

भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित सैक्टर-81,नॉलेज सिटी,प॰ ओ॰ मनोली, एस॰ ए॰ एस॰ नगर,मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)
Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab
PAN No. - AAAAI1781K GSTIN No:- 03AAAAI1781K2ZS

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CPPP/Institute Website

IISERM (1257)19/20Pur

Dated: 09th September, 2019

NOTICE INVITING E-TENDER

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** for the **Supply of Minerals and Rock Specimens for Museum** as per technical specification and details given below and BOQ list from the original manufacturer/supplier at CPPP i. e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app**& Institute website **www.iisermohali.ac.in.**

-sd-(Mukesh Kumar) Assistant Registrar (P&S)



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मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित सैक्टर-81,नॉलेज सिटी,प॰ ओ॰ मनोली, एस॰ ए॰ एस॰ नगर,मोहाली, पंजाब 140306

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E-TENDER NOTICE

| Tender Ref IISERM(1257)19/20Pur | Dated: 09 th September, 2019 |
|---------------------------------|---|

Critical Date Sections

| Sr. | Description | Date | Time |
|-----|--|-----------------------------|--------------|
| 1. | Tender Publishing Date and time | 09 th Sept, 2019 | 6:00pm |
| 2. | Tender Document download start Date & Time | 09 th Sept, 2019 | 6:00pm |
| 3. | Bid Submission start Date &Time | 09 th Sept, 2019 | 6:00pm |
| 4. | Bid Submission End date and Time | 30 th Sept 2019 | Upto 11:00am |
| 5. | Tender opening Date and Time | 01st October 2019 | At 11:30am |

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and commercial separately} for the following item(s) from the original manufacturer/supplier at CPPP i.e. https://eprocure.gov.in/eprocure/app. Tender documents may please downloaded from the E-procurement portal https://eprocure.gov.in/eprocure/app& Institute website www.iisermohali.ac.in.Tender fee in shape of DD/Banker Cheque of Rs 590/- (Non-refundable) and EMD of Rs 10,000/- should be submitted by DD /Banker Cheque/FDR/ Bank Guarantee in favour of the Registrar, IISER Mohali payable at Mohali. However, scanned copy of the both tender fee and EMD should be upload on website along with technical bid part. The hard copy of the same in original to be send to the address mentioned below duly superscribing the supply/work name and reference/ tender ID on the envelope and same must reach before opening the bid and if not received within due date the bid will be rejected summerly.

The Original EMD and Tender Fee should be sent to:

Assistant Registrar (S&P) Indian Institute of Science Education and Research Mohali Sector-81, Knowledge City, SAS Nagar, Mohali, Punjab, India, Pin: 140306

Non-receipt of original EMD and Tender Fee will lead to rejection of tender.

Item Details: -

| Sr. | Description | Qty. (in units) |
|-----|---|-----------------|
| | Supply of Minerals and Rock Specimens for Museum | |
| A | Provide minimum 70 mineral specimens in steel display tray from the following list (minimum size : 5 x 7 cm) – As per ANNEXURE-A | 01 each |
| В | List of important Ore mineral specimens (minimum Size: 4 x 6 cm) in steel display tray- As per ANNEXURE-A | 01 each |
| С | List of important plant and invertebrate fossils in steel display tray- As per ANNEXURE-A | 01 each |
| D | Provide minimum 100 rock specimens in steel display tray from the following list (minimum size: 6 x 8 cm) - As per ANNEXURE-A | 01 each |
| Е | List of rock and mineral thin sections with slide storage box | |
| | (i) Igneous rocks: As per ANNEXURE-A | 01 each |
| | (ii) Sedimentary rocks: As per ANNEXURE-A | 01 each |
| | (iii) Metamorphic rocks: As per ANNEXURE-A | 01 each |
| | (iv) Minerals: As per ANNEXURE-A | 01 each |
| F. | Collection of minerals with distinct physical and chemical characteristics As per ANNEXURE-A | As per list |
| | NOTE: The price should be quoted inclusive of consolidated samples of rocks/mineral for item nos. A, B, C, D & E above, in BOQ/Financial Bid. The price for item 'F' above, to be quoted as per list/ITEM WISE provided in BOQ/ Financial Bid. | |

SUBMISSION OF TENDER

- I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. https://eprocure.gov.in/eprocure/app only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.
- II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.
- III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.
- IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped. Also bidders applying against 'MSME/NSIC Certificate" issued by appropriate Authority, should ensure that the certificate attached is relevant to the area of service/supply. For example, If the tender is for "supply & installation of Desktop" the certificate should be issued for activity/area of "Computer supply and services activities etc" otherwise bid will be REJECTED without notice.
- V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

INSTRUCTIONS

- 1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.
- 2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID.
- 3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.
- 4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.
- 5. THE INSTITUTE IS EXEMPTED FROM CUSTOM DUTY under notification no- TU/V/RG/- CDE(1062)/201 CUSTOM DT.30.08.2016.
- 6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.
- 7. Concessional GST is applicable for all the items purchased for Research labs vide Ministry of Finance, notification no. 45/22017 dated 14.11.2017 and 47/2017 dated 14.11.2017.
- 8. Bidder/s quoting in currency other than **Indian Rupee** (**INR**) should explicitly mention the currency in which tender quoted wherever applicable in <u>Technical Bid</u> along the tender documents.
- 9. The delivery period should be specifically stated. Earlier delivery will be preferred.
- 10. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.
- 11. Validity of offer: 90 days. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 10 % of the value of supply order as per norms may be sought from the firms.
- 12. The right to reject all or any of the quotation and to split up the requirements or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website https://eprocure.gov.in/eprocure/app and
- 13. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

-sd-(Mukesh Kumar) Assistant Registrar (P&S)

Tender specifications for collection of Minerals, Rocks and Fossils

A. Provide minimum 70 mineral specimens in steel display tray from the following list (minimum size : 5 x 7 cm)

| 01 Actinolite 39 Muscovite Flakes 02 Agate 40 Silliminate 03 Agate Tree 41 Calcite Transparent 04 Amazonite 42 Chalcedony 05 Anhydrite 43 Chalcedony Bluish 06 Appophyllite White 45 Corundum Massive 07 Appophyllite White 45 Corundum Red 08 Aragonite 46 Dolomite 09 Asbestos 47 Dumortierite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz White 18 | Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|---|--------|------------------------|--------|-----------------------------|
| 03 Agate Tree 41 Calcite Transparent 04 Amazonite 42 Chalcedony 05 Anhydrite 43 Chalcedony Bluish 06 Appophyllite Green 44 Corundum Massive 07 Appophyllite White 45 Corundum Red 08 Aragonite 46 Dolomite 09 Asbestos 47 Dumortierite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz White 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal Agg.(Amethyst) 20 Hornblende Green 58 Rock Crystal Agg.(Amethyst) <t< td=""><td>01</td><td></td><td>39</td><td>Muscovite Flakes</td></t<> | 01 | | 39 | Muscovite Flakes |
| 04 Amazonite 42 Chalcedony 05 Anhydrite 43 Chalcedony Bluish 06 Appophyllite Green 44 Corundum Massive 07 Appophyllite White 45 Corundum Red 08 Aragonite 46 Dolomite 09 Asbestos 47 Dumortierite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg.(Amethyst) | 02 | Agate | 40 | Silliminate |
| 05 Anhydrite 43 Chalcedony Bluish 06 Appophyllite Green 44 Corundum Massive 07 Appophyllite White 45 Corundum Red 08 Aragonite 46 Dolomite 09 Asbestos 47 Dumorticrite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite White 53 Graphite 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz White 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg. (Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 | 03 | Agate Tree | 41 | Calcite Transparent |
| 06 Appophyllite White 44 Corundum Massive 07 Appophyllite White 45 Corundum Red 08 Aragonite 46 Dolomite 09 Asbestos 47 Dumortierite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite White 53 Graphite 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg. (Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tournaline 61 Natrolite 24 | 04 | Amazonite | 42 | Chalcedony |
| 06 Appophyllite White 44 Corundum Massive 07 Appophyllite White 45 Corundum Red 08 Aragonite 46 Dolomite 09 Asbestos 47 Dumortierite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite White 53 Graphite 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg. (Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tournaline 61 Natrolite 24 | 05 | Anhydrite | 43 | Chalcedony Bluish |
| 08Aragonite46Dolomite09Asbestos47Dumortierite10Bentonite48Feldspar Pink11Beryl Massive49Feldspar White12Beryl Crystal50Fluorite Small13Biotite51Garnet crystal14Calcite Green52Geode15Calcite White53Graphite16Gypsum54Quartz White17Gypsum Selenite55Quartz with Amethyst18Halite56Rhodonite19Heulandite57Rock Crystal20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36 | 06 | Appophyllite Green | 44 | |
| 09 Asbestos 47 Dumortierite 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tourmaline 61 Natrolite 24 Jade 62 Sillimanite Pink 25 Jasper Banded Hematite 63 Sodalite 26 | 07 | Appophyllite White | 45 | Corundum Red |
| 10 Bentonite 48 Feldspar Pink 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz White 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg.(Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tourmaline 61 Natrolite 24 Jade 62 Sillimanite Pink 25 Jasper Banded Hematite 63 Sodalite 26 Jasper Red 65 Staurolite XL. 28 <td>08</td> <td>Aragonite</td> <td>46</td> <td>Dolomite</td> | 08 | Aragonite | 46 | Dolomite |
| 11 Beryl Massive 49 Feldspar White 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg. (Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tourmaline 61 Natrolite 24 Jade 62 Sillimanite Pink 25 Jasper Banded Hematite 63 Sodalite 26 Jasper Congloomerate 64 Stilbite 27 Jasper Red 65 Staurolite XL. | 09 | Asbestos | 47 | Dumortierite |
| 12 Beryl Crystal 50 Fluorite Small 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz With 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg.(Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tourmaline 61 Natrolite 24 Jade 62 Sillimanite Pink 25 Jasper Banded Hematite 63 Sodalite 26 Jasper Red 65 Staurolite XL. 28 Jasper Green 66 Talc Green 29 Jasper Yellow 67 Talc White 30 | 10 | Bentonite | 48 | Feldspar Pink |
| 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg. (Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tourmaline 61 Natrolite 24 Jade 62 Sillimanite Pink 25 Jasper Banded Hematite 63 Sodalite 26 Jasper Congloomerate 64 Stilbite 27 Jasper Red 65 Staurolite XL. 28 Jasper Green 66 Talc Green 29 Jasper Yellow 67 Talc White <td< td=""><td>11</td><td>Beryl Massive</td><td>49</td><td>Feldspar White</td></td<> | 11 | Beryl Massive | 49 | Feldspar White |
| 13 Biotite 51 Garnet crystal 14 Calcite Green 52 Geode 15 Calcite White 53 Graphite 16 Gypsum 54 Quartz White 17 Gypsum Selenite 55 Quartz with Amethyst 18 Halite 56 Rhodonite 19 Heulandite 57 Rock Crystal 20 Hornblende Green 58 Rock Crystal Agg. (Amethyst) 21 Hornblende in Rock 59 Scolecite 22 Iceland spar 60 Serpentine 23 Tourmaline 61 Natrolite 24 Jade 62 Sillimanite Pink 25 Jasper Banded Hematite 63 Sodalite 26 Jasper Congloomerate 64 Stilbite 27 Jasper Red 65 Staurolite XL. 28 Jasper Green 66 Talc Green 29 Jasper Yellow 67 Talc White <td< td=""><td>12</td><td>Beryl Crystal</td><td>50</td><td>Fluorite Small</td></td<> | 12 | Beryl Crystal | 50 | Fluorite Small |
| 15Calcite White53Graphite16Gypsum54Quartz White17Gypsum Selenite55Quartz with Amethyst18Halite56Rhodonite19Heulandite57Rock Crystal20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 13 | Biotite | 51 | Garnet crystal |
| 16Gypsum54Quartz White17Gypsum Selenite55Quartz with Amethyst18Halite56Rhodonite19Heulandite57Rock Crystal20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 14 | Calcite Green | 52 | Geode |
| 17Gypsum Selenite55Quartz with Amethyst18Halite56Rhodonite19Heulandite57Rock Crystal20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 15 | Calcite White | 53 | Graphite |
| 18Halite56Rhodonite19Heulandite57Rock Crystal20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 16 | Gypsum | 54 | Quartz White |
| 18Halite56Rhodonite19Heulandite57Rock Crystal20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 17 | Gypsum Selenite | 55 | Quartz with Amethyst |
| 20Hornblende Green58Rock Crystal Agg.(Amethyst)21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 18 | Halite | 56 | |
| 21Hornblende in Rock59Scolecite22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 19 | Heulandite | 57 | Rock Crystal |
| 22Iceland spar60Serpentine23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 20 | Hornblende Green | 58 | Rock Crystal Agg.(Amethyst) |
| 23Tourmaline61Natrolite24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 21 | Hornblende in Rock | 59 | Scolecite |
| 24Jade62Sillimanite Pink25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 22 | Iceland spar | 60 | Serpentine |
| 25Jasper Banded Hematite63Sodalite26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 23 | Tourmaline | 61 | Natrolite |
| 26Jasper Congloomerate64Stilbite27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 24 | Jade | 62 | Sillimanite Pink |
| 27Jasper Red65Staurolite XL.28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 25 | Jasper Banded Hematite | 63 | Sodalite |
| 28Jasper Green66Talc Green29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 26 | Jasper Congloomerate | 64 | Stilbite |
| 29Jasper Yellow67Talc White30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 27 | Jasper Red | 65 | Staurolite XL. |
| 30Phlogopite68Thomsonite31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 28 | Jasper Green | 66 | Talc Green |
| 31Kaolin69Tremolite32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 29 | Jasper Yellow | 67 | Talc White |
| 32Kyanite Blue Bladed70Tourmaline33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 30 | Phlogopite | 68 | Thomsonite |
| 33Martite XL.71Nephelene in Rock34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 31 | Kaolin | 69 | Tremolite |
| 34Mesolite72Vermiculite Pcs.35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 32 | Kyanite Blue Bladed | 70 | Tourmaline |
| 35Microcline73Opal36Muscovite Book74Lepidotite37Quartz Milky75Orthoclase | 33 | Martite XL. | 71 | Nephelene in Rock |
| 36 Muscovite Book 74 Lepidotite 37 Quartz Milky 75 Orthoclase | 34 | Mesolite | 72 | Vermiculite Pcs. |
| 37 Quartz Milky 75 Orthoclase | 35 | Microcline | 73 | Opal |
| 37 Quartz Milky 75 Orthoclase | 36 | Muscovite Book | 74 | Lepidotite |
| 38 Quartz Crystal 76 Quartz Smoky | 37 | Quartz Milky | 75 | Orthoclase |
| | 38 | Quartz Crystal | 76 | Quartz Smoky |

B. <u>List of important Ore mineral specimens (minimum Size: 4 x 6 cm) in steel display tray</u>:

| Sl.No. Name of Specimen | Sl.No. | Name of Specimen |
|-------------------------|--------|------------------|
|-------------------------|--------|------------------|

| 01 | Azurite | 11 | Magnesite |
|----|----------------------|----|---------------|
| 02 | Barite | 12 | Magnetite |
| 03 | Bauxite | 13 | Malachite |
| 04 | Chalcopyrite | 14 | Manganese Ore |
| 05 | Chromite | 15 | Psilomelane |
| 06 | Sphalerite | 16 | Pyrite |
| 07 | Galena | 17 | Pyrolusite |
| 08 | Galena Argentiferous | 18 | Ilmenite |
| 09 | Goethite | 19 | Stibnite |
| 10 | Hematite | 20 | Graphite |

C. <u>List of important plant and invertebrate fossils in steel display tray</u>

| Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|--------|----------------------|--------|---------------------|
| 01 | Gleichenites | 27 | Vertebraria Indica |
| 02 | Ptillophyllum | 28 | Wood Fossil |
| 03 | Glossopteris | 29 | Wood Fossil Giant |
| 04 | Alveolina | 30 | Cidaris Spine |
| 05 | Assilina | 31 | Circe |
| 06 | AlectroyniaAngulata | 32 | Conus |
| 07 | Arca Shell | 33 | Cyrena |
| 08 | Belemnites Elongates | 34 | DiscocyclinaJavana |
| 09 | Belemnites Fibula | 35 | Eocyprea |
| 10 | Belemnites Seclusus | 36 | Fenestella in Shale |
| 11 | Brenia | 37 | Gryphea |
| 12 | Cardita Single Valve | 38 | Hemiaster |
| 13 | Cardium single Valve | 39 | Isastrea |
| 14 | Cerithium | 40 | Lucina Double Valve |
| 15 | Chama | 41 | Lucina Single Valve |
| 16 | Cidaris | 42 | Megalodon |
| 17 | Montiveltia | 43 | Meritrix |
| 18 | Murex | 44 | Perisphentis |
| 19 | Naticasegeritina | 45 | Rhynchonella |
| 20 | Nummulites 1cm. | 46 | Terebratula |
| 21 | OstreaAngulata | 47 | Trigonia |
| 22 | Ostrea Both Valves | 48 | Trigonoarca |
| 23 | OstreaGajensis | 49 | Turbo |
| 24 | Pecten | 50 | Turritella |
| 25 | Pecten Both Valves | 51 | Unio |
| 26 | Physa | | |

D. <u>Provide minimum 100 rock specimens in steel display tray from the following list (minimum size: 6 x 8 cm)</u>

| Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|--------|---------------------|--------|-----------------------|
| 01 | Aplite | 57 | Gneiss Bengal |
| 02 | Amphibolites | 58 | Gneiss Bundelkhand |
| 03 | Anorthosite | 59 | Golden Oolite |
| 04 | Anorthosite White | 60 | Granite Epidote – Red |
| 05 | Ankaramite | 61 | Granite Grey |
| 06 | Amygdaloidal Basalt | 62 | Limestone Black |
| 07 | Arkose | 63 | Limestone Chocolate |

| 08 | Basic Vesicular Lava | 64 | Limestone Coralline |
|----|--------------------------------|-----|---------------------------------|
| 09 | Basalt Fine Grain | 65 | Limestone Crystalline |
| 10 | Biotite Schist | 66 | Limestone Foraminifera |
| 11 | Biotite Kyanite Schist | 67 | Limestone with Fossil |
| 12 | Breccia | 68 | Limestone Jaisalmer Jurassic |
| 13 | Carbonaceous Shale | 69 | Limestone Reddish |
| 14 | Coal Banded | 70 | Limestone Upper Bhandara |
| 15 | Coal Durain | 71 | Limestone Yellow |
| 16 | Coal Fusion | 72 | Marble Black |
| 17 | Calcite Rock Orange | 73 | Marble Coarse Grain White |
| 18 | Calcite Rock White | 74 | Marble Chocolate |
| 19 | Calcite Rock Yellow | 75 | Marble Greenish |
| 20 | Charnockite Acid | 76 | Marble Makrana |
| 21 | Charnockite Basic | 77 | Marble Pink |
| 22 | Charnockite Intermediate | 78 | Volcanic Tuff Green |
| 23 | Granite Gneiss | 79 | Mica Schist Kalimpong |
| 24 | Granite Porphyritic | 80 | Zeolite in Trap |
| 25 | Granite Singhbhum | 81 | Nepheline Syenite Sivamalai |
| 26 | Granite White | 82 | Norite |
| 27 | Granodiorite | 83 | Obsidian |
| 28 | Granophyre | 84 | Pegmatite |
| 29 | Graphic Granite | 85 | Phyllite |
| 30 | Graphite Schist | 86 | Pitchstone |
| 31 | Greywacke | 87 | Quartzite Banded Hematite |
| 32 | Gondite | 88 | Slate Kangra |
| 33 | Hornblende Schist | 89 | Shale Grey Barakar |
| 34 | Khondalite | 90 | Shale Suket |
| 35 | Lamprophyre Leucite | 91 | Shale Talcher |
| 36 | Laterite | 92 | Quartzite Fruscite |
| 37 | Leptinite | 93 | Quartzite Greeen with Rubellite |
| 38 | Limestone Algal | 94 | Quartzite Grey |
| 39 | Limestone Banded | 95 | Quartzite Reddish |
| 40 | Sandstone Talchir | 96 | Quartzite White |
| 41 | Scrol Rock | 97 | Rhyolite Chocolate |
| 42 | Serpentine Rock (Bluish Green) | 98 | Rhyolite Pinkish |
| 43 | Serpentinite | 99 | Rhyolite with Flow Structure |
| 44 | Shale with Fossil | 100 | Sandstone |
| 45 | Chlorite Schist | 101 | Sandstone Barakar |
| 46 | Conglomerate | 102 | Sandstone Bermer |
| 47 | Dacite | 103 | Sandstone Grey |
| 48 | Diorite | 104 | Sandstone Jurassic Kutch |
| 49 | Dolerite (Asansol Fm) | 105 | Sandstone Pink(Vindayan) |
| 50 | Dolerite (Surguja Fm) | 106 | Sandstone Spotted |
| 51 | Dunite | 107 | Sodalite Syenite |
| 52 | Fireclay Brown | 108 | Staurolite Schist |
| 53 | Fireclay White | 109 | Tale Schist |
| 54 | Gabbro Med. Grain | 110 | Three Phenocryst Basalt |
| 55 | Garnet Mica Gneiss | 111 | Trachyte |
| 56 | Garnet Mica Schist | 112 | Unakite |

E. List of rock and mineral thin sections with slide storage box

| <. | T 1 | |
|-----|--------------|------------|
| (i) | Igneous rock | C • |
| | | |

| Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|--------|--------------------------|--------|---------------------|
| 01 | Amygdaloidal Basalt | 21 | Monzonite |
| 02 | Andesite | 22 | NepheleneSyenite |
| 03 | Anorthosite | 23 | Norite |
| 04 | Basalt Coarse Grained | 24 | Obsidian |
| 05 | Basalt Fine Grained | 25 | Olivine Basalt |
| 06 | Charnockite Acid | 26 | Olivine Dolerite |
| 07 | Charnockite Basic | 27 | Pegmatite |
| 08 | Charnockite Intermediate | 28 | Peridotite |
| 09 | Dacite | 29 | Pumice |
| 10 | Dolerite | 30 | Pyroxenite |
| 11 | Dunite | 31 | Quartz Diorite |
| 12 | Gabbro | 32 | Rhyolite |
| 13 | Granite | 33 | Sodalite Syenite |
| 14 | Granodiorite | 34 | Syenite |
| 15 | Granophyre | 35 | Tachylite |
| 16 | Graphic Granite | 36 | Unakite |
| 17 | Lamrophyre | 37 | Vesicular Basalt |
| 18 | Leptinite | 38 | Vein Quartz in Rock |
| 19 | Micro Granite | 39 | Volcanic Tuff |
| 20 | Mica Peridotite | | |

ii) Sedimentary rocks:

| Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|--------|---------------------------|--------|--------------------------|
| 01 | Arkose | 11 | Oolitic Limestone |
| 02 | Breccia | 12 | Sandstone micaceous |
| 03 | Calcareous Grit | 13 | Sandstone Calcareous |
| 04 | Carbonaceous Shale | 14 | Sandstone Carbonaceous |
| 05 | Coal | 15 | Sandstone Coarse Grained |
| 06 | Conglomerate | 16 | Sandstone ferruginous |
| 07 | Coralline Limestone | 17 | Sandstone fine Grained |
| 08 | Banded Hematite Quartzite | 18 | Sandstone kaolinised |
| 09 | Foraminifera Limestone | 19 | Shale |
| 10 | Limestone | | |

iii) Metamorphic rocks:

| Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|--------|--------------------|--------|------------------------|
| 01 | Amphibolite | 17 | Khondalite |
| 02 | Biotite Schist | 18 | Kyanite Schist |
| 03 | Calc Silicate rock | 19 | Marble Diopside |
| 04 | Chlorite Schist | 20 | Mica Hornblende Schist |
| 05 | Diopside Marble | 21 | Mica Schist |
| 06 | Dumorterite Schist | 22 | Phyllite |
| 07 | Epidote Schist | 23 | Piedmontite Quartzite |

| 08 | Fuchsite Quartzite | 24 | Pyroxenite |
|----|-----------------------|----|---------------------|
| 09 | Garnet Granulite | 25 | Quartzite |
| 10 | Garnet Mica Schist | 26 | Schrol Rock |
| 11 | Glaucophane Schist | 27 | Serpentine Rock |
| 12 | Gondite | 28 | Slate |
| 13 | Granite Gneiss | 29 | Staurolite Schist |
| 14 | Hornblende Gneiss | 30 | Talc Schist |
| 15 | Hornblende Schist | 31 | Tremolite Schist |
| 16 | Hypersthene Granulite | 32 | Woolastonite Marble |

iv) Minerals

| Sl.No. | Name of Specimen | Sl.No. | Name of Specimen |
|--------|------------------|--------|------------------|
| 01 | Actinolite | 25 | Olivine |
| 02 | Aegirine | 26 | Glauconite |
| 03 | Agate | 27 | Glaucophane |
| 04 | Amazonestone | 28 | Gypsum |
| 05 | Andalusite | 29 | Hematite |
| 06 | Anhydrite | 30 | Heulandite |
| 07 | Apatite | 31 | Hornblende |
| 08 | Apophylite | 32 | Hypersthene |
| 09 | Aragonite | 33 | Ilmenite |
| 10 | Augite in Rock | 34 | Jade |
| 11 | Barite | 35 | Jasper |
| 12 | Beryl | 36 | Kyanite |
| 13 | Biotite | 37 | Labradorite |
| 14 | Calcite | 38 | Lepidolite |
| 15 | Chalcedony | 39 | Limonite |
| 16 | Chlorite | 40 | Magnesite |
| 17 | Corundum | 41 | Magnetite |
| 18 | Diopside | 42 | Mesolite |
| 19 | Dumortierite | 43 | Microcline |
| 20 | Enstatite | 44 | Muscovite |
| 21 | Epidote | 45 | Natrolite |
| 22 | Fayalite | 46 | Nephelene |
| 23 | Fluorite | 47 | Oligoclase |
| 24 | Goethite | | |

F) Collection of minerals with distinct physical and chemical characteristics

| Sl.No. | Description | Set |
|--------|---|-----|
| 01 | Moh's Scale of Hardness ,No.1-9 (Small Pcs) in a Velvet Box and with | 5 |
| | 1no.each of the followings :- Diamond Tipped Pencil, Iron Plate, Brass Plate, | |
| | Glass Plate, Streak Plate, Pocket Lens 10X, Pocket Magnet-horseshoe type, | |
| | Pocket Knife-Multipurpose type, Acid Drop Bottle (Empty) all arranged in a | |
| | nylon Pouch | |
| 02 | Collection of 15 Minerals showing Natural Crystals | 1 |
| 03 | Collection of 15 Minerals showing Lustre | 1 |
| 04 | Collection of 15 Minerals showing Colour | 1 |
| 05 | Collection of 15 Minerals showing Cleavage | 1 |
| 06 | Collection of 10 Minerals showing Fracture | 1 |
| 07 | Collection of 12 Minerals showing Tenacity | 1 |

| 08 | Collection of 15 Minerals for Refractory Industry | 1 |
|-----|--|---|
| 09 | Collection of 10 Minerals for Cement Industry | 1 |
| 10 | Collection of 15 Minerals for Paints Industry | 1 |
| 11 | Collection of 15 Minerals for Building Industry | 1 |
| 12 | Collection of 10 Minerals showing Crystal Aggregates | 1 |
| 14 | Collection of 20 Common Minerals-Small Pcs. | 1 |
| 15 | Collection of 15 Volcanic Products | 1 |
| 17 | Collection of 10 Minerals showing Streaks | 1 |
| 18 | Collection of 10 Minerals showing Feel Properties | 1 |
| 19. | Collection of 12 Minerals showing Specific Gravity | 1 |
| 20 | Collection of 20 Minerals showing Habits | 1 |
| 21 | Munsell Rock Colour Chart, with 115 Colour Chips with Munsell numerical | 1 |
| | designation for identifying range of Rock Colours | |
| 22 | Munsell Soil Colour Chart developed in cooperation with the U.S. Soil | 1 |
| | Conservation Service guidelines for classifying colors of various soils. | |
| 23 | Sand Grain Size Chart /Folder for quick and accurate identification of grain | 1 |
| | size and shape, grain sorting, roundness, and sphericity of a sample | |
