

Replies to Question asked in the parliament. Details of question asked and replies given

1. Performa for inputs w.r.t. Lok Sabha Questions No. 61

(a) whether new senior counsels and special advocates have been appointed	Ms. Appoli Srivastava, Advocate Registration No. 5583 is being engaged as standing council of the Institute at Hon'ble High Court, Lucknow w.e.f. 09 th October, 2019 onwards.
(b) if so, the details thereof and if not, the reasons therefor;	NA

Table for detail of new senior counsels and special advocates (if appointed any) : NIL

S. No.	Bench	Name	Contact details (eg. Mobile No., address etc.)	senior counsels or special advocates	Date of engagement	Date of Expiry
01.	Lucknow Bench	Ms. Appoli Srivastava	Hon'ble High Court (Chamber A-303), Lucknow. Residential Address: AORA/1010,16 Murgh Khana, Peeli Kothi, Near City Station, Lucknow- 18 Mob: 9628607325 8318024270	Standing Counsel	09.10.2019 (The said engagement is temporary to deal judicial matter on a case to case basis.)	NA

2. Performa for inputs w.r.t. Rajya Sabha Admitted Questions No. 2875 sitting on 12th Dec 2019

Setting up of Internal Complaints Committee

S. No.	Question	Input
1.	Whether an Internal Complaints Committee (ICC) has been set up in the Autonomous Body	NIL
2.	Total number of complaints filed with ICCs in the Autonomous Body	NIL
3.	In how many of the complaints has the allegation been found to be correct;	NIL
4.	What action has been taken against those found guilty by the ICC in Government, Ministries and workspaces; and	NA (Note: Please annex separate sheet(s) for detailed input)

3. Lok Sabha Starred Question No. 198 for 2.12.2019- reg

Officer In-Charge
Parilament Unit ASI
New Delhi

Subject: Reply to query mentioned in the letter dated 20-11-2019 regarding setting up AMS Laboratory
Please find point wise answers to query raised.

(a) Whether Accelerator Mass Spectrometry (AMS) is essential to find the date of an object found in archaeological excavation and that are only few of these labs in our country?

Reply- Having AMS is not essential for obtaining a radiocarbon age of an object found in archaeological excavations as BSIP Lucknow has an operational Radiocarbon dating facility since 1974. The facility converts 1-3 ml of Benzene from carbon present in archaeological object followed by its beta decay counting using a *Quantulus* Liquid Scintillation Counter. However it must be noted that obtaining a radiocarbon date using aforementioned conventional radiometric method is labour intensive and time consuming process for two reasons, it involves much bigger size of sample (~10-15 gm of carbon present in sample i.e. ~200-300 gram organic rich sediment) and lengthy counting time about a week (per sample). Due to this, only a few type of archaeological material (viz. sediment, charcoal, bigger carbonate shells etc.) can be dated.

In contrast, AMS technique requires only 1mg of pure carbon from archaeological material in form of graphite powder and ~40 minutes of counting time. This opens a whole new dimensions of radiocarbon dating such as a few charred carbonized grains, small piece of cloth, rope, teeth, bone could be dated. Compared to the conventional radiometric dating cost, cost involved with AMS technique is much higher as the AMS equipment itself is worth ~18-20 Crores (350-600 USD per sample on payment basis). To cope up with requirements of archaeology and other allied subjects, BSIP has recently created only a sample preparation facility for AMS dating that involves automatic graphitization of both organic and inorganic samples. It was carried out as cost of AMS dating (on payment basis) reduced quite significantly from 350-600 USD to ~100 USD. BSIP is carrying out successfully graphite preparation of sediment, charcoal, charred botanical grains, small carbonate shells, enamel from fossil teeth and collagen extracted from fossil bones.

BSIP do not have yet the major equipment i.e. AMS however, India has now two operational AMS for radiocarbon dating one in IUAC New Delhi and the other with Physical Research Laboratory Ahmadabad. In future, depending availability of funds, BSIP would like to have its own AMS equipment to completely transform its ~45 year old Radiocarbon dating facility. (b) Whether Archaeological Survey of India (ASI) has any plan to set up an AMS laboratory in Tamilnadu in collaboration with UGC as it is archaeological rich state.

Reply- Not applicable.

(c) If so, the details thereof and the steps taken by the Government in this regard; and

Reply- Not applicable.

(d) If not, the reasons thereof?

Reply- Not applicable.

Reply of Rajya Sabha Question No.S5084 sitting on 06th Dec 2019, regarding Consultants within S&T Ministry.

1	The Number of full time consultants and /or advisors who are currently working with the autonomous bodies/institutions as of 31 st August 2019;				NIL
2	Details of full time consultants and/or advisors (reference point 1 above), if any				
	S.No.	Name of consultant and/or advisor	Since when are they working and what is; and	Monthly remuneration	The total amount of honorarium/salary/fees being awarded to them
		-	-	-	-
		-	-	-	-
		-	-	-	-
		-	-	-	-
3	the details of mechanism, if any, of assessing their performance periodically?				-

5. Lok Sabha Unstarred Question No. 2564 for 03.01.2018 regarding SC/ST Scientists as on 01.01.2018 -Reg

Name of AI / PB:			BIRBAL SAHANI INSTITUTE OF PALAEOSCIENCES LUCKNOW			
Scientists of Level		As on 01.01.2018			As on 01.12.2019	
No. of regular Scientist		No. of Recruited Scientists in the last			No. of regular Scientist	
Total	SC/ST	Total	SC/ST	Total	SC/ST	
15	1	0	0	0	1	0
14	0	0	0	0	1	0
13A	8	2	0	0	3	0
13	8	0	0	0	5	0
12	12	5	0	0	17	5
11	25	1	0	0	21	1
10	10	0	24	1	9	0
Total	64	6	24	1	57	6

6. Performa for inputs w.r.t. Rajya Sabha Questions S936, 588, U1595

ORGANIZATION NAME: BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, LUCKNOW

In response of RSPQ No. S936	1(a)	how many law suits the Autonomous Body is facing in various High Courts and the Supreme Court as of 31st August, 2019;	1 write Petition no. 21526 - 2018						
			2 F.A.57 - 1999						
			3 F.A.58 - 1999						
			4 Write Petition no.2765(S/S) - 2006						
			5 Write Petition no.20052(S/B) - 2017						
	1(b)	what is the High Court-wise statistics of these cases (i.e. detailed in response of 1(a) above) that have been filed and since when	(Note : please attach different annexure for different High Court statistics and requested to send the soft copy of the same for compilation)						
	1(c)	how many of these law suits (i.e. detailed in response of 1(a) above) are filed by Government Departments/Government Establishments including Autonomous Body or State Government ; and	---						
	1(d)	whether the Autonomous Body has evolved any structured mechanism to minimise the number of law suits being filed, if so, what is the nature of the same and if not, the reasons therefor?	---						
In response of RSPQ No. 388	2(a)	Total number of ongoing litigation cases in courts where Government is a party to the dispute;	---						
	2(b)	the percentage of such litigation w.r.t. the litigations detailed in response of 2(a) above, that has been initiated by Government;	---						
	2(c)	whether the Legal Information Management and Briefing System (LIMBS) platform comprehensively tracks all such litigations?	---						
In response of RSPQ No. U1595	3(a)	the details of the expenditure on lawyers fees and other related expenses incurred by Autonomous Body on litigation where Government/Autonomous Body is a party during the last three years: and	<table border="0"> <tbody> <tr> <td>FY 2016-17</td> <td>RS 1,13,170.00</td> </tr> <tr> <td>FY 2017-18</td> <td>RS. 1,81,800.00</td> </tr> <tr> <td>FY 2018-19</td> <td>RS. 53,000.00</td> </tr> </tbody> </table>	FY 2016-17	RS 1,13,170.00	FY 2017-18	RS. 1,81,800.00	FY 2018-19	RS. 53,000.00
FY 2016-17	RS 1,13,170.00								
FY 2017-18	RS. 1,81,800.00								
FY 2018-19	RS. 53,000.00								

3(b)	the details of the expenditure on lawyers fees and other expenses incurred by Autonomous Body/Government on litigation initiated by it, as well as litigation for disputes inter-se Government Ministries, Departments, Autonomous Body and Public Sector Undertakings during the last three years;	FY 2016-17 RS 1,13,170.00 FY 2017-18 RS. 1,81,800.00 FY 2018-19 RS. 53,000.00
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7. Parliament Committee on the Welfare of Scheduled Castes and Scheduled Tribes - Role of Ministry of Personnel, Public Grievances and Pensions (Department of Personnel and Training) in Formation, Implementation and Monitoring of Reservation Policy - Regarding.

Group	Vacancies status after 15.06.2018		
	Vacancies as on 15.06.2018	Posts filled thereafter	Present position of vacancies
	Total SC ST	Total SC ST	Total SC ST
Group A	12 10 2	---	12 10 2
Group B	--	---	--
Group C	3 1 2	---	3 1 2
Total	15 11 4	0	15 11 4

8. LOK SABHA UNSTARRED QUESTION NO. 666 & 3651 reg.-

Input for Parliament Question No. 666 & 3651

बीरबल साहनी पुराविज्ञान संस्थान, लखनऊ

BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, LUCKNOW

For F.Y. 2013-14

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provides in F.Y. 2013-14 (in Rs. Lakh)
1	Palynological investigations of mangroves from South Andaman island, India: Implications in vegetation change, palaeoclimate and sea-level fluctuations during Late Quaternary.	SR/FTP/ES-97/2012 Under Young Scientist Scheme	SERB/DST	Rs. 9,20,000/-
2	Past climate change and tree line dynamics based on tree-ring date from the Himalayan region	SR/S4/ES/621/2012	SERB/DST	Rs. 9,35,000/-
3	Late Quaternary climate and glacial study from Dokriani and adjoining area, Upper Bhagirathi Valley, Western India	SR/DGH/44/2012	SERB/DST	Rs. 18,00,000/-
4	High resolution palaeoclimate and palaeoceanographic study on eastern Arabian Sea of Saurashtra based on foraminifera and their geochemical signature.	SR/FTP/ES/63/2013 Under Young Scientist Scheme	SERB/DST	Rs. 5,80,000/-
5	Changes in the biosphere across the transition of Mesoproterozoic-Neoproterozoic succession of Buxa Formation, Sikkim, Lesser Himalaya and its correlation with coeval successions	SR/FTP/ES-151/2014	CSIR Fellow	Rs. 2,79,200/-

For F.Y. 2014-15

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
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6	Extending the dating range of Luminescence technique using fieldspars	SR/FTP/ES-56/2011-13 Under Young Scientist Scheme	SERB/DST	Rs. 6,17,190/-
7	Linking Vadoze Zone Microbial Ecology Geochemistry of sediments cores from Alluvial Mahi River Basin, Western India	SR/S4/ES-545/2011	SERB/DST	Rs. 3,50,000/-
8	Palaeogene Vertebrate Fauna from Lignite associated sedimentary sequence of Western India:	SR/S4/ES/621/2012	SERB/DST	Rs. 9,83,257/-

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
9	Collection, identification, documentation, exploration and conservation of biodiversity of parasitic foliicolours hyphomycetous fungi from Tarai forests flora of Uttar Pradesh	SB/YLS/LS-288/2013	SERB/DST	Rs. 6,00,000/-
10	Studies on the late quaternary vegetation and climate change in Jammu and Kashmir, India on the basis of pollen proxy records	SR/FTP/ES-81/2013	SERB/DST	Rs. 5,20,000/-
11	Studies on the late quaternary vegetation and climate change in Jammu and Kashmir, India on the basis of pollen proxy records	SR/FTP/ES-81/2013	SERB/DST	Rs. 5,20,000/-
12	Vegetation succession and climate oscillation since late Quaternary from northern Assam North-east India: a multi proxy analysis	SB/EMEQ-225/2014	SERB/DST	Rs. 9,50,000/-
13	Palaeofloristics of Lower Gondwana sediments of India and Brazil with special reference to palaeowild fire: Implications in palaeoecology, palaeoclimate and biostratigraphy	Ind/Brazil/P-06/2013	SERB/DST	Rs. 11,11,370/-
14	Characterization of glacial lake deposits of the Ladakh, NW Trans Himalaya Implications on landscape evolution and palaeoclimate.	SR/DGH/69/2013	SERB/DST	Rs. 30,00,000/-

15	Palaeoclimate and Lake history of Trpovan Gangotri Glacier, Garhwal Himalaya.	SR/DGH/56/2013	SERB/DST	Rs. 32,84,000/-
16	Indo-Swiss collaborative project	Nil	SERB/DST	Rs. 15,00,000/-
17	Sediments Geochemistry and Sedimentology (alongwith these proxies I also used palynofacies environmental magnetism)	SR/FTP/ES-16/2014	SERB/DST	Rs. 5,50,000/-
18	Palaeobotanical and sedimentological studies on Indian and Sri Lankan basins with special references to Gondwana flora, their palaeoenvironmental and palaeogeographical implications	INT/SL/P-002	SERB/DST	Rs.10,76,400/-
19	Mangrove dynamics and relative sea level changes during the late Quaternary in Godavari Basin	SR/FP/ES-84/2014	SERB/DST	Rs. 17,50,000/-
20	High Resolution stable isotopic and geochemical studies of the Late Neoproterozoic Early Cambrian Bilara Group, Marwar Supergroup, Rajasthan to understand the contemporary carbon cycle and the Shuram engine.	SR/FTP/ES-107/2014	SERB/DST	Rs. 5,50,000/-

For F.Y. 2015-16

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
21	Catalogue on Angiosperm pollen Grains from Indian Tertiary Sediments	SB/UR/10/2014	DST	Rs. 4,83,000/-
22	Deciphering high resolution climatic changes in Indian Himalaya for the last 20,000 years by employing manifold archives with emphasis on extreme climatic events of multi-annual	MoES/P.O/Geology/43/2015	MoES	Rs. 7,00,000/-
23	Quantitative reconstruction of the Palaeogene climate of palaeoequatorial region based on Indian palynological records.	MoES/P.O/Geosci/36/2014	MoES	Rs. 46,82,229/-
24	Provenance and environmental records of lake sediments from Kerala, Southern India using a suite of geochemical proxies	SR/FTP/ES-153/2014	SERB DST	Rs. 8,00,000/-

25	Glacial chronology Paleoclimate reconstruction and their climatic implications in the Thangu Valley, Sikkim Himalaya, India with special emphasis on luminescence characteristics of feldspar and quartz.	SB/DGH-89/2014	SERB DST	Rs. 12,00,000/-
26	Changes in the biosphere across the transition of Mesoproterozoic Neoproterozoic succession of Buxa formation, Sikkim, Lesser Himalaya and its correlation with coeval successions.	SR/FTP/ES-151/2014	SERB DST	Rs. 11,25,000/-
27	Facies dynamics of Palaeocene Eocene carbonates from Meghalaya, N-E India: Palaeoenvironmental implications.	SR/FTP/ES-143/2014 Under Young Scientist Scheme	SERB DST	Rs. 9,00,000/-
28	Late Quaternary vegetation and climate oscillation from endangenerated wetlands and surroundings reserve forests of Manipur, northeast India: based on pollen and NPP records.	SR/FTP/ES-141/2014 Under Young Scientist Scheme	SERB DST	Rs. 57,00,000/-
29	Late Quaternary biotic abiotic interactions from the Harshad estuary, Gujarat, India: implications on Palaeo-productivity and climate.	SR/FTP/ES-149/2014	SERB DST	Rs. 5,00,000/-
30	Reconstruction of climate and dating of Geo-hazards related to hydr-geomorphic evidences from Sikkim Himalaya based on tree-ring proxy.	SR/FTP/ES-127/2014	SERB DST	Rs. 14,00,000/-

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
31	Analysis of Plants and human relationship since Late Pleistocene from Dzoko valley, Nagaland, Northeast India.	YSS/2015/001193	SERB DST	Rs. 18,00,000/-
32	Mesozoic fluvial and coastal deposits of Jaisalmer Basin, Rajasthan: Palaeoclimatic, Playnostratigraphic and palaeobiogeographic implications based on fossil floras.	SB/EMEQ-161/2014	SERB DST	Rs. 16,70,000/-
33	Late Quaternary Palaeoclimatic/sea level changes and anthropogenic responses from	SB/EMEQ-161/2014	SERB DST	Rs. 16,70,000/-

34	Late Quaternary Palaeoclimatic/sea level changes and anthropogenic responses from estuarine complexes of western India: A multi-proxy approach.	SB/EMEQ-244/2014	SERB DST	Rs. 26,50,000/-
35	Subsistence pattern, Vegetation Dynamics and Climate change during Harapan (Indus) and subsequent cultures in North-Western India: A palaeoethnobotanical approach	EMR/2015/000881	SERB DST	Rs. 26,70,000/-
36	Analysis of Holocene climate change in Tripura and Mizoram based on pollen, environmental geomagnetism and isotope data	SR/WOS-A/ES-18/2014 [©]	DST (Women Scientist Scheme)	Rs. 5,40,000/-
37	Investigation of high-attitude climate variability during Holocene around Hamtah Glacier, Lahaul-Spiti, Western Himalaya, India	SR/WOS-A/ES-1018/2015 [©]	DST (Women Scientist Scheme)	Rs. 4,95,000/-
38	Macro and micro phytodiversity and behavioral pattern of pollen deposition in and around endangered wetlands of Assam: a palaeoecological conversational perspective	EMR/2014/000233	SERB DST	

For F.Y. 2016-17

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
39	Tree growth response of selected tree species of timber line to climate variability across the Indian Himalayan Region	1882/XII-86/2016	NMHS jointly with GBPIHED	Rs. 4,77,200/- Rs. 900000/-
40	Palyno-biozonation and palaeoclimatic reconstruction of Permo-Mesozoic sediments West Bokaro Coalfield, Damodar basin	SERB/F/1960/2016-17	SERB-DST	Rs. 6,00,000/-

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
41	Pliocene Arctic Climate Teleconnection (PACT)	MoES/Indo-Nor/PS-8/2015	MoES	Rs.18,21,478/- Rs.22,26,000/-
42	Analysis of the Early Eocene Amber from Cambay and Kutch basin, Gujarat India: palaeological environmental and Climatic significance	EEQ/2016/000112	SERB-DST	Rs. 20,50,000/-

For F.Y. 2017-18

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
43	Probing the Evolution of Late Miocene Bottom Water Oxygenation: A Stable Metal Isotope Constraints (IODP-355 Arabian Sea Monsoon Expedition)	NCAOR/IODP/2015/15(V)	NCAOR	Rs.10,01,000/-
44	Palaeoclimate and palaeoceanography of the Lower Bengal fan from Late Paleogene to present -IODP Expedition 354	NCAOR/IODP/2015/15(V)	NCAOR	Rs.10,01,000/-

For F.Y. 2018-19

S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
45	Mesoproterozoic microbotas of Eurasia: an integrated approach to the Indian and Russian early eukaryte-dominated assemblages	INT/RUS.RFBR/P-278	DST	Rs. 10,90,400/-
46	Biostratigraphy of Kerala based on palynology and calcareous nannofossil: implications on palaeovegetation and palaeoclimate	EMR/2016/005983	SERB	Rs. 9,50,000/-
47	Quantifying the Holocene monsoonal variability using modern vegetation climate relationship in the western margin of the Bengal Basin, India: Development of transfer functions	EMR/2016/005209	SERB	Rs. 15,80,000/-

48	Quest for the signatures of early plants, their subsequent evolution and biodiversity in the Early Palaeozoic sequences of Spiti Himalayas: Palaeoenvironmental and palaeogeographical implications	EMR/2016/006042	SERB	Rs. 10,75,000/-
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S. No.	Title of new Science and Technology Projects undertaken in F.Y. 2013-14	Reference No. (if any)	Name of Division & Department of Funding Agency	Funds provided in F.Y. 2013-14 (in Rs. Lakh)
49	Study of floral evolution and macroscopic charcoal: an indicator of wild fire during the late Palaeozoic sediments of northeast India: implications in palaeoclimate, palaeoecology, biostratigraphy and palaeogeography	EMR/2017/001408	SERB	Rs. 9,00,000/-
50	Land Sea Interactions along coastal wetlands of Gujarat, Western India: Mangroves response to climate and sea level changes during the Holocene.	EMR/2017/004795	SERB	Rs. 22,10,000/-
51	Reconstruction of Long term soil moisture evaporation in drought prone Budelkhand and Vidharbha regions using tree ring cellulose isotope date.		SERB	Rs. 42,00,000/-

9. LOK SABHA UNSTARRED QUESTION DY. NO. 1597 regarding 'Promotion of Institution' – for reply on 28 June 2019 reg.

Compliance to Lok Sabha unstarred question DY No. 1597 regarding 'Promotion of Institution'

Promotion of Institution

- (a) Whether the Government proposes to promote institutions under the Science and Technology Department, if so, the action taken their development.

Compliance: BSIP is an autonomous institution under Department of Science and Technology, Government of India. The Government promotes the institution for its overall progress and development. The mandate of the institution is to promote basic research in Palaeosciences and popularization of this specialized branch of science that is an amalgamation of plant, animal, earth, physical and chemical

sciences. The overall development of BSIP can be ascertained by the significant progress of publication profile and establishment of advanced State-of-the-Art Geochemical laboratories.

(b) Whether the Government proposes to or has entered into agreement with private institutions for making arrangements for educational purpose, if so, the details thereof:

Compliance: Till date BSIP has executed MoU with one Private University (UPES, Dehradun) for educational purpose (Registration of Ph. D. students).

(c) The details of the agreement executed between the Sree Chitra Tirunal Institute of Science and Technology (SCTIMST) Thiruvananthapuram with other private institutions for educational and other purposes.

N.A.

(d) Whether the SCTIMST obtained prior permission from the Union Government for entering into agreements with private agencies, if so, the details thereof; and

N.A.

(e) Whether the Government proposes to give full authority to the SCTIMST for entering into agreements with private agencies and if so, the details thereof along with the extent of powers vested therein?

N.A.

10. Lok Sabha Question Dy.No. 683 for a reply on 06.02.2019 regarding Attrition of Scientists

Reply of Lok Sabha D.N0. 683 are as follows:

(a) Whether attrition of scientists from research institutions and laboratories is being witnessed and if so, the details in this regard;

No scientist has resigned and left the institute during last 10 years, hence reply to the above questions is NA

(b) Whether there is any system of holding exit interviews of scientists who indicate their willingness to quit research institutions/labs exists and if so, the details thereof and if not, the reasons therefor;

NA

(c) Whether the Government has taken any steps to encourage reverse brain drain of scientists from abroad and if so, the extent to which such measures have been successful;

NA

(d) If so, the details of the number of scientists who have been repatriated, and

NA

(e) The details of the steps taken/proposed to be taken to assist the scientific community and motivate them to continue their research in the country?

NA

11. Lok Sabha Unstarred Question D.No. 7422 regarding 'Recorded Innovations' –

(a) i). Grants in aid received – Rs. 26,48,25000.00

ii) Grant Utilized - Rs. 26,48,25000.00

(b) The mandate of research for Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow was initially focused on classical Palaeobotanical research. During the last five years the scope of research has been widened from core Palaeobotany to Palaeosciences. Initiatives taken by BSIP towards modern approaches in Palaeosciences during the last five years are:

2014-15

Dating (age determination) of glaciated terrain, quaternary sediments and archaeological artefacts with newly installed TL/OSL) system.

2015-16

- Studies for bio-molecular characterization of organic matter that may help in fossil fuel exploration and their by products with newly installed GC-MS.

- Isotopic characters to establish monsoonal fluctuation in geological past and source material establishment with newly established IRMS laboratory at BSIP.
- Ultra trace element analysis having wider implications in environmental studies using state-of-the art geochemical analysis using ICP-MS installed in the institute.
- Identification and new metal/alloy discoveries including nano-materials using newly installed XRD equipment.

2016-17

Installation and generation of data by the newly installed equipments: Particle Size Analyzer, HPGe, Isodynamic Magnetic Separator, etc. for further strengthening the geochemical analysis. For the study of environmental magnetism and magnetostratigraphy, magnetic susceptibility measurements have been initiated.

2017-18

Ancient DNA laboratory established at BSIP reveals that in Late Pleistocene ostriches existed in the Indian sub-continent. In addition, FE-SEM., CHNS analyzer, Confocal Laser and Raman Spectroscopy have been introduced for very high resolution study of the ultrastructure of the fossil and recent materials.

2018-19

Significant study on Genetic diversity of human population inferring from modern and ancient DNA have been carried out in the newly established Modern DNA laboratory at BSIP.

(c) As far as BSIP, Lucknow is concerned the Institute is fully funded by DST, New Delhi and the scientists of this institute are capable of impart training to young brains for innovations in researches on Palaeosciences, a specialized branch of Science & Technology.

(d) Not Applicable

(e) The Union Government is providing ample opportunities to scale up innovations in the form of sponsored research projects and various fellowships to the young researchers (e.g., CSIR-UGC NET, INSPIRE, NPDF and other national fellowships).

12. Starred Rajya Sabha Question 349 & Review Meeting.

S. No.	Question	Group/ Year	2014	2015	2016	2017	2018	2019		
1.	Number of vacancies arisen since May, 14 to 01 st July, 2019	Group A	14	16	20	15	24	25		
		Group B	00	00	00	01	01	02		
		Group C	27	32	35	37	32	36		
2.	Number of vacancies filled since May, 14 to 01 st July, 2019	Group A	02	00	02	11	00	01		
		Group B	00	00	00	02	00	00		
		Group C	06	00	00	05	04	01		
3.	Details of vacancies abolished	Group A	-N.A.-							
		Group B	-N.A.-							
		Group C	-N.A.-						Reasons	Steps taken to fill
4.	Details of vacancies lying vacant for more than two years and reasons thereof and Steps taken to fill these vacancies.	Group A	-	-	-	-	-	-		
		Group B	-	-	-	-	-	-		
		Group C	-	-	-	13	-	Cancellation of the advertisement due to technical reasons.		The process for the notification for the vacant posts as per the new roster (Inclusion of EWS category) is in process.

13. LOK SABHA UNSTARRED QUESTION No. 3201 (Dy. NO. 3713) regarding 'Vacant Posts of Scientists' – for reply on 12 July 2019.

Questions:

- (a) the **number** of posts of scientists lying vacant in top scientific institutes of the country, institute/laboratory-wise;
- (b) the steps being taken by the Government to fill up the said vacancies;
- (c) the details of the scheme formulated by the Government to encourage women scientists in the country along with the outcome of the said scheme during the last five years;
- (d) whether the Government has any scheme to provide opportunity through fellowship to the students of the schools and colleges in the country to work in top laboratories of the country on the lines of America and Europe, if so, the number of young scientists invited in this regard; and
- (e) the details of the laboratories which are participating in this work?

Reply:

- a) - 25 Nos.
- b) - N.A.
- c) - N.A.
- d) - Ten post Doctoral Fellows (Birbal Sahni Research Associate) are working in the Institute as Young Scientist on different aspects of Palaeosciences as per mandate of the Institute.
- e) - N.A.