrigerated. Centrifuge-Mod, Cryofuge 20-3.	Siemssen/0312-200	22210.00	1	111050.00
20.	UV Radiations Lamp.	-do- /1425-010	1788.00	1	8940.00
21.	Electronic Colony Counter.	-do- /0835-150	2016.00	1	10080.00
22.	Clean Work Bench Mod. 7000(Laminal flow)	-do- /0910-200	5680.00	1	28400.00
23.	Aeration pump for pend,	Griffin /460V	L 35.10	1	660.00
24.	Single stage vaccine Pump.	Siemssen/0235-010	DM 886.00	1	4430.00
25.	Sound Synchrocorder.	Griffin/PxD-810-010-E	£ 112.28	1	2470.16
26.	Digital P H. meter Mod. C C 6 811.	Siemssen/0426-020	DM 1755.00	1	8775.00
27.	Mettler analytical Balance.	Griffin/100-250V.a.ch	950	1	2900.00
28.	Spectrophotometer Mod. PM 7Kt.	Siemssen/0633-010	DM21420	1	107100.00
29.	Biological series Thermostate.	Karl Kolb/451-700	DM19460	1	97300.00
<u>Accessories:</u>					
	i) Thermostate.	-do- /451-710	DM 376	1	1128.00
	ii) Angle Thermostate.	-do- /451-720	DM 40	1	200.00
	iii) Spare Bulb.	-do- /451-725	DM 20	10	200.00
30.	PH. Meter Battery operated transistorized with analogue scale.	17100-075	DM 623	5	15575.00
31.	Combination PH.Electrode.		261.00(per pk)	1	1305.00
32.	Magnatic Stirrer/hot plate.		119.00	6	3570.00
33.	Soil Thermameter.		16.00	5	400.00

34.	Soil Penetrometer.		DM	58.20	5	1455.00
35.	Soil Moisture Tensiometer.		DM	41.70	2	41.00
36.	Soil Moisture Meter.		DM	6.55	10	32.00
37.	Spare part of Soil Moisture Tensiometer (Poron Pot in Water Proof Cover).		DM	7.15	6	64.50
38.	Laboratory Centrifuge.	YSE	DM	18.70	9	187.00
39.	Heating Drying Oven.	YSE	DM	261.00	2	2610.00
40.	Micrometer Disc.	59-4260	E	36.00	10	7920.00
41.	Stage Micrometer.	59-4480	E	55.00	10	12100.00
42.	Auxiliary system	281-229	DM	257.00	2	2570.00
43.	Microscope Viewing Screen.	218-230	DM	1190.00	2	11900.00

Total Amount = Rs. 2791051.00

OTHER ITEMS (BOT. SC. DIV.)

S. No:	Items:	Model/Quality:	Cost	Qty:	Total Amount in (\$)	
44.	Hygrometer.	BYT 470	E	10.90	5	80.1
45.	Exhibition case No.030	YSE 410	E	5.10	20	149.95
46.	Exhibition case No.050	YSE 410	E	8.00	20	235.2
47.	Exhibition Case.	YSE 490	E	16.30	20	479.2
48.	Hot Plat.	541070 sur cot. 125.	E	172.00	6	1517.00
49.	Ranson microscope slide warming table.	67-84-5	E	280.00	5	2058.00
50.	Replacement UV Lamp.	65-4156	E	13.20	5	9702.00
51.	Maximum Minimum Thermometer	74-5530	E	15.55	5	114.30
52.	Pranahar weather instrument.	74-5542	"	25.95	5	190.77
53.	Freezing attachment.	67-3302	"	180.00	5	1323.00
54.	Vasculum(Carolina aluminum)	66-3001	DM.	47.23	2	283.38
55.	Plant Press.	66-3050	DM.	21.00	2	126.00
56.	Plant Press.	Y5B-170-L	"	4.85	1	14.55
57.	Flower Dry Kit.	66-3195	"	7.55	1	22.60
58.	Complete single Hydroponics Unit.	66-6852	"	283.50	1	283.50
59.	Mod room development.	56-8375	"	143.30	1 set	141.30
60.	Root, Stem and Leaf.	56-8700	"	49.50	-do-	49.50
61.	Deciduous Leaf.	56-8809	"	129.50	-do-	129.50
62.	Hot Vascular Bundle.	56-8363	"	113.50	-do-	113.50

63.	Leaf Section.	56-3810	\$	181.81	1 set	181.81
64.	Seed Germination.	56-8888	\$	118.69	-do-	118.69
65.	Monocot Stem.	56-8770	\$	130.30	-do-	130.30
66.	Amaulta Muscaria.	ZKD-860-S	b	26.45	1	38.88
67.	Fern Life Cycle.	ZKD-870-L	b	52.77	1	77.57
68.	Hypogeal Germination.	ZKD-830-E	b	44.30	1	65.12
69.	Epigeal Germination.	ZKD-882-P	b	44.30	1	65.12
70.	Lichens.	ZTL-128-N	b	6.80	1	10.00
71.	Insectivorous Plants.	ZTI-132-T	b	6.80	1	10.00
72.	PEA.	ZTL-208-T	b	6.80	1	10.00
73.	Wheat.	ZTL-212-C	b	10.60	1	15.06
74.	Cotton.	ZTL-216-B	b	10.60	1	15.06
75.	Fern Life Cycle.	ZTL-232-L	b	13.08	1	10.00
76.	The Nitrogen Cycle in Plants.	ZTL-236-K	b	5.11	1	7.5
77.	Chlamydomonas.	ZTM-615-L	b	10.10	1	15.00
78.	Vaucheria, Cladophora and Mucor.	ZTM-625-E	b	15.63	1	23.00
79.	Plant Cell.	ZTL-100-G	b	12.14	1	18.00
80.	The Water Cycle in Plants. 2.	ZTL-112-K	b	8.02	1	12.00
81.	Monohybrid Cross.	17-6800	\$	10.00	1	10.00
82.	Stemonitis Sporangia.	PB-178	\$	4.25	1	4.25
83.	Anthoceros Sporophytes.	PB-301	\$	3.00	1	3.00
84.	Sundew, Drosera.	PB-500	\$	2.00	1	2.00
85.	Bladderwort. Utricularia.	PB-626	\$	3.50	1	3.50
86.	Chara.	23-7430	\$	4.70	1	4.70
87.	Ascophyllum	23-7650	\$	4.70	1	4.70
88.	Polysiphonia.	23-8000	\$	4.70	1	4.70
89.	Root, Stem, and Leaf.	56-8700	\$	49.50	1	49.50
90.	Dicot Stem, herbaceous.	56-56	\$	96.96	1	96.96
91.	Monocot Stem.	56-8770	\$	130.30	1	130.30
92.	Deciduous Leaf.	56-3809	\$	129.50	1	129.50

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93.	Leaf Section.	56-8810	\$	181.81	1	181.81
94.	Typical Dicot Flower.	56-8820	\$	154.26	1	154.26
95.	Pine Seed Germination.	56-3336	\$	109.55	1	109.55
96.	New Metabolism Structure and Regulation.	48-1304	\$	73.50	1	73.50
97.	New Plant Growth Regulators Set.	48-1310	\$	75.45	1	75.45
98.	The Ecosystem II. Energy Set.	48-1338	\$	73.50	1	73.50
99.	Pond Weed Web Set.	48-1349	\$	23.40	1	23.40
100.	The Environment Shapes the Forest Set.	48-1375	\$	74.26	1	74.26
101.	The Life of a Dead Tree.	48-1376	\$	23.80	1	23.80
102.	Succession Communities Change over Time Set.	48-1385-A	\$	42.70	1	42.70
103.	Supermarket Botany.	48-2495	\$	71.88	1	71.88
104.	Economic Botany Set.	48-2510	\$	61.88	1	61.88
105.	Plants of Modern Medicine.	48-2512	\$	33.95	1	33.95
106.	Introduction to the Algae Set.	48-2575	\$	71.88	1	71.88
107.	Bacteria Set.	48-2640	\$	11.90	1	11.90
108.	Mushrooms and their Allies Set.	48-2696	\$	16.66	1	16.66
109.	Lichen Set.	48-2700	\$	7.89	1	7.89
110.	The Bryophytes and Ferns Set.	48-2705	\$	83.50	1	83.50
111.	The Gymnosperms.	48-2773	\$	83.50	1	83.50
112.	Inflorescence Set.	48-2871	\$	17.85	1	17.75
113.	Plant Pollination: Agents and Adaptations.	48-2874	\$	46.80	1	46.80
114.	Plant Fossils Set.	48-3041	\$	19.04	1	19.04
115.	Erosion by Water and Ice Set.	48-3087	\$	23.30	1	23.30
116.	Cells of Plants: Structure and Function.	52-1612	\$	27.45	1	27.45
117.	Competition: The Struggle for survival.	52-3412	\$	38.50	1	38.50
118.	Freshwater: The Aquatic Environment.	52-3432	\$	38.50	1	38.50
119.	Our Polluted world: The price of progress.	52-3440	\$	32.00	1	32.00

120.	Soil: Its Meaning for Man.	52-3450	\$	67.50	1	67.50
121.	The Life of the Desert.	52-3483	\$	30.75	1	30.75
122.	Plant Classification: Diversity in common habitats.		\$	38.50	1	38.50
123.	Life line.	57-1960	\$	4.90	1	4.90
124.	History of Life.	57-1962	\$	24.95	1	24.95
125.	Meadows.	57-3856	\$	7.85	1	7.85
126.	Waste grounds & Weeds.	57-3858	\$	7.85	1	7.85
127.	Hedgegrows	57-3860	\$	7.85	1	7.85
128.	Deciduous wood lands.	57-3862	\$	7.85	1	7.85
129.	Salt Marshes	57-3866	\$	7.85	1	7.85
130.	Mountain Plants.	57-3870	\$	7.85	1	7.85
131.	Freshwater Plants.	57-3872	\$	7.85	1	7.85
132.	Plant Cell.	57-8000	\$	24.95	1	24.95
133.	Medicinal Plants.	57-8015	\$	7.87	1	7.87
134.	Plant Hallucinogens.	57-8017	\$	7.85	1	7.85
135.	North American Mushrooms	57-8370	\$	7.85	1	7.85
136.	Pine Life Cycle.	57-8672	\$	8.75	1	8.75
137.	Flowers of the garden.	57-8702	\$	7.85	1	7.85
138.	World of flowers.	57-8820	\$	4.75	1	4.75
139.	Wild flowers of the Desert.	57-8825	\$	7.85	1	7.85
140.	Wild flowers of the Southern Pinelands.	57-8826	\$	7.85	1	7.85
141.	Spring Wood land Wild flowers.	57-27	\$	7.85	1	7.85
142.	Wild flowers of the Alpine Rocky Mountains.	57-8828	\$	7.85	1	7.85
143.	Corn Life Cycle.	57-8050	\$	8.75	1	8.75
144.	Lily Life Cycle.	57-8972	\$	8.75	1	8.75
145.	Botanical Set of 20 charts.	57-1514	\$	445.85	1 set	445.85
146.	Wild Flowers of North America.	57-1530	\$	30.40	1 set	30.40
147.	Biological Hazards.	57-2040	\$	19.60	-do-	19.60
148.	Biology 1: Diffusion, Photosynthesis, the Allmen-try canals and Digestion.	52-1014	\$	78.50	-do-	78.50

149.	Science and Society: An Inquiry into technology and Valuss.	52-1350	\$	258.50	1 set.	258.50
150.	Jean George Explores Natural Science.	52-1350	\$	39.00	-do-	139.00
151.	Cities of Nature: The Organization of Eco-system.	52-3402	\$	38.50	-do-	38.50
152.	The environment shapes the forest.	52-3406	\$	30.75	-do-	30.75
153.	Marine Biomass.	54-3425	\$	205.50	-do-	205.50
154.	Fresh water: the aquatic environment.	52-3432	\$	38.50	-do-	38.50
155.	Cycle of the Biosphere.	52-3473	\$	38.50	-do-	38.50
156.	The Forest, our largest.	52-3478	\$	30.75	-do-	30.75
157.	Pyrex Glass Graduated Cylinders 1000 ml.		L	3.77	200	1108.4
			L	4.06	200	1193.6
			L	4.27	200	1255.3
			L	6.72	200	1975.6
			L	9.21	200	2707.7
			L	12.10	200	3557.4
			L	15.77	200	4636.4
158.	Round Bottom Flasks (Pyrex Glass).	FHB-270	L	1.13	60	100.00
			L	1.27	60	112.00
			L	1.66	60	146.5
			L	2.25	60	199.00
			L	4.12	60	363.00
159.	Flat Bottom Flasks. (Pyrex Glass),	FHB-330	L	1.24	60	109.4
			L	1.27	60	112.1
160.	Bottles, Glass-stoppered Reagent.	BTF-250	L	0.89	each 120	157.00
			L	1.37	120	241.6
			L	1.05	120	185.2
			L	1.24	120	218.7
			L	1.37	120	241.6
			L	1.98	120	349.2
161.	Plant Classification: Diversity Common Habitat.	52-8020 Biol. supp. com. 82-83.	\$	38.50	1 set.	38.50
162.	Classification of Lower Plants.	52-8198	\$	27.45	1 set.	37.45
163.	Introduction to the Algae.	52-8200	\$	30.75	1 set.	30.75

TOTAL AMOUNT: = \$ 40381.00

" " = Rs. 605715.00

GRAND TOTAL: = Rs. 3396766.00

EARTH SCIENCES DIVISION

S. No.	LABORATORY EQUIPMENT	Model/ Quality	Cost	Qty	Total Amount
		Griffin			
1.	Mettler Analytical Balance	BFF-2200	£950.00	2	\$1900.00
2.	Water Bath.	BJE-500	£101.50	1	\$195.19
3.	Griffin Centrifugal Machine	CFB-500	£117.00	1	\$225.00
4.	Centrifuge Tubes.	GFT-340N	£58.30	10	\$112.12
5.	Hot Plate	HPS-600S	£23.70	3	\$70.10
6.	Muffel Furnace. 1000 ^o c	SL-300-010y	\$2272.72	1	\$2272.72
7.	Muffel Furnace 1200 ^o c	SL-300-010y	\$2272.72	1	\$2272.72
8.	Oven 100 ^o c (Large)	OVH-300	£715.00	1	\$1375.00
9.	Oven 1400 ^o c (Large)	OVH-300	£715.00	1	\$1375.00
10.	Digital PH meter Bench Model	PHJ-5200	£212.00	2	\$424.00
11.	Brunton Compass.	SZB-590G	£116.00	3	\$348.00
12.	Tape Measures.	RUL-690	£19.40	3	\$58.20
13.	Bunsen Burners	BYB-200J	£26.88	12	\$322.56
14.	Magnifier (Gerrand variangle)	NAR-450H	£43.60	6	\$261.60
15.	Thermometer 0-100 ^o c	AUX904-950G	£14.70	6	\$88.20
	0-360 ^o c	AUX904-950G	£14.70	6	\$88.20
		<u>Carolina Bio 82-83</u>			
16.	Microscope slides	63-1920	£1.75	1000	\$33653.85
17.	Plastic slide Box	63-4220	£5.90	1000	\$11346.15
18.	Slide Holder	63-5395	£2.75	1000	\$528.85
18.	Stop watch	Bio supp. Co	\$83.00	2	\$166.00
19.	Binocular 7 x 50	65-2585	\$83.00	6	\$498.00
20.	Beakers 50 ml	BNB-380	£4.90	100 pks	\$942.31
	100 ml	BNB-380	£4.90	"	\$942.31
	250 ml	BNB-380	£5.15	"	\$990.38
	500 ml	BNB-380	£6.45	"	\$1240.38
	1000 ml	BNB-380	£6.45	"	\$1240.38
21.	Burettes 50cc	BWF-260	£6.57	12	\$152.00
	75cc	"	£6.14	12	\$142.05
22.	Conical Flask. 50 ml	FHB-480	£0.94	60	\$108.46
	100 ml	"	£0.83	60	\$95.77
	250 ml	"	£0.98	60	\$113.08
	500 ml	"	£1.16	30	\$67.00
	1000 ml	"	£2.06	10	\$39.71

From Pre-page.

23. Funnels (Pyrex glass) 100mm	EPH-360	L1.62	50	\$156.16
150mm	"	L1.93	10	\$38.17
200mm	"	L2.39	10	\$46.07
250mm	"	L4.20	10	\$80.97
24. Pipettes 2-10				
5-20				
10-50				
25-50				
50-20				
100-20	PMC-200	L0.64	600	\$738.46
25. Test Tubes (50 x 6 mm)		L0.64	500	\$616.96
50 x 10mm		L0.83	500	\$800.12
75 x 10mm		L0.95	500	\$915.80
75 x 12 mm		L1.31	500	\$1262.84
100 x 12mm		L1.36	500	\$1311.04
125 x 12mm		L0.81	500	\$780.84
125 x 16mm		L0.81	200	\$312.33
150 x 25mm		L0.97	200	\$374.03
26. Petri dishes. (9cm in diameter)	PMC-150	L24.00	40	\$461.54
27. Test Tubes. (p.p. of 32)	TES-200	L3.20	20	\$113.46
28. Geological Hammer Type 050-T	GRK-800D	L99.55	6	\$231.00
29. Hardness Pencil set	GRK-800D	L26.00	3	\$150.38
30. Jacob staff.	-	L5.00	2	\$23.00
31. Abneys Level	-	L63.55	2	\$300.00
32. Ultrasonic Cleaning Bath	70-5800	\$400.00	1	\$400.00
33. Model Analysis point counter	-	\$1000.00	1	\$1000.00
34. Geiger Counter	1242-010	DM222.80	1	\$80.00
35. Universal Rotatory stage.	-	\$1000.00	1	\$1000.00
36. Zeiss Atomic Absorption spectrometer FMD 4 with accessories	0639-110	DM66111.65	1	\$2542
37. Atomic Absorption Lamps		L1138	8	\$2032
38. Refractometer.	-	L1051	1	\$1876
39. Sieve Shaker	-	\$255.50	1	\$255.50
40. Astm Sieves Complete set	-	\$1012.80	1	\$2025.60
41. X-ray Fluorescence spectrometer.	-	\$107142	1	\$107142
42. DTA & TGA Equipment	-	DM148810	1	\$58461
43. Theodolite.	-	DM12610	2	\$1801
44A. Magnetic Separator.	-	DM3350	1	\$1316
44B. Scanning Electron Microscope	-	\$115384	1	\$115384

From Pre-page.

45. Tema Disc Mill		\$3846	1	\$3846
46. Pelleting Mould.		\$1538	1	\$1538
47. Ammonia Duplicating Machine		\$1538	1	\$1538
48. Xerox Photocopier. (Technical for maps reduction etc).		\$7692	1	\$7692
49. Water De-Ionizer.		\$1538	1	\$1538
50. Flouroscope.		\$3846	1	\$3846
51. Research optical Microcope Carl Zeiss. (for sophisticated work)		DM22116,5	1	\$8506.34
52. Optical Microscope Carl Zeiss (ordinary)		DM14892	4	\$22910.76
53. Radiometric dating Instrument		\$55651.03	1	\$55651.03
54. Hydraulic press.		\$3846.15	1	\$3846.15
55. Cartographic table for en- larging and reducing maps (Map construction).		\$1538.46	1	\$1538.46
56. Philips X-Ray diffractometer with automatic heating arrange- ments, automatic sample changer and computerised chart recorder		\$153846.15	1	\$153846.15
57. Microscope for Palaeontology wiet M.S.		\$1153.84	2	\$2307.69
58. Automatic thin section cutting Machine with accessories.		\$29583.58	1	\$29583.58
59. Automatic lapping & polishing machine with spare parts.		L700.00	1	\$1346.15
60. Morter-Pestle-agate MWA-580 Type-050-V (Medium)		L44.15	1	\$84.90
61. Morter-Pestle-agate MWA-580 Type-090-J (Large)		L132.40	1	\$254.61
62. Grain size Analysis apparatus (fluid method)		\$1441.45	1	\$1441.45

Total:

\$668997.91

ZOOLOGICAL SCIENCES DIVISION (C)L I S T O F E Q U I P M E N T S

<u>S.No.</u>	<u>Item</u>	<u>Model/Quality</u> (Siemens & Co)	<u>Cost</u>
1.	Universal large Research Microscope, Binocular, for transmitted light/Bright field examination.	0568-210	22790 DM
	<u>Accessories</u>		
	a) Luminar head with thread for T2 Adapter.	0568-300	1228 DM
	b) Luminar 16 mm (1:2.5) with iris diaphragm.	0568-310	996 DM
	c) Luminar, 25 mm (1:3.5) with iris diaphragm.	0568-320	749.5 DM
	d) Luminar 40 mm (1:4.5) with iris diaphragm.	0568-330	644 DM
	e) Holder for luminars.	0568-350	58.65 DM
	f) Luminar 63 mm (1:4.5) with iris diaphragm.	0568-360	686 DM
	g) Each one spectacle glass condenser for above luminars with condenser holder Z	0568-370	169.6 DM
	h) Attachment lens for Luminar 63 mm.	0568-380	94.35 DM
	i) Illumination lens BL	0568-390	77.8 DM
2.	Zeiss Laboratory Microscope for histological/ cytological laboratory (Standard 16 microscope system)	0568-310	9550 DM
	<u>Accessories.</u>		
	a) 0.8 wide field system screwed into tube.	0564-320	446.3 DM
	b) M-24/M-30 Adapter Ring.	0564-325	25.5 DM
	c) 12.5 X Kpl eye piece W-Br (2)	0564-330	811 DM
3.	Prison Binocular 15 X 60	0594- 55	593 DM
	<u>Accessories.</u>		
	a) Clamp with thread	0594-020	24.95 DM
	b) Photo Tripod	0594-022	81 DM
	c) Pair of Sun filter	0594-024	21.85 DM
	d) Pair of Yellow filters	0594-026	17.15 DM
	e) Rubber eyecups with shade	0594-028	12.5 DM
	f) Rain Protecting cap	0594-030	10.9 DM
	g) Leather flap	0594-032	2.8 DM

4.	Prism Binocular 10 X 40 WW (Wide-Range for use in mountain and sea side).	0594-010	550 DM
5.	Carl Zeiss High Resolution Electron Microscope. Model EM 10B	0613-100	4,30,950 DM
	<u>Accessories.</u>		
	a) Anticontamination device 1/coolent, Duration about five hours.	0613-200	4084 DM
	b) Focusing Aid and Beam Tilt.	0613-210	8240 DM
	c) Monostable.	0613-220	382 DM
	d) Emergency Power supply	0613-230	3,31,800 DM
	e) High resolution Goniometer	0613-300	32150 DM
	f) Equipment for specimen manipulation	0614-010	9800 DM
	g) 35 mm camera equipment	0614-020	9560 DM
	h) Rewinding Device	0614-120	416.40 DM
	i) Annular Condenser aperture	0614-120	203 DM
	j) Format dividin unit	0614-130	3822 DM
	k) Adapter for image intensifier	0614-210	1,459.50 DM
6.	Mettler Electronic Analytical Balance Model HL-52	03 J	8405 DM
7.	High speed Refrigerated Centrifuge Model Cryofuge 20-1	0312-200	22210 DM
	<u>Accessories.</u>		
	a) Angled Roters	0313-000	6145 DM
		0313-002	6010 DM
		0313-004	5375 DM
		0313-006	3443 DM
		0313-008	3483 DM
		0311-010	3983 DM
8.	Digital pH meter, Model CG811	0426-020	1745 DM
	<u>Accessories</u>		
	Complete Set	-426-025	1953 DM
9.	Water Distillation Apparatus	0220-205	110 DM

Accessories

	Narrow Neck Reagent Bottle (5 litre)	0220-220	61.30 DM
	Plastic Bottle (10 litre)	0220-222	42.35 DM
	Bottle of Detergent (1 litre)	0220-224	17.35 DM
10.	Magnetic stirrer (Comb l-mag) Model No.RET	-150-130	447.80 DM
11.	Stretching table	0100-102	583 DM
12.	Water Bath Model WB-24	0100-150	547 DM
13.	Rapid Dryer for laboratory glassware	0076-100	1001.50 DM
14.	Built in glass Drying cabinet with air circulation.	0033-110	2310 DM

Accessories.

	a) Over temperature security	0033-112	248.80 DM
	b) Regulator for low temperature	0033-114	283.20 DM
	c) Timer	0033-116	150 DM
15.	Parrafin Embedding Cabinet	0033-200	2033 DM
16.	35 mm Camera kit for photomicrography	0587-120	873 DM
17.	Recoding Camera with built in reticles	0701-015	2525 DM
18.	Drawing Apparatus Camera lucida.	281-225	2089 DM
19.	Mark I Co ₂ Incubator.	70-1370	4900 DM

TOTAL :- 6,68,608.06 DM

33,43,040.20 Rupees

ZOOLOGICAL SCIENCES DIVISION

Sr. No.	Item	Model/ Quality	Cost	Qty	Total Amount.
<u>Carolina Cat 53</u>					
1.	Collection Trays & Equipment	65-4112	\$ 11.70	100	\$ 1170.00
2.	Insect aspirator set	65-4136	\$ 8.00	20	\$ 160.00
3.	Insect Pins size 000	65-4300	\$ 25.75	100	\$ 2575.00
			10 Pkt.	Pkt.	
4.	Insect Pins size 00	65-4301	\$ 25.75	100	\$ 2575.00
			10 Pkt.	Pkt.	
5.	Insect Pins size 0	65-4302	\$25.75	100	\$ 2575.00
			10 Pkts.	Pkt.	
6.	Insect Pins Size-2	65-4304	\$ 25.75	100	\$ 2575.00
			10 Pkts.	Pkt	
7.	Insect Pins Size-3	65-4305	\$ 25.75	100	\$ 2575.00
			10 Pkts.	Pkt.	
8.	Insect Pins size-0-20	65-4380	\$ 6.23	100	\$ 623.00
9.	Advanced Entomology Kit	65-4005	\$52.00	1	\$ 52.00
10.	UV insect trap	65-4155	\$94.95	5	\$ 474.75
11.	Replacement UV lamp	65-4156	\$ 13.20	5	\$ 66.00
12.	Lepidopteran wing venetion Kit	P-9L	\$ 19.30	1	\$ 1.30
13.	Maximum Minimum Thermometer	74-5530	\$ 19.95	6	\$ 119.70
14.	Pine Burstweaether Instrument	74-5542	\$ 29.95	1	\$ 29.95
15.	Wind speed & wind chill meter	74-5562	\$ 19.95	1	\$ 19.95
16.	Wind speed & Direction. indicator	74-5572	\$350.00	1	\$ 350.00
17.	Safety Pocket Compass	74-5601	\$ 5.29	1	\$ 5.29
18.	Portable Insect Trap	<u>Griffin Cat</u> MAH-580-V	L30.00	2	£ 60.00
19.	Pocket environmental Compara- tor:	YRC-420-A	L 50.70	2	£ 101.40
20.	Magnifier	YRT-380-D	L 44.15		£ 264.90
21.	Magnifiers	MAR-330-G	L/ 11.60	1	£ 11.80
22.	-do-	MAH-340	L 46.45	1	£ 46.45
23.	-do-	MAH-500	L 2.35	1	£ 2.35
24.	Butterfly net pocket size	YRF-280R	L 5.70	20	£ 114.00
25.	Beating trays	YRF-370-M	L 13.25	10	£ 132.50
26.	Sweepnets	" -330-B	L 26.65	20	£ 533.00
27.	Entomological Forceps	DKC-590-T	L 3.60	20	£ 72.00
28.	forceps	DKS-620-X	L 3.60	20	£ 72.00
29.	Hygrometer	HYT-470	L 10.90	2	21.80
30.	Zooplankton Net	YRK-520	L 17.90	6	£ 107.40
31.	Dredge Net	YRK-650-V	L 12.85	2	£ 25.70
32.	Tullgren Funnel	YRT-220-E	L 49.00	2	£ 98.00
33.	Exhibition case No.030	YSE-410	L 5.10	2	£ 10.20
34.	Exhibition case No.050	YSE-410	L 8.00	2	£ 16.00

Griffin Cat

35.	Exhibition case	YSE-490-M	L	16.30	2	£	32.60
36.	Quadrat Frame	YRC-580-T	L	16.80	1	£	16.80
37.	Clear Resin Casting kit.	PPU-300-S	L	16.25	10	£	162.50
38.	Cell mount kit	YSF-170-E	L	10.00	10	£	100.00
39.	Humidistat	<u>Surgen Welch Cat</u> S-41480					
40.	Hot plat	S-41070	L	172.00	2	£	344.00
41.	Kilner jar (Storage Bottles)	<u>Griffin Cat</u> BTF-730	L	6.28	500	£	3140.00
42.	Ranson microscope slide warming table:	<u>Carolina Cat 53</u> 62-8475		280.00	4	\$	1120.00
43.	Double wall Embedding Oven	82-8509		\$ 1820.00	2	\$	3640.00
44.	Microscope slides	63-1920		\$ 1.75	100Pkt.	\$	1750.00
45.	Plastic slide Box	63-4220		\$ 5.90	100	\$	590.00
46.	Slide Holder	63-4395		\$ 2.75	100	\$	275.00
47.	Rotary Microtome:	62-8174		\$ 2925.00	4	\$	11700.00
48.	Plastic Microtome Blocks	62-8210		\$5.00	12piece 4doz.	\$	20.00
49.	" "	62-8211		\$5.00	12piece 4doz.	\$	20.00
50.	" "	62-8212		\$5.00	12piece 4doz	\$	20.00
51.	Object Disc 7/8"	62-8238		\$8.10	4	\$	32.40
52.	" " 1½"	62-8244		\$9.00	4	\$	36.00
53.	Time clamp	62-8270		\$ 152.00	4	\$	608.00
54.	Tissue Processing Cassette Clamp.	62-8274		\$ 149.00	4	\$	596.00
55.	Freezing attachment:	62-8302		\$ 185.00	4	\$	740.00
56.	Knife	62-8322		\$ 85.00	10	\$	850.00
57.	Knife handle	62-8326		\$ 27.00	5	\$	135.00
58.	Knife back	62-8332		\$ 12.15	5	\$	60.75
59.	Lo-Boy tissue Float Bath	62-8450		\$ 195.00	2	\$	390.00
60.	Wide field eyepiece	59-3640		\$ 35.00	2	\$	70.00
61.	Micrometer disc	59-4260		\$ 34.00	2	\$	68.00
62.	Stage Micrometer	59-4480		\$ 55.00	2	\$	110.00
63.	Opaque Contrast plate	59-4790		\$ 12.00	2	\$	48.00
64.	Transillumination Base	59-4795		\$ 79.00	2	\$	158.00
65.	Relaxing Jar	65-4070		\$ 2.00	10	\$	20.00
66.	Relaxing Fluid	65-4072		\$ 22.10	10	\$	21.00
67.	Insect killing Jars (Cyanide) (4 oz).	65-4035		\$ 2.20	10	\$	22.00
68.	Insect Killing Jars (Cyanide) (8 oz)	65-4037		\$ 2.50	10	\$	25.00
69.	Insect Killing Jar (Ethyl Acetate, 4 oz)	65-4050		\$ 13.20	10	\$	132.00
70.	- do - (8 oz)	65-4052		\$ 13.80	10	\$	138.00
71.	Grass-hopper	56-4550		\$ 77.13	1	\$	77.13

Carolina Cat 53

72.	butterfly Head	6-4540	\$ 182.00	1	\$ 182.00
73.	Grasshopper	56-4548	\$ 48.50	1	\$ 48.50
74.	Grasshopper	56-4556	\$ 274.75	1	\$ 274.75
75.	Grasshopper	56-4555	\$ 136.36	1	\$ 136.36
76.	Honey Bee	56-4560	\$ 292.60	1	\$ 292.60
77.	House Fly Head	56-4570	\$ 126.00	1	\$ 126.00
78.	Mosquito Head	56-4580	\$ 189.50	1	\$ 189.50
79.	Mosquito	56-4582	\$ 721.10	1	\$ 721.10
80.	Cockroach Head	56-4585	\$ 177.50	1	\$ 177.50
81.	An introduction to Insects and their relatives:	52-44001	\$ 42.00	1	\$ 42.00
82.	The Monarch Butterfly	52-416	\$ 32.10	1	\$ 32.10
83.	Honey Bee Anatomy and life cycle:	52-4596	\$ 30.75	1	\$ 30.75
84.	Animals Animals	52-1010	\$ 145.00	1	\$ 145.00
85.	Adaptation life from & land form	52-2605	\$ 38.50	1	\$ 38.50
86.	Fresh Water: the aquatic Environment	52-3412	\$ 38.50	1	\$ 38.50
87.	Colonial Birds.	52-5110	\$ 63.45	1	\$ 63.45
88.	Insect microscope stage	65-4395	\$ 21.40	6	\$ 128.40
89.	Insect point punch	65-4400	\$ 26.40	6	\$ 158.40
90.	Riker specimen mounts	65-4530	\$ 17.00	12 Doz	\$ 204.00
91.	" "	65-4530	\$ 19.60	"	\$ 235.20
92.	" "	65-4534	\$ 22.00	"	\$ 264.00
93.	" "	65-4536	\$ 28.40	"	\$ 340.80
94.	" "	65-4538	\$ 35.60	"	\$ 427.20
95.	" "	65-4540	\$ 56.80	"	\$ 681.60
96.	" "	65-4512	\$ 124.60	"	\$ 1495.20
97.	Cornell Insect Cabinets	65-4810	\$ 375.35	1	\$ 375.35
98.	Cornell Insect Drawer	65-4825	\$ 43.35	1	\$ 43.35
99.	Unit Pinning Trays	65-4830	\$ 12.60	10	\$ 126.00
100.	" "	65-4832	\$ 10.00	10	\$ 100.00
101.	" "	65-4834	\$ 8.80	10	\$ 88.00
102.	" "	65-4835	\$ 8.40	10	\$ 84.00
103.	Portable data memory	69-9660	\$ 1084.95	2	\$ 2169.90
104.	Magnifier	Griffith Cat MAR-850V	\$ 30.00	2	\$ 60.00
105.	ocket Environmental Comparator	YRC-470A	\$ 50.70	2	\$ 101.40

Total

\$ = 49,271.58 Rs. 6,40,530.54

\$ = 5,484.60 Rs. 1,37,115.00

Total Rs. 7,77,645.54

GRAND TOTAL: Rs. 41,20,685.7

<u>S.No: Items:</u>	<u>Qty:</u>	<u>Foreign Exchange Cost per Item:-</u>	<u>Total Amount (\$):</u>
---------------------	-------------	-----------------------------------------	---------------------------

2. LIBRARY EQUIPMENT:

- | | | | |
|------------------------------------------------------------------------------------------------------------------------------------|---|--|----------------|
| 1) Printing Machine for producing educational material for school children and general public and material for short term courses. | | | Rs. 6,00,000/- |
| 2) Typewriter Composer IBM. | 1 | | Rs. 2,00,000/- |
| 3) Microfish films of published literature. | | | Rs. 1,00,000/- |

Total:Rs. 9,00,000/-

3. PHOTOGRAPHIC EQUIPMENT:

- | | | | |
|--------------------------------------------------------------------------------------------------------------|---|--|----------------|
| 1) Movie Camera with accessories 16 mm. | 1 | | Rs. 3,00,000/- |
| 2) Sound system for recording birds & animals sound and installation of reproduction system in the Exhibits. | | | Rs. 2,00,000/- |
| 3) 35 m.m. Camera with (Hasleblad) accessories close up & telephotolenses. | | | Rs. 1,00,000/- |
| 4) Polorod Camera. | 3 | | Rs. 10,000/- |

Total: Rs. 6,10,000/-

4. AUDIOVISUAL EQUIPMENT/AID:

- | | | | |
|------------------------------------------|--|--|----------------|
| 1) Micro computer with graphic software. | | | Rs. 4,00,000/- |
|------------------------------------------|--|--|----------------|

VIDEO EQUIPMENT:

- | | | | |
|----------------------------------------|---|--|----------------|
| i) Camera. | 1 | | |
| ii) Recorder | 1 | | Rs. 1,00,000/- |
| iii) Display. | 1 | | |
| v) Sound synchronized unit. | 2 | | 80,000/- |
| iv) Screen. | | | Rs. 10,000/- |
| iiiv) Film Projector with sound 16 mm. | 1 | | Rs. 3,00,000/- |

Total: Rs. 8,90,000/-

5. WORKSHOP EQUIPMENT:

- | | | | |
|-----------------------------|--|--|----------------|
| 1) Lathe Machine (7). | | | Rs. 90,000/- |
| 2) Shaker. | | | Rs. 50,000/- |
| 3) Electric Welding Plant. | | | Rs. 35,000/- |
| 4) Assorted Workshop tools. | | | Rs. 20,000/- |
| 5) Air Compressor. | | | Rs. 15,000/- |
| 6) Gas Welding Plant. | | | Rs. 10,000/- |
| 7) Drilling Machine. | | | Rs. 1,50,000/- |

Total: Rs. 3,70,000/-

6. CARRENTERY:

1) Assorted tools.		Rs.	35,000/-
2) Planning Machine.		Rs.	10,000/-
3) Circular Saw.		Rs.	10,000/-
		Total: Rs.	35,000/-

7. FOUNDARY:

1) Furnaces, Air-compressor, burners etc.		Rs.	50,000/-
2) Stainless steel & other allovs.		Rs.	50,000/-
3) Craphite Crucible.		Rs.	20,000/-
		Total: Rs.	1,20,000/-

8. OFFICE EQUIPMENT:

1) Fire fighting Equipment for laboratory and building.		Rs.	2,00,000/-
2) Water Coolers.	4	Rs.	60,000/-
3) Electric Typewriter.	1	Rs.	
4) Ordinary Typewriters.	3	Rs.	25,000/-
		Total; Rs.	3,15,000/-

GRAND TOTAL: Rs. 1,98,65,000.14

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ANNEXURE - IV

III. BOOKS AND JOURNALS: Rs. 16,00,000/-

IV. TRANSPORT:

1. Jeeps for field work (One for each discipline)	3	Rs. 4,80,000/-
2. Wagons for staff.	2	Rs. 3,00,000/-
3. Suzuki Pick up for stores.	2	Rs. 1,20,000/-
Total:		Rs. 9,00,000/-

V. OTHER COSTS:

1. Foreign Training. Detail on Annexure-IV.	Rs. 14,00,000/-
2. Foreign Consultants.	Rs. 2,00,000/-
Total:	Rs. 16,00,000/- =====

VI. SHOW CASES FOR EXHIBITS CABINET FOR
STORING TYPE SPECIMENS AND DISPLAY
ARRANGEMENT FOR SKELETONS ANIMALS ETC.

1. Large Built in & other show cases for exhibits of three division.		
2. Almirahs (office).		
3. Storage Cabinet for Galleries (type specimens for three divs.)		Rs. 23,00,000/-
4. Laboratories & Research Rooms.		
5. Library Tables & Racks for books.		
6. Furniture for Souvenir Shop.		
Total		Rs. 23,00,000/- =====

P.M.N.II. for a period of 5 years. 50% of the staff would be trained at the expenses of the Government of Pakistan and the remaining 50% would be trained through international co-operation.

ANNEXURE -VI

SUMMARY OF SALARY STATEMENT FOR STAFF

Name of Division/ Branch/Section:	Pay/ Allowances:	1983-84:	1984-85:	1985-86:	1986-87:	1987-88:	Total:
Director General Office.	Pay	66480	88920	93480	98040	102700	449620
	Allowances	60684	77100	77880	78504	79206	373374
Botanical Sciences Division	Pay:	56160	70020	73080	76140	79200	354600
	Allowances	52908	60186	61116	61614	63408	299232
Department of Higher Plants.	Pay:	102000	135600	166080	175520	185760	764960
	Allowances	82140	104688	124440	126120	128232	565620
Department of Lower Plants.	Pay:	63600	68280	95040	175920	185760	588600
	Allowances:	52980	54204	73212	126120	128232	434748
Department of Economic Plants.	Pay:	63600	68280	72960	152400	160800	518040
	Allowances	52980	54204	55908	108624	110400	382116
Department of Palaeobotany.	Pay:	94800	190944	218224	275436	165558	944962
	Allowances:	73128	146568	161741	229131	230823	841391
Department of Ornithology	Pay:	44400	47640	50880	84720	89760	317400
	Allowances:	36780	37572	38604	60816	61872	235644
Department of Herpetology inclu- ding (Amphibia).	Pay:	19200	20640	22080	54120	57360	173400
	Allowances:	16200	16632	17304	39156	39852	129144
Department of Ichthyology	Pay:	44400	47640	144000	152400	160800	549240
	Allowances:	36780	37572	107136	108624	110400	400512
Department of Entomology (Insects)	Pay:	63600	108600	144000	183000	193200	692400
	Allowances:	52980	83748	107536	130284	132420	506568
Department of Invertebrate	Pay:	63600	95280	101760	152400	160800	573840
	Allowances:	52980	75144	77208	108624	110400	242356
Supporting Staff:	Pay:	63120	146544	184056	202872	237286	833878
	Allowances:	46380	96686	114392	119500	119518	496476
Earth Sciences Division	Pay:	66960	70020	73080	76146	79200	365406
	Allowances:	59688	60186	61116	61614	63408	306012
Department of Palaeontology & Stratigraphy	Pay:	108000	115380	123840	206520	243120	796860
	Allowances:	89760	91776	94512	147780	168084	191912
Department of Min- eralogy & Petrology & Geochemistry.	Pay:	165600	176880	188160	199440	210720	940800
	Allowances:	135120	137952	141744	143616	146064	704497
Supporting Staff:	Pay:	84000	151344	172032	179284	201738	788398
	Allowances:	58188	109998	119999	120517	121257	529959
Public Services Division	Pay:	-	-	-	49800	122880	172680
	Allowances:	-	-	-	35436	83805	119241
Exhibit Development	Pay:	25200	73680	78480	83280	88080	348720
	Allowances:	20580	53382	54588	55158	55950	239658
Exhibit Execution Installation Maintenance	Pay:	37080	117000	124500	155674	164460	598714
	Allowances:	31914	92604	93022	113052	114612	445204
Photography	Pay	17880	18960	75840	80760	85680	279120
	Allowances:	15714	15810	54692	56880	57552	200648

Name of Division/ Branch/Section:	Pay/ Allowances:	1983-84:	1984-85:	1985-86:	1986-87:	1987-88:	Total:
Model Making and Taxidermy	Pay: Allowances:	25200 21180	34116 25956	36312 24615	38508 26354	65664 44427	199800 142532
Workshop	Pay: Allowances:	- -	106116 73398	112032 73715	129948 81743	136464 82560	484560 311416
Instrumentation:	Pay: Allowances:	17880 15714	18960 15810	20040 15136	36600 26880	38640 27072	132120 100612
Administration Services (Accounts)	Pay: Allowances:	17400 11250	67260 48432	71340 48250	75420 49596	79500 50184	310920 207712
Security	Pay: Allowances:	21120 20496	59952 50598	62184 49938	81336 66232	83928 66384	408520 253648
House Keeping	Pay: Allowances:	10560 10248	51768 43848	70848 58164	85200 67956	98880 78204	317256 258420
Transport:	Pay: Allowances:	18000 14616	37956 29844	39192 29851	40428 28979	41664 29007	177240 130497
Souvenir Shop	Pay: Allowances:	- -	19320 12480	20556 12576	21792 12672	23028 12768	84696 50496
Stores/Purchases:	Pay: Allowances:	6720 4704	30396 18990	32232 19146	34068 19302	36180 19458	139596 81600
Administration	Pay: Allowances:	19920 15072	20676 15114	40632 27516	42828 27702	54024 27888	169080 113292
Library	Pay: Allowances:	- -	57600 49134	72576 48940	76752 50286	80928 50862	287856 199222
Zoological Sciences Division,	Pay: Allowances:	56160 52908	70020 60188	73080 61116	76140 61614	79200 63408	354600 299234
Department of Mammology.	Pay: Allowances:	57600 45360	60260 46176	64320 47232	67680 47808	71040 48528	320900 235104
TOTAL:-	Pay: Allowances:	1500240 1239432	2446052 1895080	2916916 2151045	3620572 2598294	3855002 2726245	14338782 10610096
GRAND TOTAL:-		2739672	4341132	5067961	6218866	6581247	24948878

Name of Post: Grade: Strength: 1983-84: 1984-85: 1985-86: 1986-87: 1987-88: Total

DIRECTOR GENERAL OFFICE

Director General	21	Strength	1	1	1	1	1	
		Pay	50400	53100	55800	58500	61300	279100
		Allowances	48780	49320	49860	50400	50940	249300
Personal Secretary	16	Strength	-	1	1	1	1	
		Pay	-	13560	14520	15480	16440	60000
		Allowances	-	16686	10860	10878	10974	433998
Personal Assistant	15	Strength	1	1	1	1	1	
		Pay	10800	11460	12120	12780	13440	60600
		Allowances	6780	6846	6912	6978	7044	34560
Naib Qasid	1	Strength	1	2	2	2	2	
		P-ay	5280	10800	11040	11280	11520	49920
		Allowances	5124	10248	10248	10248	10248	46116
TOTAL:		Pay:	66480	88920	93480	98040	102700	449620
		Allowances:	60684	77100	77880	78504	79206	373374

BOTANICAL SCIENCES DIVISION

Director	20	Strength	1	1	1	1	1	
		Pay	45600	47760	49920	52080	54240	249600
		Allowances	42660	43092	43956	44388	46116	220212
Stenographer	15	Strength	-	1	1	1	1	1
		Pay	-	11460	12120	12780	13440	49800
		Allowances	-	6846	6912	6978	7044	27780
Naib Qasid	1	Strength	2	2	2	2	2	
		Pay	10560	10800	11040	11280	11520	55200
		Allowances	10248	10248	10248	10248	10248	51240
TOTAL:-		Pay:	56160	70020	73080	76140	79200	354600
		Allowances:	52908	60186	61116	61614	63408	299232

Name of Post	Grade	Strength	1983-84	1984-85	1985-86	1986-87	1987-88	Total
<u>Department of Higher Plants</u>								
Curator	19	Strength	1	1	1	1	1	
		Pay	38400	40320	42240	44160	46080	211200
		Allowances	29160	29544	29928	30312	30696	149640
Associate Curator:	18	Strength	1	2	2	2	2	
		Pay	25200	54000	57600	61200	64800	262800
		Allowances	20580	41880	42600	43320	44040	1922420
Research Associate	17	Strength	2	2	4	4	4	
		Pay	38400	41230	66240	70560	74880	291360
		Allowances	32400	33264	51912	52488	53496	223560
Total:		Pay:	102000	135600	166080	175520	185760	764960
		Allowances	82140	104688	124440	126120	128232	565628
<u>Department of Lower Plants</u>								
Curator	19	Strength	-	-	-	1	1	
		Pay	-	-	-	44160	46080	90240
		Allowances	-	-	-	30312	30696	61008
Associate Curator	18	Strength	1	1	1	2	2	
		Pay	25200	27000	28800	61200	64800	207000
		Allowances	20580	20940	21300	43320	44040	150180
Research Associate	17	Strength	2	2	3	3	3	
		Pay	38400	41280	66240	70560	74880	291360
		Allowances	32400	33264	51912	52488	53496	223560
Total:		Pay:	63600	68280	95040	175920	185760	588600
		Allowances	52980	54204	73212	126120	128232	434748
<u>Department of Economic Plants</u>								
Curator	19	Strength	1	1	1	1	1	
		Pay	-	-	-	44160	46080	90240
		Allowances	-	-	-	30312	30696	61008
Associate Curator	18	Strength	1	1	1	2	2	
		Pay	25200	27000	28800	61200	64800	207000
		Allowances	20580	20940	23100	43320	44040	150180
Research Associate	17	Strength	2	2	2	2	2	
		Pay	38400	41280	44160	47040	49920	220800
		Allowances	32400	33264	34608	34992	35664	170928
Total:		Pay:	63600	68280	72960	152400	160800	518040
		Allowances:	52980	54204	55998	108624	110400	382116

Department of Palaeobotany

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
Curator	19	Strength	-	-	-	1	1	
		Pay	-	-	-	44160	46080	90240
		Allowances	-	-	-	30312	30696	61008
Associate Curator	18	Strength	1	1	1	2	2	
		Pay	25200	27000	28800	61200	64800	207000
		Allowances	20580	20940	21300	43320	44040	150180
Research Associate	17	Strength	1	1	1	1	1	
		Pay	19200	20640	22080	23520	24960	110400
		Allowances	16200	16632	17304	17496	17832	85464
U.D.C	7	Strength	-	4	4	4	4	
		Pay	-	27984	29080	30192	31296	118552
		Allowances	-	18336	18364	18476	18588	73764
Fumigating & Drying Assistant	7	Strength	2	2	2	2	2	
		Pay	13440	13992	14544	15096	15648	72720
		Allowances	9168	9168	9182	9238	9294	46050
Collection Incharge	7	Strength	1	2	3	3	3	
		Pay	6720	13992	21816	22644	27108	91680
		Allowances	4584	9168	13773	13857	13941	55323
Field Assistant	5	Strength	4	6	7	8	8	
		Pay	24960	38736	46704	55104	69330	234834
		Allowances	17472	26208	30576	34944	34944	141444
Laboratory Assistant	1	Strength	-	6	2	9	9	
		Pay	-	32400	38640	50760	51840	173640
		Allowances	-	30744	35868	46116	46116	158844
Nalb Qasid	1	Strength	1	3	3	3	4	
		Pay	5280	16200	16560	16920	17280	72240
		Allowances	5124	15372	15372	15372	15372	66612
Total :-		Pay:	94800	190944	218224	275436	165558	944962
		Allowances:	73128	146568	161741	229131	230823	841391

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
<u>ZOOLOGICAL SCIENCES DIVISION</u>								
Director	20	Strength	1	1	1	1	1	
		Pay	45600	47760	49920	52080	54240	249600
		Allowances	42660	43092	43956	44388	46116	220212
Stenographer	15	Strength	-	1	1	1	1	
		Pay	-	11460	12120	12780	13440	49800
		Allowances	-	6848	6912	6978	7044	27782
Naib Qasid	1	Strength	2	2	2	2	2	
		Pay	10560	10800	11040	11280	11520	55200
		Allowances	10248	10248	10248	10248	10248	51240
TOTAL:-		Pay:	56160	70020	73080	76140	79200	354600
		Allowances	52908	60188	61116	61614	63408	299234

(B) DEPARTMENT OF MAMMOLOGY

Curator	19	Strength	1	1	1	1	1	
		Pay	38400	40020	42240	44160	46080	210900
		Allowances	29160	29544	29928	30312	30696	149640
Research Associate	17	Strength	1	1	1	1	1	
		Pay	19200	20240	22080	23520	24960	110000
		Allowances	16200	16632	17304	17496	17832	85464
TOTAL:-		Pay	57600	60260	64320	67680	71040	320900
		Allowances	45360	46176	47232	47808	48528	235104

DEPARTMENT OF ORNITHOLOGY

Associate Curator	18	Strength	1	1	1	1	1	
		Pay	25200	27000	28800	61200	64800	207000
		Allowances	20580	20940	21300	43320	44040	150180
Research Associate	17	Strength	1	1	1	1	1	
		Pay	19200	20640	22080	23520	24960	110400
		Allowances	16200	16632	17304	17496	17832	85464
TOTAL:-		Pay:	44400	47640	50880	84720	89760	317400
		Allowances:	36780	37572	38604	60816	61872	235644

Name of Post	Grade	Strength	1983-84	1984-85	1985-86	1986-87	1987-88	Total
Insect Sellers	5	Strength	-	1	2	2	2	
		Pay	-	6456	13344	13776	17332	50908
		Allowances	-	4368	8736	8736	8736	30576
Naib Qasid	1	Strength	2	3	4	5	6	
		Pay	10560	16200	22080	28200	34560	111600
		Allowances	10248	10248	10248	10248	10248	51240
Total:		Pay	63120	146544	184056	202872	237286	833878
		Allowances	46380	96686	114392	119500	119518	496476

EARTH Sciences Division

Director	20	Strength	1	1	1	1	1	
		Pay	45600	47760	49920	52686	54240	249606
		Allowances	42660	43092	43956	44388	46116	220212
Stenographer	15	Strength	1	1	1	1	1	
		Pay	10800	11460	12120	12780	13440	60600
		Allowances	6780	6846	6912	6978	7044	34560
Naib Qasid	1	Strength	2	2	2	2	2	
		Pay	10560	10800	11040	11280	11520	55200
		Allowances	10248	10248	10248	10248	10248	51240
Total:		Pay	66960	70020	73080	76146	79200	365406
		Allowances	59688	60186	61116	61614	63408	306012

Name of Post:	Grade	Strength	1983-84	1984-85	1985-86	1986-87	1987-88	Total
Department of Paleontology and Stratigraphy								
Curator	19	Strength	-	-	-	1	1	
		Pay	-	-	-	44160	46080	90240
		Allow.	-	-	-	30312	30696	61008
Associate Curator	18	Strength	3	3	3	3	3	
		Pay	50400	54000	57600	91800	97200	351000
		Allow.	41160	41880	42600	64980	66060	256680
Research Associate	17	Strength	3	3	3	3	3	
		Pay	57600	61380	66240	70560	99840	355620
		Allow.	48600	49896	51912	52488	71328	274224
TOTAL:		Pay	108000	115380	123840	206520	243120	796860
		Allow.	89760	91776	94512	147780	168084	591912

**Department of Mineralogy and Petrology
Sedimentology and Geochemistry.**

Curator	19	Strength	1	1	1	1	1	
		Pay	38400	40320	42240	44160	46080	211200
		Allow.	29160	29544	29928	30312	30696	149640
Associate Curator	18	Strength	2	2	2	2	2	
		Pay	50400	54000	57600	61200	64800	288000
		Allow.	41160	41880	42600	43320	44040	213000
Research Associate	17	Strength	4	4	4	4	4	
		Pay	76800	82560	88320	94080	99840	441600
		Allow.	64800	66528	69216	69984	71328	341856
Total:		Pay	165600	176880	188160	199440	210720	940800
		Allow.	135120	137952	141744	143616	146064	704496

Supporting Staff

Senior Fossil Preparator	17	Strength	-	1	1	1	1	
		Pay	-	20640	22080	23520	24960	91200
		Allow.	-	16632	17304	17496	17832	69264
Senior Surveyor	16	Strength	-	1	1	1	1	
		Pay	-	13560	14520	15480	16440	60000
		Allow.	-	10686	10860	10878	10974	43398
Section Cutter	11	Strength	2	2	2	2	2	
		Pay	16800	17640	18480	19320	20160	92400
		Allow.	10920	11004	11088	11172	11256	55440
Junior Fossil Preparator	11	Strength	2	2	2	2	2	
		Pay	16800	17640	18480	19320	20160	92400
		Allow.	10920	11004	11088	11172	11256	55440

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
U.D.C.	5	Strength	1	2	2	2	2	
		Pay	6720	13992	14544	15096	18072	68424
		Allowances	4584	9168	9182	9238	9294	41466
Collection Incharge	7	Strength	2	2	3	3	3	
		Pay	13440	13992	21816	22644	27109	99000
		Allowances	9168	9168	13773	13857	13941	59907
Field Assistant	5	Strength	4	5	6	6	6	
		Pay	24960	32280	40032	41329	51798	190398
		Allowances	17472	21840	26208	26208	26208	117936
Lab. Assistant	1	Strength	-	2	2	2	2	
		Pay	-	10800	11040	11288	11520	44648
		Allow.	-	10248	10248	10248	10248	40992
Naib Qasid	1	Strength	1	2	2	2	2	
		Pay	5280	10800	11040	11288	11520	49928
		Allow.	5124	10248	10248	10248	10248	46116
Total		Pay	84000	151344	172032	179284	201738	788397
		Allowances	58188	109998	119999	120517	121257	529959

Public Services Division

Incharge Scientist	19	Strength	-	-	-	-	1	
		Pay	-	-	-	-	46080	46080
		Allowances	-	-	-	-	30696	30696
Stenographer	15	Strength	-	-	-	-	1	
		Pay	-	-	-	-	13440	13440
		Allowances	-	-	-	-	7044	7044
Helper	1	Strength	-	-	-	-	2	
		Pay	-	-	-	-	11520	11520
		Allowances	-	-	-	-	10246	10246
Operational Manager	19	Strength	-	-	-	1	1	
		Pay	-	-	-	44160	46080	90240
		Allowances	-	-	-	30312	30696	61008
Helper	1	Strength	-	-	-	1	1	
		Pay	-	-	-	5640	5760	11400
		Allowances	-	-	-	5124	5123	10247
Total:		Pay	-	-	-	49800	122880	172680
		Allowances	-	-	-	35436	83805	119241

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
<u>Exhibit Development</u>								
Exhibit Designer	18	Strength	1	1	1	1	1	
		Pay	25200	27000	28800	30600	32400	144000
		Allowances	20580	20940	21300	21660	22020	106500
Teacher Scientist	17	Strength		1	1	1	1	
		Pay	-	20640	22080	23520	24960	91200
		Allowances	-	10686	10860	10878	10874	43398
Editor	17	Strength	-	1	1	1	1	
		Pay	-	20640	22080	23520	24960	91200
		Allowances	-	16632	17304	17496	17832	69264
Helper	1	Strength	-	1	1	1	1	
		Pay	-	5400	5520	5640	5760	22320
		Allowances	-	5124	5124	5124	5124	20496
Totals:		Pay	25200	73680	78480	83280	88080	348720
		Allowances	20580	53382	54588	55158	55950	239658

Exhibit Execution Installation & Maintenance

Artist/Graphic Designer	18	Strength	-	1	1	1	1	
		Pay	-	27000	28800	30600	32400	118800
		Allowances	-	20940	21300	21660	22020	85920
Artist	17	Strength	1	2	2	2	2	
		Pay	19200	41280	44160	47040	49920	201600
		Allowances	16200	33264	34608	34992	35664	154728
Graphic Designer	17	Strength	-	-	-	1	1	
		Pay	-	-	-	23520	24960	48480
		Allowances	-	-	-	17496	17832	35328
Calligrapher	15	Strength	-	1	1	1	1	
		Pay	-	10800	11460	12120	12780	47160
		Allowances	-	6780	6840	6900	6900	27420
Printer	16	Strength	1	2	2	2	2	
		Pay	12600	27120	28040	31114	32880	132754
		Allowances	10590	21372	20026	21756	21948	95692
Helper	1	Strength	1	2	2	2	2	
		Pay	5280	10800	11040	11280	11520	49920
		Allowances	5124	10248	10248	10248	10248	46116
Total:		Pay	37080	117000	124500	155674	164460	598714
		Allowances	31914	92604	93022	113052	114612	445204

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
Photography								
Incharge Studio	17	Strength	-	-	1	1	1	
		Pay	-	-	19200	20640	22080	61920
		Allowances	-	-	12240	12504	12648	37392
Photographer	16	Strength	1	1	2	2	2	
		Pay	12600	13560	29040	30960	32800	119040
		Allowances	10590	10686	20024	21756	21948	85004
Helper	1	Strength	1	1	1	1	1	
		Pay	5280	5400	5520	5640	5760	27600
		Allowances	5124	5124	5124	5124	5124	25620
Total:		Pay	17880	18960	75840	80760	85680	279120
		Allowances	15714	15810	54692	56880	57552	200648

Model Making and Taxidermy								
Taxidermist	16	Strength	1	1	1	1	1	
		Pay	12600	13560	14520	1580	16440	72600
		Allowances	10590	10686	10012	10857	10974	53119
Assistant Taxidermist	7	Strength	-	1	1	1	1	
		Pay	-	6996	7272	7548	7824	29640
		Allowances	-	4584	4591	4619	4647	18441
Modeller	17	Strength	-	-	-	-	1	
		Pay	-	-	-	-	24960	24960
		Allowances	-	-	-	-	17832	17832
Assistant Modeller	16	Strength	1	1	1	1	1	
		Pay	12680	13560	14520	15480	16440	72600
		Allowances	10590	10686	10012	10878	10974	53140
Total:		Pay	25200	34116	36312	38508	65664	199800
		Allowances	21180	25956	24615	26354	44427	142532

Workshop								
Mechanical Eng./Civil/El.	17/18	Strength	-	1	1	1	1	
		Pay	-	20640	22080	23520	24960	91200
		Allowances	-	16632	17304	17496	17832	69264
Foreman	16	Strength	-	1	1	1	1	
		Pay	-	13560	14520	15480	16440	60000
		Allowances	-	10686	10012	10878	10974	42550
Draftsman	15	Strength	-	1	1	1	1	1
		Pay	-	11460	12120	12780	13440	49800
		Allowances	-	6846	6912	6978	7044	27780
Mechanic	14	Strength	-	1	1	2	2	
		Pay	-	10800	11400	24000	25200	71400
		Allowances	-	6510	6570	13260	13380	39720
Carpenter	14	Strength	-	1	1	1	1	
		Pay	-	10800	11400	1200	12600	46800
		Allowances	-	6510	6570	6630	6690	26400

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
Bench Fitter	11	Strength	-	1	1	1	1	
		Pay	-	8820	9240	9660	10080	37800
		Allowances	-	5502	5544	5586	5628	22260
Turner	11	Strength	-	1	1	1	1	
		Pay	-	8820	9240	9660	10080	37800
		Allowances	-	5502	5544	5586	5628	22260
Welder	11	Strength	-	1	1	1	1	
		Pay	-	8820	9240	9660	10080	37800
		Allowances	-	5502	5544	5586	5628	22260
Mason/Elec.	7	Strength	-	1	1	1	1	
		Pay	-	6996	7272	7548	7824	29640
		Allowances	-	4584	4591	4619	4632	18426
Helper	1	Strength	-	1	1	1	1	
		Pay	-	5400	5520	5640	5760	22320
		Allowances	-	5124	5124	5124	5124	20496
Totals:		Pay		106116	112032	129948	136464	484560
		Allowances		73398	73715	81743	82560	311416

Instrumentation

Tech.	14/16	Strength	1	1	1	2	2	
		Pay	12500	13560	14520	30960	32880	114520
		Allowances	10590	10686	10012	21756	21948	74992
Helper	1/3	Strength	1	1	1	1	1	
		Pay	5280	5400	5520	5640	5760	27600
		Allowances	5124	5124	5124	5124	5124	25620
Total:		Pay	17880	18960	20040	36600	38640	132120
		Allowances	15714	15810	15136	26880	27072	100612

Administrative Services (Accounts)

Accounts Officer	17/18	Strength	-	1	1	1	1	
		Pay	-	27000	28800	30600	32400	118800
		Allowances	-	20940	21300	21660	22020	85920
Account Supp.	16	Strength	-	1	1	1	1	
		Pay	-	13560	14520	15480	16440	60000
		Allowances	-	10686	10012	10878	10974	42550

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
Accounts Assistant	11	Strength	-	1	1	1	1	
		Pay		8400	8820	9240	9660	36120
		Allowances		5460	5508	5544	5580	22092
Cashier	11	Strength	1	1	1	1	1	
		Pay	8400	8820	9240	9660	10080	46200
		Allowances	5460	5508	5544	5580	5628	27720
Stenotypist	12	Strength	1	1	1	1	1	
		Pay	9000	9480	9960	10440	10920	49800
		Allowances	5790	5838	5886	5934	5982	29430
Total:	Pay		17400	67260	71340	75420	79500	310920
	Allowances		11250	48432	48250	49596	50184	207712

Security

Security	14/16	Strength	-	1	1	1	1	
		Pay	-	13560	14520	15480	16440	60000
		Allowances	-	10686	10012	10878	10974	42550
Security Guard	1	Strength	4	6	6	9	9	
		Pay	21120	32400	33120	50760	51840	189240
		Allowances	20496	30744	30744	46116	46116	174216
Telephone Operator	7	Strength	-	2	2	2	2	
		Pay	-	13992	14544	15096	15648	59280
		Allowances	-	9168	9182	9238	9294	36882
Total:	Pay		21120	59952	62184	81336	83928	308520
	Allowances		20496	50598	49938	66232	66384	253648

House Keeping

Guides	5	Strength	-	2	3	4	4	
		Pay	-	12912	20016	27552	28416	88896
		Allowances	-	8736	12804	17472	17472	56484
Head Mali	5	Strength	-	1	1	1	1	
		Pay	-	6456	6672	6888	7104	27120
		Allowances	-	4368	4368	4368	4368	17472
Sweeper	1	Strength	2	4	4	4	6	
		Pay	10560	21600	22080	22560	34560	111360
		Allowances	10248	20496	20496	20496	30744	102480
Mali	1	Strength	-	2	4	5	5	
		Pay	-	10800	22080	28200	28800	89880
		Allowances	-	10248	20496	25620	25620	81984
Total:	Pay		10560	51768	70848	85200	98880	317256
	Allowances		10248	43848	58164	67956	78204	258420

Name of Post	Grade	Strength	1983-84	1984-85	1985-86	1986-87	1987-88	Total	
<u>Transport</u>									
Driver Staff Car	7	Strength	-	1	1	1	1		
		Pay	-	6996	7272	7548	7824	29640	
		Allowances	-	4584	4591	4619	4647	18441	
Driver	4	Strength	3	4	4	4	4		
		Pay	18000	24768	25536	26304	27072	121680	
		Allowances	14616	19488	19418	19488	19488	92568	
Junior Despatch Rider	4	Strength	-	1	1	1	1		
		Pay	-	6192	6384	6576	6768	25920	
		Allowances	-	4872	4872	4872	4872	19488	
Total:			Pay	18000	37956	39192	40428	41664	177240
			Allowances	14616	28944	28951	28979	29007	130497

Souvenir Shop

Shop Manager	15/16	Strength	-	1	1	1	1		
		Pay	-	12600	13560	14520	15480	56160	
		Allowances	-	7776	7872	7968	8064	31680	
Salesman	7	Strength	-	1	1	1	1		
		Pay	-	6720	6996	7272	7548	28536	
		Allowances	-	4704	4704	4704	4704	18816	
Total:			Pay	-	19320	20556	21792	23028	84696
			Allowances	-	12480	12576	12672	12768	50496

Store/Purchase

Purchase Officer	16	Strength	-	1	1	1	1		
		Pay	-	12600	13560	14520	15480	56160	
		Allowances	-	7776	7872	7968	8064	31680	
Senior Storekeeper	11/14	Strength	-	1	1	1	1		
		Pay	-	10800	11400	12000	12600	46800	
		Allowances	-	6510	6570	6630	6690	26400	
Junior Storekeeper	7	Strength	1	1	1	1	1		
		Pay	6720	6996	7272	7548	8100	36636	
		Allowances	4704	4704	4704	4704	4704	23520	
Total:			Pay	6720	30396	32232	34068	36180	139596
			Allowances	4704	18990	19146	19302	19458	81600

<u>Name of Post</u>	<u>Grade</u>	<u>Strength</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>Total</u>
<u>Administration</u>								
Admn. Officer	17	Strength	-	-	1	1	1	
		Pay	-	-	19200	20640	22080	61920
		Allowances	-	-	12360	12504	12648	37512
Admn. Assistant	11	Strength	-	1	1	1	1	
		Pay	8400	8820	9240	9660	10080	46200
		Allowances	5460	5502	5544	5586	5628	27720
L.D.C.	5	Strength	1	1	1	1	1	
		Pay	6240	6456	6672	6888	7104	33360
		Allowances	4488	4488	4488	4488	4488	22440
Naib Qasid	1	Strength	1	1	1	1	1	
		Pay	5280	5400	5520	5640	5760	27600
		Allowances	5124	5124	5124	5124	5124	25620
Total:		Pay	19920	20676	40632	42828	45024	169080
		Allowances	15072	15114	27516	27702	27888	113292

Library

Librarian	17/18	Strength	-	1	1	1	1	
		Pay	-	27000	28800	30600	32400	118800
		Allow.	-	20940	21300	21660	22020	85920
Asstt. Librarian	16	Strength	-	1	1	1	1	
		Pay	-	13560	14520	15480	16440	60000
		Allow.	-	10686	10812	10878	10974	42550
Cataloguer	11/14	Strength	-	1	2	2	2	
		Pay	-	10800	22800	24000	25200	82800
		Allow.	-	13020	13140	13260	13380	52800
L.D.C.	5	Strength	-	1	1	1	1	
		Pay	-	6240	6456	6672	6888	26256
		Allow.	-	4488	4488	4488	4488	17952
TOTAL:-		Pay:	-	57600	72576	76752	80928	287856
		Allow.	-	49134	48940	50286	50862	199222

ANNEXURE - VIILIST OF EXISTING MAJOR EQUIPMENT,
BOOKS AND FURNITURE ETC.

<u>S.No.</u>	<u>Description:</u>	<u>Qty.</u>	<u>Amount:</u>
<u>LABORATORY EQUIPMENT:</u>			
1.	Research Microscopes.	7	2,21,300/-
2.	Stereo Microscope.	4	84,984/-
3.	Microtome.	2	25,600/-
4.	Triple Beam Balance.	1	3,800/-
5.	Analytical Balance 1104.	1	18,000/-
6.	" " 1103	1	16,500/-
7.	Memret Universal Oven.	1	12,850/-
8.	Paraffine Mounting Bath.	1	3,200/-
9.	Rock Cutting Machine.	1 Set.	2,86,500/-
10.	Herbarium Almirah.	24	89,746/-
11.	Camera Canon AE-1	1	10,000/-
12.	Enlarger Krokus	1	14,000/-
13.	Flash Gun	1	600/-
14.	Camera Stand	1	600/-
15.	Glazing Machine.	1	800/-
16.	Trimmer.	1	2,100/-
17.	Safe Light.	2	400/-
18.	Plastic Dishes	3	210/-
19.	Cutter.	1	900/-
20.	Eaisel.	1	350/-
21.	Developing Tank	2	800/-
22.	Enlarging meter.	1	1,200/-
23.	Glazing Sheet	2	170/-
24.	Epivisor Epidiascope	1	18,500/-
25.	Over-head Projector	1	12,500/-
26.	Projector Screen	1	4,440/-
27.	Drilling Machine.	4	2,045/-
28.	Steel Almirah	12	7,740/-
29.	Show-cases (Storage).	27	39,214/-
30.	Hot Plate.	2	2,985/-

<u>S.No:</u>	<u>Descriptions:</u>	<u>Qty:</u>	<u>Amount(Rs.)</u>
<u>FURNITURE:</u>			
1.	Office Table.	21	24,489.00
2.	Lab. Table.	6	33,200.00
3.	Herbarium Tables	4	5,648.00
4.	Map Case Drawing.	13	42,120.00
5.	Chest of Drawers.	2	4,254.00
6.	Glass Shelf Cabinet.	10	37,000.00
7.	Insect Cabinet.	6	12,762.00
8.	Officer's Table.	4	12,256.00
9.	Revolving Chair.	10	12,428.00
10.	Office Chair.	36	13,680.00
11.	File Rack.	7	7,100.00
12.	Display Show Case.	26	50,505.00
13.	Revolving Steel Wheel Chair.	18	5,400.00
14.	Display Cabinet.	8	24,000.00
15.	Library Cabinet.	12	18,504.00
16.	Fume Cupboard.	1	3,638.00
17.	Stationery Rack.	24	22,704.00
18.	Index Card Cabinet.	4	13,600.00
Total:			3,43,288.00

OFFICE EQUIPMENT

1. Typewriter (Manual)	2	Rs. 15,990/-
2. Typewriter (Manual)	1	Rs. 6,008/75
3. Typewriter (Electric)	3	Rs. 55,200/-
4. Filing Cabinet	6	Rs. 4,080/-
5. Gas Heater.	9	Rs. 7,650/-
6. Gas Heater.	3	Rs. 3,150/-
7. Water Cooler.	1	Rs. 5,690/-
8. Duplicating Machine.	1	Rs. 25,713/-
9. Plain Paper Copier.	1	Rs. 66,000/-
10. Microfich Reader	1	Rs. 69,370/-
Total		Rs. 2,58,851.75

ANNEXURE VIIITOTAL OF MAJOR ITEMS OF EXPENDITURE

1. Land for the Museum	Rs. 10,54,300.00
2. Office Equipment.	Rs. 2,58,851.75
3. Furniture.	Rs. 3,43,288.00
4. Laboratory Equipment	Rs. 8,82,024.00
5. Books	Rs. 1,84,610.00
6. Transport (Truck)	Rs. 1,61,178.00
Rs. 28,84,251.75	

Grand Total: 2.88 millions Rupees.