



# Initiative for Moral and Cultural Training Foundation [IMCTF]

## Sustain Environment

[Theme III]



***“Ganga Vandanam” and “Bhoomi” Vandanam***

***Reverence for  
Mother Earth,  
Rivers and Nature***

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# Sustain Environment

*Ganga Vandanam, Bhoomi Vandanam*

**MATA Bhoomi: PUTRO AHAMPRITHIVYA:**  
(ATHARVA VEDA 12|1|12)

*Meaning : Earth is my mother and I am her son.*

***Reverence for Mother Earth, Rivers and Nature***

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## The IMCT Philosophy in a nutshell

**The Initiative for Moral and Cultural Training [IMCT]** is an innovative module devised to **impart, implant and ingrain cultural and moral values** in young boys and girls. The essence of the IMCT programmes insists **only on voluntary participation** by the educational institutions, teachers, students, parents and the public.

**IMCT** has devised training modules [Samskarams] which are **scientifically devised, connected to the timeless values of our tradition**, based on emotional quotient and grounded in our civilisational assets and virtues.

IMCT offers knowledge and protection to young boys and girls who **often drift from our ancient Indian culture due to contextual compulsions and peer pressure under the pervasive effect of ill-defined modernity** that undermines traditions, family and societal values.

**IMCT** Samskarams rest on the ancient **Indian philosophy of “Isavasyam Idam Sarvam”** [everything, even the tiniest atom, is manifestation of the Divine]. This principle manifests in the six Themes or values of IMCT namely— **Conserving Forests and Protecting Wildlife, Preserving Ecology, Sustaining Environment, Inculcating Human and Family Values, Fostering Women’s Honour and Instilling Patriotism.**

**IMCT** has devised Samskarams [training modules] for each Theme [value] to impart and implant the values in the minds of young boys and girls **volunteering to participate** in its programmes.

**IMCT’s thematic samskarams are designed to penetrate the subconscious**, so not just to make impact on the students’ thinking but to influence their conduct as well to inspire them.

**IMCT’s programmes rest on the triangle of Themes [values], Samskarams [training] and Symbols [sign]** to implant reverence in them towards nature, trees and wildlife, all living beings, parents, elders, women and nation underlying the six Themes.

**IMCT** provides moral and cultural anchor through thematic samskarams by connecting the Symbols with the Themes in **young minds — so that they recall the forest when they see a tree.**

**IMCT** programmes are devised to **protect and preserve our heritage, family, society, nation and economy.**

**IMCT** trusts that **Virtues and Values build families, societies and nation.**

**IMCT** intends to prepare the young Indians to measure up to their national and global responsibilities, **as Bharat is rising as a Geo-political, economic and cultural power.**

**IMCT** believes, **individual’s personality building through thematic samskarams is directly connected to Nation Building.**

**IMCT’s motto** therefore is : **“Value Building is Nation Building”**



## Preface

The Initiative for Moral and Cultural Training Foundation [IMCTF] has worked on how to impart values and implant them deep in the consciousness of young students in their highly impressionable years. IMCTF enables the young boys and girls to imbibe values and handle the contemporary world which is founded on west centric modernity. The corpus of knowledge built by the IMCTF aligns the basic and fundamental values of Indian Civilisation and Culture which is the timeless heritage of India to the contemporary life.

**The IMCTF modules are designed with value imparting training known as “Samskarams” in ancient Indian thought.** The IMCTF training models are classified into six basic Themes which connect the core of the culture of India to the contemporary challenges. The six Themes are: Conservation of Forests and Protection of Wildlife; Preserving Ecology; Sustaining Environment; Inculcating Family and Human Values; Fostering women’s honour and Instilling Patriotism.

The first three Themes — namely Conserve of Forests and Protect of Wildlife, Preserve Ecology and Sustain Environment — are bound to the most challenging issue of Climate Change which is regarded as the greatest challenge ever faced by humans in history. All contemporary works on Forests, Ecology and Environment are almost agreement with the fact that all ancient thought systems and indigenous cultures had a reverential attitude to nature which the contemporary world has undermined. With the result humans who were preserving and Conserving Nature turned into their consumers and destroyers. The IMCTF Thematic Samskarams endeavour to bring Reverence back into human relation with nature. It endeavours to re-build human consciousness to Conserve Forests by recalling the ancient Reverence for Trees and even by Reverence for Wildlife like Snake, to Preserve Ecology by traditional Reverence for Animals like Cow, Elephant and plants like Tulasi, and to Sustain Environment by Universal Reverence for Rivers, Nature and Mother Earth.

The fourth Theme, Inculcate Family and Human Values, builds reverence for parents teachers and even strangers — consistent with the ancient Indian values. The fifth Theme, Foster Honour of Women recalls and builds respect for Girl Child and Womanhood in accord with the traditions and culture of diverse communities in different

parts of India. The sixth Theme, Instill Patriotism builds Reverence for Mother Land through the pre-independence spirit of worshipping Bharatamata. The contemporary respect for the Paramveer Chakra Awardee heroes belonging to all communities of India who sacrificed their life in defense of the motherland is added as an immediate emotional connect for Instilling Patriotism.

The IMCTF Themes have worked on the sociological and cultural inheritance and resources of India and by effective use of Symbols and Symbolism has designed a triangular module of Themes, Samskarams and Symbols as demonstrated here:

<b>S. No.</b>	<b>Theme</b>	<b>Samskaram</b>	<b>Symbols</b>
1	Conserve Forest & Protect Wild life	Reverence for Plants & Wild Animals	Vruksha Vandanam Naaga Vandanam
2	Preserve Ecology	Reverence for all Plant Kingdom and Animal Kingdom	Go Vandanam Gaja Vandanam Tulasi Vandanam
3	Sustain Environment	Reverence for Mother Earth, Rivers and Nature	Bhoomi Vandanam Ganga Vandanam
4	Inculcate Family & Human Values	Reverence for Parents, Teachers and Elders	Maathru-Pitru Vandanam Aacharya Vandanam Aditi Vandanam
5	Foster Women's Honour	Reverence for Girl Children and Motherhood	Kanya Vandanam Suvaasini Vandanam
6	Instill Patriotism	Reverence for Nation and National War Heroes	Bhaarat Maata Vandanam Param Veer Vandanam

The Symbols are powerful reminders of the Theme and the Samskarams connect the Theme and the Symbols and make those



who undergo the training to recall the Theme through the Symbols — like when one undergoes the Samskaram of Vruksha Vandanam will see a Forest in a Tree or like one who undergoes the Samskaram of Tulasi Vandanam will recall the entire plant kingdom. The Samskarams by effective use

of Symbols build a deep emotional connect with the Theme and influence not just the thinking of the young but also their conduct.

The scientific, historic, sociological, cultural and psychological corpus of knowledge underlying the IMCTF training modules are contained in the six thematic volumes. This volume is devoted to the value of Sustain Environment

The triangle of the Themes, Samskarams and Symbols is inherited through the age-old traditions, which this great country has preserved. The idea that the entire creation is Divine [God] is a cultural foundation of this country. Without this country the world will be bereft of this high consciousness of the whole creation as manifestation of God. That is why the motherland itself is revered as divine in our tradition. In IMCTF's view, the Nation [Desam] itself is Divine [Deivam], its value system is [Dharmam] and all the three—Desam, Deivam and Dharmam are therefore inseparably interlinked.

**S.Gurumurthy**

*Chairman, Advisory Committee*



## Suggestions for Efficient Conduct of Thematic Samskarams

Initiative for Moral and Cultural Training Foundation [IMCTF] has designed a set of suggestions to enable the associate schools for conducting the Thematic Samskarams uniformly and efficiently as mentioned here under.

IMCTF emphasises **voluntary participation** by students, teachers, parents, and neighborhood.

### 1. Suggestions for Associate Schools [schools which have agreed to be the associate of IMCTF]

The associate schools may follow the given suggestions for the proper conduct of the IMCTF programmes in their respective schools.

- i. Display the board designed by IMCTF to indicate the school's association with IMCTF at the entrance of the school.
- ii. Display panels and thematic posters of IMCTF at prominent locations where parents, visitors, teachers and students will be able to read.
- iii. Depute an interested and involved teacher to be the IMCTF Faculty.
- iv. Form IMCTF chapter in the school headed by the IMCTF Faculty and consisting of teachers who have undergone the IMCTF training programmes.
- v. Motivate and encourage teachers and students to partake in the IMCTF programmes;
- vi. Include IMCTF thematic programmes in the school calendar to facilitate advance planning.
- vii. Invite and encourage all students, teachers and parents to volunteer to witness the performance of IMCTF programmes.
- viii. Assist in sponsoring or identifying the sponsors to meet the expenditure towards
  - a) Prizes to winners of Thematic competitions
  - b) Printing handbills, publicity materials
  - c) Performing Thematic Samskarams
  - d) Video and photography

## 2. Suggestions for IMCTF Chapter in School

The IMCTF Chapter in each school may endeavour to do the following

- i. The IMCTF Chapter in each associate school will plan and guide the conduct of the samskarams.
- ii. Display the IMCTF panels in different locations of the school, so that it draws students to read and understand the goal of IMCTF programmes.
- iii. Display the thematic posters in the classrooms and prominent places one month ahead of the date of the programme.
- iv. Display of banners with particulars of the date, time and venue as well as the guests in prominent locations inside and outside the school area.
- v. Encourage the students to participate in the programmes voluntarily.
- vi. Choose the students who volunteer to participate carefully.
- vii. Encourage teachers, parents and neighbours to participate and/or witness the programme.
- viii. Invite and encourage the neighbouring schools and their management to participate or witness the Samskarams.
- ix. wherever possible Invite the management officials of the neighbouring schools or their principals as chief guests or guests of honour for the programme.
- x. Invite as far as possible important people in the neighbourhood, instead of a celebrity, as chief guest or guest of honour.
- xi. After identifying chief guest brief him/her about the IMCTF programmes.
- xii. Design invitation and hand bills for printing.
- xiii. Choose the appropriate and attractive words to describe the samskarams in banners and hand bills and for publicity.
- xiv. Plan and conduct competitions based on the selected Theme from the competition manual provided by IMCTF among all classes and in the neighbouring schools, if possible.

- xv. Select a proper Master of Ceremony in English and Tamil [Regional language] who can articulate well.
- xvi. Choose singers and get them well-versed in the slokams and thematic songs in the sequence listed in the Annexure-I
- xvii. Nominate follow up teams to carry out the Samskaram throughout the year;
- xviii. Select the songs, skit, drama and dances relevant to the theme and stage them by involving the volunteering younger students.
- xix. Review-team mainly constituted by IMCTF Faculties and higher-class volunteer students.
- xx. Get feedback in the form of writing and by videographing from performing students, participants, visitors and Guests after the completion of the programme.
- xxi. Get video and photos of the programmes for the school and for IMCTF
- xxii. Prepare well worded write ups for media, IMCTF and school souvenir.
- xxiii. Prepare document or PPT showing the preparations and programme which can be screened in future.

### **3. IMCTF programme as the bridge between the school and neighbouring residents, traders and eminent personalities**

The schools and local residents, businessmen, and important people of the neighbourhood do not interact on any common programme. The schools are like islands. Therefore IMCTF programmes will be a great bridge between schools and neighbourhood. So the school will be benefited greatly if the neighbourhood is personally invited by management, teachers, students depending on who is to invite whom.

### **4. Suggested approach for participating students**

The participating students may be encouraged to

- i. Partake on their own will voluntarily.
- ii. Study the panels and posters of the IMCTF related to the samskarams to imbibe the values imparted.
- iii. Receive consent from the parents to participate in the samskarams.



- iv. Perform and participate in the samskarams in the appropriate attire.
- v. Invite or accompany their parents for the programme.
- vi. Get inspired and to concentrate wholly in the programme and should realise the need and necessity to practise it.
- vii. Practise the samskaram as a part of their daily routine and observe the transformation in their conduct.
- viii. Share their experiences with others.

## **5. Suggested approach to media**

- i. Media may be informed in advance.
- ii. Television channels may be encouraged to telecast the samskaram as attractive as possible for viewers.
- iii. A brief note of IMCTF concept, how the selected Thematic Samskaram is scientifically devised and connected with the timeless values of our tradition also may be described to media well in advance of the programme.
- iv. Encourage publications of articles in local newspapers and visual channels

## **6. Role of IMCTF**

- i. IMCTF Will give all support at any level for the conduct of the programme.
- ii. Will provide well in advance the posters, quiz book, thematic songs, thematic competition materials in Indian national languages, Arts & Crafts, Carnatic Classical and Folk cultural, Games etc that are relevant to the theme that the school is to perform as a Thematic Samskaram.
- iii. Will coordinate with media for the programme if informed ahead of the programme
- iv. Will felicitate to inform other IMCTF associated schools about the event.

## **7. Suggestions for follow up**

- i. Follow up is the crucial to implant the values in the participating students as otherwise the programme will be merely an event.

- ii. The IMCTF chapter may conduct competitions — essay writing, oratorical, quiz, and other competitions on the thematic competitions.
- iii. Such competitions may also be conducted for other schools as inter school competitions.

## **IMCTF Classifies the Thematic Samskaram Programmes as follows**

1. Dress Appropriate for Samskarams
2. First requirements
3. Pre-programme preparation
4. Arrangements at the programme
5. Suggestions for conducting Thematic Samskaram
6. Performance of the Samskaram
7. Post programme
8. Follow up

### **1. Dress Appropriate for the Samskarams**

- i. The Participant students may be encouraged to wear traditional dresses.
- ii. However for Paramveer Vandanam, the dress code will be more appropriate to be in army, navy, air force uniform dress.
- iii. Women teachers and guests may be requested to wear sarees.
- iv. Teachers who are men may be requested to wear dhoti, kurta or formal shirt.

### **2. First Requirements**

- i. The management's involvement, support and encouragements will enhance the introduction of IMCTF programmes in the respective schools.
- ii. Make the teachers, parents and students aware of the vision and goal of IMCTF through handbills and banners kept in prominent locations inside and outside the school premises.
- iii. The management and parents may assist in sponsoring or identifying the sponsors to meet the expenditures on various heads of the programme.

- iv. Identifying voluntary teachers and other staffs of the school to conduct IMCT programmes in the manner suggested by IMCTF.
- v. Recruiting student volunteers who are willing to work for IMCT programmes.

### **3. The Pre Programme Preparation to commence before 30 days of scheduled programme.**

- i. Relevant thematic posters of IMCTF relating to the samskarams to be displayed one month ahead of the programme and the school must reverberate with the atmosphere of the samskaram ahead of the programme.
- ii. Attractive Posters about the programme to be put up in classrooms and in all prominent locations inside and outside the school premises before one month.
- iii. All teachers, students and parents should be informed through school gatherings, notice board, announcements and through handbills about the programme.
- iv. Meeting neighbours with handbills or invitation, so that the programme links the schools to the neighbourhood.
- v. Arranging dignitary preferably from the same locality after briefing them about IMCTF and Thematic Samskarams will yield desirable results. Important points that need to be highlighted by the Chief Guest may also be given as a note.
- vi. Providing brief and descriptive write up about the programme and the pre-programmes like thematic competitions to media and to ensure that it is covered by them in local papers and TV Channels before and after the programme.
- vii. Conducting thematic competitions based on the Thematic Samskaram selected by the school using the materials suggested by IMCTF in various categories.
- viii. Thematic badges, bags, caps or kerchiefs printed with photos of Thematic Samskaram or Theme/ Samskaram / Symbol may be distributed to the students.

- ix. A detailed description of the Theme, Symbol and Samskaram, the course of the programme, how samskaram will be performed may be explained by master of ceremony student in English or Tamil before the commencement. This will give clarity and understanding about the programme.
- x. The process of thematic samskaram may be explained while the preparations are going on before the starting of thematic samskaram. This will engage the audience.
- xi. The students who are designated to sing during the Thematic Samskaram may practice in advance the dedicated songs and slokams given in Annexure I.
  - i. Deepa Slokam
  - ii. Isayasam Idam Sarvam
  - iii. Shanthi Mantrams
  - iv. Maithreem Bhajatha

[Tamizh thai vanakkam, National anthem or Vande Mataram can be used depending on the nature and composition of the school]

#### **4. Materials required**

- i. Decorated Kuthu Vilakku with five wicks and single hand vilakku for lighting the lamp, match-box, oil, wicks camphor and plate, Harthi. (Please avoid Candles) Waste clothes for dirt wiping
- ii. Lot of agal vilakku with oil and wick
- iii. Akshataha, Uthiri poo (Largh quantity) flowers may be kept in plenty for performing the Samskaram
- iv. Create pleasant smelling ambience using incense sticks etc
- v. Floral decoration for the Symbols of the samskaram to be made attractive Like Decorated Tulasi Maadam; Tree saplings, Naaga cut out or picture, Akhanda Bharat, Paramveer Awardees Photos, etc that are symbols
- vi. Persons (Kanya, Suvaasini, Aachaarya, Maatru-Pitru, others) as Symbols to be in traditional dresses.
- vii. Civil service uniforms like Naval, Military and Air-force may be used for Param Veer / Bhaarat Maata Vandanams.

- viii. Prasadam for offering to the symbol –food for Go/Gaja etc,
- ix. Sound and Mike
- x. Dias arrangements
- xi. Photo and Videography
- xii. Feedback documentation
- xiii. Follow up team

## **5. Performance of the Samskaram**

- i. It is advisable to keep good Thematic music going on at least 30 minutes before the programme starts and 15 mts after the programme.
- ii. Deepa Prajwalan Slokam, Santhi Manthrams, Isavasyam Idam Sarvam and invocation song "Maithreem Bhajatha"etc as suggested before to be explained by the master of ceremony before the commencement of the programme.
- iii. The welcome speech itself may contain the brief about IMCTF concept, samskaram that is going to be performed, the sequence of performance, IMCTF's mission to impact as well influence the participant, visitors or guests and acknowledgment of contributions from various ends so that there is no vote of thanks at the end. The speech will explain the concept of IMCTF, Thematic Samskaram that is going to be performed and its need of the hour in the present situation. How it influences the conduct of the participants and builds values will be given by IMCTF representative students.
- iv. After welcoming the dignitaries, they may be seated comfortably off the dais to view the Samskaram. They may also be invited, if willing, to participate in the Samskaram.
- v. A small skit of thematic samskaram highlighting the relevant Theme, Samskaram or Symbol which will be self explanatory be presented before the performance of Thematic Samskaram.
- vi. Cultural programmes like dance, folk music etc., to be aligned with the respective Theme, Samskaram or Symbol.

- vii. After the performance of samskaram by the participants, floral offerings by the dignitary, head of the institution, officials of the school, visitors, parents etc. may be done to the Symbols - be it Vruksha, Naaga; Go, Gaja, Tulasi; Bhoomi, Ganga; Maatru-Pitru, Aachaarya, Adithi; Kanya, Suvaasini; Bharat Maata, Paramveer Awardees whichever theme represents the Samskaram.
- viii. Administering the IMCTF Pledge by student volunteer is to be repeated by all.
- ix. Dignitary's speech specifying the effect of Thematic Samskaram and Symbolic representation of the relevant samskaram performed will be appropriate. (The host to provide with the relevant panels and posters of IMCTF well in advance to the dignitary or prepare a brief note of the speech that is to be delivered.)
- x. The programme may be concluded with Shanthi Manthram, Vande Mataram or National Anthem depending on the nature and composition of the school.
- xi. Feedback of the experiences of performing students, participants, dignitaries, visitors, and media persons to be collected in writing, audio visual recording may be done before the gathering is dispersed.

## **6. Post Programme :**

- i. Briefing the media
- ii. Analysis of the responses
- iii. Editing of the DVD
- iv. Preparation of report with photographs for IMCTF office as well as for school magazine.

## **7. Follow up**

Follow up is the crucial to implant the values in the participating students as otherwise the programme will be merely an event. (Refer 6. Suggestions for Follow up for further information).

## Annexure - I

### 1. Deepa Slokam- Sanskrit (While lighting the Lamp)

Deepa jyothir Param Jyothir, Deepa jyothir Janardhana  
Deepo Hara Tu Me Paapam, Deepaa Jyothir Namostute.  
Subham Karoti Kalyanam, Arogyam Dhana Sampadah  
Shatru Buddhi Vinashaya, Atma Jyotir Namosthute.  
Aathma jyothir Pradeepthaya, Brahma jyothir Namosthute  
Brahma jyothir Pradeepthaya, Gurur Jyothir Manosthute.

### 2. Thiru Vilakku Sostram-Tamil

Vilakke, Thiru vilakke , Vaendhan Udan Pirappae  
Jyothi Vilakkae Sridevi Pennmaniyae  
Andhi Vilakkae Alankara Kanmaniyae  
Kanchi Vilakkae Kamakshi Deviyare

Pasumpon Vilaku Vaithu Panchu Thiri Pottu  
Kulam Pol Neyyai Vittu Kolamudan Yaettri Vaithaen  
Pottu Mittaen Kunkumatthal Poomalai Sooti Vaithaen  
Yaettrinaen Nei Vilakku Enthan Kudi Vilanga

Vaithaen Thiruvilakkai Maaligaiyil Thaan Vilanga  
Maaligaiyil Jothi Ulla Mathavai Kandu Kondaen  
Mangalya Pichchai Madi Pichchai Thaarum Amma  
Santhana Pichchaiyudan Dhanangalayum Thaarum Amma

Petti Niraya Bhushanangal Thaarum Amma  
Kottagai Niraya Pasu Maadu Thaarum Amma  
Pughazhudambai Thandu Endhan Pakkathil Nillum Amma  
Agathazhivai Thandhu Enthan Agathinilae Vazhum Amma

Saevi Thozhuthunindraen Devi Vadivam Kandaen



Vajra Kiridam Kandaen Vaidoorya Maeni Kandaen  
Muthu Kondai Kandaen Muzhu Pachchai Malai Kandaen  
Saviri Mudi Kandaen Thazaimadal Chuzha Kandaen

Pinnal Azhagu Kandaen Pirai Pola Netri Kandaen  
Chanthudan Netri Kandaen Thaayaar Vadivam Kandaen  
Kurukidum Netri Kandaen Kovai Kani Vayum Kandaen  
Senthamarai Poomadal Pol Sevi Irandum Kandukondaen

Senbhaga Poopol Thirumookkum Kandukondaen  
Maarbil Pathakkam Minna Malai Asaya Kandaen  
Kaalil Silambhu Konja Kalazhi Peezhi Kandaen  
Pattadai Than Udutha Padai Irandum Kandukondaen

Mangala Nayagiyae Unnai Manam Kulira Kandukondaen  
Anbae Arun Thunayae Unnai Adaintha Endhanukku  
Vandha Vinai Agartri Maha Bhagyam Thantharulvai  
Thanthai Thai Piravi Neeyae Tharkakkum Rakkshagi Neeyae

Andharthirku Udavi Seyyum Atharamaanaaval Neeyae  
Undhanayae Uravaga Nambi Uttraarai Kai Vittaen Thayae  
Santhaanam Sowbhagyam Alitthu Sakthikalum Saevaigalum Enakkarulvai  
Bakthi Ulla Manitharukkae Para Devi Krupayudan Arulvai

### **3. Santhi Mantram**

Asato mā sadgamaya, tamasomā jyotir gamaya  
Mrityormāamritam gamaya, Om śhānti śhānti śhāntih

### **4. Isayasam Idam Sarvam**

Om Isavasyamidam sarvam, yatkiñca jagatyam jagat  
tena tyaktena bhuñjitha ma, grdhah kasyasvid dhanam

## 5. Tamil Thai Vazhthu

Neeraarum kadaluduththa nilamadandhai kezhilolugum...  
Seeraarum vadhanamena thihazh baradha kandamidhil...  
Thekkanamum adhil chirandha Dravida nal thiru naadum...  
Thakkasiru pirai nudhalum thari thanarum thilagamume...  
Aththilaga vaasanai pol anaithulagum inbamura...  
Yeththisayum puhazh manakka irundha perum Thamizhanange!!!  
Thamizhanange!!!  
Vun seerilamai thiram viyandhu seyal marandhu Vazhthudhume!!!  
Vazhthudhume!!!  
Vazhthudhume!!!

## 6. Maithreem Bhajatha

Composed by Kanchi Maha Swamigal for the Universal Unity and Peace.  
Sung by  
Smt. M.S. Subhalakshmi in the United Nations Organisation in 1962.

Maithreem Bhajatha, Akhila Hrujjethreem,  
Atmavadeva paraanapi pashyatha  
Yuddham thyajatha, Spardhaam Tyajata,  
thyajatha Pareshu akramamaakramanam  
Jananee Pruthivee Kaamadughaastey  
JanakO Devah Sakala Dayaalu  
Daamyata Datta Dayadhvam Janathaah  
Sreyo Bhooyaath Sakala Janaanaam  
Sreyo Bhooyaath Sakala Janaanaam  
Sreyo Bhooyaath Sakala Janaanaam

## 7. Santhi Manthram

1. Aum Poornam adah Poornam idam  
Poorna aat Poornam udachyate  
Poorna asya poornam aadaaya  
Poornam evaa vashishyate  
Aum śāntiḥ, śāntiḥ, śāntiḥ
2. Aum Sarveshaam svastir bhavatu  
Sarvesham shantir bhavatu  
Sarvesham purnam bhavatu  
Sarvesham mangalam bhavatu
3. Aum Sarve bhavantu sukhinah  
sarve santhu niramayah  
Sarve bhadrani pasyantu  
maa kashchit duhkha vagh bhavet  
Aum śāntiḥ, śāntiḥ, śāntiḥ
4. Aum dyauḥ śāntirantarikṣaṁ śāntiḥ  
pṛthivī śāntirāpaḥ śāntiroṣadhayaḥ śāntiḥ  
vanaspatayaḥ śāntirviśvedevāḥ śāntirbrahma śāntiḥ  
sarvaṁ śāntiḥ śāntireva śāntiḥ  
sā mā śāntiredhi  
Aum śāntiḥ, śāntiḥ, śāntiḥ

- Yajurveda 36:17

## 8. Vande Maataram

Vande Maataram.. vande maataram.. vande maataram.. maataram..

sujalaam sufalaam malayaja sheetalaam

sasyashyaamalaam maataram

Vande Maataram

shubhrajyotsna pulakita yaaminiim

phulla kusumita drumadala shobhiniim

suhaasinim sumadhura bhaashhinim

sukhadaam varadaam maataram..

Vande Maataram

sapta koti kantha kalakala ninaada karaale

nisapta koti bhujaidhruta khala karvaale

ka bola ka noma eith bole

bahubal dhaariniin namaami taariniim

ripudalavaariniin maataram

Vande Maataram

tumi vidyaa tumi dharma, tumi hridi tumi marma

tvani praanaah shariire

baahute tumi maa shakti,

hridaye tumi maa bhakti,

tomaarai pratimaa gadi mandire mandire

Vande Maataram

tumi durgaa dashapraharanadhaarinii

kamala kamaladala vihaarinii

vaanii vidyaadaayinii, namaami tvaam

namaami kamalaan amalaan atulaam

sujalaan sufalaan maataram

Vande Maataram

shyaamalaan saralaan susmitaan bhuushhitaam

dharaniin bharaniin maataram

Vande Maataram

- Bankim Chandra Chattopadhyay

## 9. National Anthem

Jana Gana Mana Adhinaayak Jaya Hey,  
Bhaarat Bhaagya Vidhaataa  
Panjaab Sindhu Gujarat Maraatha,  
Draavid Utkal Banga  
Vindhya Himaachal Yamuna Ganga,  
Uchchhal Jaladhi Taranga  
Tav Shubh Naamey Jaagey,  
Tav Shubh Aashish Maange  
Gaahey Tav Jayagaathaa  
Jana Gana Mangal Daayak,  
Jaya Hey Bhaarat Bhaagya Vidhaataa  
Jaya Hey, Jaya Hey, Jaya Hey,  
Jaya Jaya Jaya, Jaya Hey

- Rabindranath Tagore

## 1. The Earth and Water as the Centre of Natural Environment

The natural environment encompasses all living and non-living things occurring naturally on Earth or some region thereof. **It is an environment that encompasses the interaction of all living species.**

The concept of the natural environment can be distinguished by components:

Complete ecological units that function as natural systems without massive human intervention, including all vegetation, microorganisms, soil, rocks, atmosphere, and natural phenomena that occur within their boundaries.



Universal natural resources and physical phenomena that lack clear-cut boundaries, such as air, water, and climate, as well as energy, radiation, electric charge, and magnetism, not originating from human activity.

The natural environment is contrasted with the built environment, which comprises the areas and components that are strongly influenced by humans. **A geographical area is regarded as a natural environment.**

It is difficult to find absolutely natural environments, and it is common that the naturalness varies in a continuum, from ideally 100% natural in one extreme to 0% natural in the other. More precisely, we can consider the different aspects or components of an environment, and see that their degree of naturalness is not uniform. If, for instance, we take an agricultural field, and consider the mineralogical composition and the structure of its soil, we will find that whereas the first is quite similar to that of an undisturbed forest soil, the structure is quite different.

**Natural environment is often used as a synonym for habitat.** For instance, when we say that, the natural environment of giraffe is the savanna.

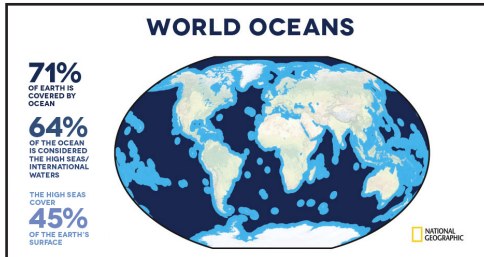
<https://en.wikipedia.org/wiki/Savanna>

## The Earth and Water as the centre of Natural Environment.

It is the earth and water such as oceans, rivers, streams, lakes, ponds that constitute the core of natural environment. The combination of the two impact upon and influence the atmosphere, forest and ecology.

## 2. Composition of Environment

### Atmosphere, climate, weather



The atmosphere of the Earth serves as a key factor in sustaining the planetary ecosystem. The thin layer of gas that envelops the Earth is held in place by the planet's gravity. Dry air consists of

78% nitrogen, 21% oxygen, 1% argon and other inert gases, such as carbon dioxide. The remaining gases are often referred to as trace gases, among which are the greenhouse gases such as water vapour, carbon dioxide, methane, nitrous oxide, and ozone. Filtered air includes trace amounts of many other chemical compounds. **Air also contains a variable amount of water vapor and suspensions of water droplets and ice crystals seen as clouds.** Many natural substances may be present in tiny amounts in an unfiltered air sample, including dust, pollen and spores, sea spray, volcanic ash, and meteoroids. Various industrial pollutants also may be present, such as chlorine (elementary or in compounds), fluorine compounds, elemental mercury, and sulphur compounds such as sulphur dioxide [SO<sub>2</sub>]. The ozone layer of the Earth's atmosphere plays an important role in depleting the amount of ultraviolet (UV) radiation that reaches the surface. As DNA is readily damaged by UV light, this serves to protect life at the surface. **The atmosphere also retains heat during the night, thereby reducing the daily temperature extremes.**



### 3. Environmental Issues-I

Here is the list of various environmental issues. As such they relate to the anthropogenic effects on the natural environment.



1. **Climate change** — Global warming • Global dimming • Fossil fuels • Sea level rise • Greenhouse gas • Ocean acidification • Shutdown of thermohaline circulation • Environmental impact of the coal industry • Urban Heat Islands
2. **Conservation** — Species extinction • Pollinator decline • Coral bleaching • Holocene extinction • Invasive species • Poaching • Endangered species
3. **Energy** — Energy conservation • Renewable energy • Efficient energy use • Renewable energy commercialization • Environmental impact of the coal industry • Environmental impact of hydraulic fracturing
4. **Environment degradation** — Eutrophication • Habitat destruction • Invasive species • Soda lake
5. **Environmental health** — Air quality • Asthma • Environmental impact on the coal industry • Electromagnetic fields • Electromagnetic radiation and health • Indoor air quality • Lead poisoning • Sick Building Syndrome • Environmental impact of hydraulic fracturing
6. **Genetic engineering** — Genetic pollution • Genetically modified food controversies
7. **Intensive farming** — Overgrazing • Irrigation • Monoculture • Environmental effects of meat production • Slash and burn • Pesticide drift • Plasticulture

8. **Land degradation** — Land pollution • Desertification
9. **Soil** — Soil conservation • Soil erosion • Soil contamination • Soil salination • Alkali soils • Residual Sodium Carbonate Index
10. **Land use** — Urban sprawl. Habitat fragmentation • Habitat destruction
11. **Nanotechnology** — Nano toxicology • Nano pollution
12. **Nuclear issues** — Nuclear fallout • Nuclear meltdown • Nuclear power • Nuclear weapons • Nuclear and radiation accidents • Nuclear safety • High-level radioactive waste management
13. **Overpopulation** — Burial • Water crisis • Overpopulation in companion animals • Tragedy of the commons • Gender Imbalance in Developing Countries • Sub-replacement fertility levels in developed countries
14. **Ozone depletion** — CFC • Biological effects of UV exposure
15. **Pollution** — Environmental impact of the coal industry • Nonpoint source pollution • Point source pollution • Light pollution • Noise pollution • Visual pollution • Interplanetary contamination

#### **4. Environmental Issues-II**

16. **Water pollution** — Environmental impact of the coal industry • Acid rain • Eutrophication • Marine pollution • ocean dumping • Oil spills • Thermal pollution • Urban runoff • Water crisis • Marine debris • Micro-plastics • Ocean acidification • Ship pollution • Wastewater • Fish kill • Algal bloom • Mercury in fish
17. **Air pollution** — Environment impact of hydraulic fracturing • Environmental impact of the coal industry • Smog • Tropospheric ozone • Atmospheric particulate matter • Environmental impact of hydraulic fracturing
18. **Reservoirs** — Environment impacts of reservoirs
19. **Resource depletion** — Exploitation of natural resources • Over drafting
20. **Consumerism** — Consumer capitalism • Planned obsolescence • Over consumption
21. **Fishing** — Blast fishing • Bottom trawling • Cyanide fishing • Ghost nets • Illegal, unreported and unregulated fishing • Overfishing • Shark finning • Whaling

22. **Logging** — Clear cutting Deforestation • Deforestation • Illegal logging
23. **Mining** — Acid mine drainage • Environmental impact of hydraulic fracturing • Mountaintop removal mining • Slurry impoundments
24. **Water (depletion)** — Aral Sea • Dead Sea • Lake Chad • Other Wikipedia articles on water problems are Water pollution, Water crisis / scarcity, Wastewater, Anoxic water
25. **Toxins** — Chlorofluorocarbons (CFCs) • DDT • Endocrine disruptors • Dioxin • Toxic heavy metals • Environmental impact of the coal industry • Herbicides • Pesticides • Toxic waste • PCB • Bioaccumulation • Bio- magnification • Environmental impact of hydraulic fracturing
26. **Waste** — Electronic waste • Litter • Waste disposal incidents • Marine debris • Medical waste • Landfill • Leachate • Environmental impact of the coal industry • Incineration • Great Pacific Garbage Patch • Exporting of hazardous waste • Environmental impact of hydraulic fracturing.

## 5. Types of Environmental Pollution

Environmental pollution is the biggest menace to the human race on this planet today. It means adding impurity to environment. The environment consists of earth, water, air, plants and animals. If we pollute them, then the existence of man and nature will be hampered.

1. **Soil Pollution** : - It is true that trees are being cut down rapidly. Our earth is becoming warmer. If pollution continues, the day is not far when our earth will become a boilingpan desert. Or it will be covered with seawater causing destruction of mankind.
2. **Air Pollution** : - Pure air is always needed for inhaling. If we take pure air, our health improves. On the other hand impure air causes diseases and impairs our health and causes our death. Smoke pollutes the air. It is the root of air pollution. The smoke which is discharged from industries, automobiles and kitchens is the mixture of carbon monoxide, carbon dioxide, methane etc.



These are all poisonous gases. These cause lung-cancer, tuberculosis etc. which takes a heavy toll of life. **The glaring incident is the Bhopal gas leak in December 1984. Thousands of the residents of Bhopal died due to lungs problem which was caused by methylamine gas from the Union Carbide Plant.**

The garbage emitting foul smell, the decaying plants and animals also cause air pollution. Hence the doctors advise the patients having lungs trouble to settle in some rural places because the air of villages is pure and free from pollution.

3. **Noise Pollution** : The harsh sounds of traffic system, motor vehicles, aircraft, trains and machines affect our hearing power and causes heart troubles. It has been reported that there are two villages named Biraspalli and DevadasPalli near Dum Dum airport in Calcutta where a large number of people have lost their power of hearing. This is because of the frequent sounds of planes coming in and going out of Dum Dum Airport. The evils of noise pollution can be imagined from this example.



4. **Water Pollution** : - The water of rivers and seas is being constantly pollute all over the world by various dangerous chemical and biological wastes. Mills and factories discharge very harmful wastewaters into many rivers and sea. The water of the Ganges flowing by the side of both Varanashi and Calcutta is extremely polluted and contains all sorts of dangerous bacteria.



**Reckless application of chemical fertilizers, insecticides and pesticides pollutes the soil. Vegetables and fruits are quite injurious today, because they contain the poison of insecticides and pesticides.**

If the air we breathe, the water we drink and the soil, which produces our crops, vegetables and fruits all become more and more impure, then our chances of good health and longevity will rapidly decrease.

Environment pollution is a serious menace to our existence. Realising the danger, we must plant trees in large number to absorb impure air. Impure water from industries can be sent back for purification and then it can be used for irrigation purpose. Our government is well aware of the fact and is taking steps to save environment from pollution. We have also a ministry to look after the environmental issues.

## 6. Main causes of Soil Pollution



Soil pollution is defined as the build-up in soils of persistent toxic compounds, chemicals, salts, radioactive materials, or disease causing agents, which have adverse effects on plant growth and animal health.

Soil pollution is one of the major problems taking place today. Our earth is increasingly

getting contaminated and polluted and there is no one else to blame, but ourselves.

The pollution of soil is the result of the presence of contaminants, including toxic compounds, radioactive materials and other foreign and harmful chemicals, in the soil. As a result, the soil loses its structure and chemical (content of oxygen, nitrogen, etc) and biological (e.g. ability to support life) properties.

Some of the common soil pollutants are hydrocarbons, heavy metals (e.g. cadmium, lead, chromium, copper, zinc, mercury and arsenic), herbicides, pesticides, oils, tars, Polychlorinated Biphenyl (PCB) and dioxins.

### Main causes of Soil Pollution

1. Soil pollution is often associated with indiscriminate use of farming chemicals, such as pesticides, fertilizers, etc. Pesticides applied to plants can also leak into the ground, leaving long-lasting effects. Read about the dangers of pesticides. In turn, some of the harmful chemicals found in the fertilizers (e.g. cadmium) may accumulate above their toxic levels, ironically leading to the poisoning of crops.

2. Heavy metals can enter the soil through the use of polluted water while watering crops, or through the use of mineral fertilizers.
3. Faulty landfills, bursting of underground bins and seepage from faulty sewage systems could cause the leakage of toxins into the surrounding soil.
4. Acid rains caused by industrial fumes mixing in rain falls on the land, and could dissolve away some of the important nutrients found in soil, as such change the structure of the soil.
5. Industrial wastes are one of the biggest soil-pollution factors. Iron, steel, power and chemical manufacturing plants which irresponsibly use the earth as a dumping ground often leave behind lasting effects for years to come.
6. Fuel leakages from automobiles, which get washed by rain, can seep into the nearby soil, polluting it.
7. Deforestation is a major cause for soil erosion, where soil particles are dislodged and carried away by water or wind. As a result, the soil loses its structure as well as important nutrients.

## 7. Effects of Soil Pollution

The effects of pollution on soil are quite disturbing and can result in huge disturbances in the ecological balance and health of living beings on earth. Some of the most serious soil pollution effects are:

1. **Disturbance** in the balance of flora and fauna inhabiting in the soil.
2. Contaminated soil decreases soil fertility and hence there is **decrease in the soil yield.**
3. Normally crops cannot grow and flourish in a **polluted soil.** However if some crops manage to grow, then these crops might have absorbed the toxic chemicals in the soil and might **cause serious health problems in people consuming them.**



4. Sometimes the soil pollution is in the form of increased salinity of the soil. In such a case, the soil becomes **unhealthy for vegetation, and often becomes useless and barren.**
5. When soil pollution modifies the soil structure, deaths of many beneficial soil organisms (e.g. earthworms) in the soil could take place. Other than further reducing the ability of the soil to support life, this occurrence could also have **an effect on the larger predators (e.g. birds) and force them to move to other places, in the search of food.**
6. People living near polluted land tend to have higher incidences of **migraines, nausea, fatigue, skin disorders and even miscarriages.** Depending on the pollutants present in the soil, some of the longer-term effects of soil pollution include cancer, leukemia, reproductive disorders, kidney and liver damage, and central nervous system failure. These health problems could be a result of **direct poisoning by the polluted land (e.g. children playing on land filled with toxic waste)** or indirect poisoning (e.g. eating crops grown on polluted land, drinking water polluted by the leaching of chemicals from the polluted land to the water supply, etc).

<http://www.all-recycling-facts.com/soil-pollution.html#ixzz2nqfQhxO3>

## 8. Air Pollution



Air pollution is the introduction into the atmosphere of chemicals, particulates, or biological materials that cause discomfort, disease, or death to humans, damage other living organisms such as food crops, or damage the natural environment or built environment.

**The atmosphere is a complex dynamic natural gaseous system that is essential to support life on planet Earth. Stratospheric ozone depletion due to air pollution has long been recognized as a threat to human health as well as to the Earth's ecosystems.**

Indoor air pollution (see Airlog) and urban air quality are listed as two of the World's Worst Toxic Pollution Problems in the 2008 Blacksmith Institute World's Worst Polluted Places report.



A substance in the air that can be adverse to humans and the environment is known as an air pollutant. **Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made.** Pollutants can be classified as primary or secondary. Primary pollutants are directly produced from a process, such as ash from a volcanic eruption, the carbon monoxide gas from a motor vehicle exhaust or sulfur dioxide released from factories. Some pollutants may be both primary and secondary: that is, they are both **emitted directly and formed from other primary pollutants. Secondary pollutants are not emitted directly. Rather, they form in the air when primary pollutants react or interact. An important example of a secondary pollutant is ground level ozone** — one of the many secondary pollutants that make up **photochemical smog.**

## 9. Health effects of Air Pollution-I



**Air pollution is a significant risk factor for multiple health conditions including respiratory infections, heart disease, and lung cancer, according to the WHO.** The health effects caused by air pollution may include difficulty in breathing, wheezing, coughing, asthma and aggravation of existing respiratory and cardiac conditions. These effects can result in increased medication use,

increased doctor or emergency room visits, more hospital admissions and premature death. The human health effects of poor air quality are far reaching, but principally affect the body's respiratory system and the cardiovascular system. **Individual reactions to air pollutants depend on the type of pollutant a person is exposed to, the degree of exposure, the individual's health status and genetics.**

The most common sources of air pollution include particulate matter, Carbon monoxide, Ozone, Nitrogen dioxide and Sulfur dioxide. Both indoor and outdoor air pollution have caused approximately 3.3 million deaths worldwide. Children aged less than five years that live in developing countries are the most vulnerable population in terms of total deaths attributable to indoor and outdoor air pollution.

**The World Health Organization states that 2.4 million people die each year from causes directly attributable to air pollution, with 1.5 million of these deaths attributable to indoor air pollution.**

"Epidemiological studies suggest that more than 500,000 Americans die each year from cardiopulmonary disease linked to breathing fine particle air pollution".

A study by the University of Birmingham has shown a strong correlation between pneumonia related deaths and air pollution from motor vehicles. Worldwide more deaths per year are linked to air pollution than to automobile accidents. A 2005 study by the European Commission calculated that air pollution reduces life expectancy by an average of almost nine months across the European Union. Causes of deaths include aggravated asthma, emphysema, lung and heart diseases, and respiratory allergies.

**The US EPA estimates that a proposed set of changes in diesel engine technology (Tier 2) could result in 12,000 fewer premature mortalities, 15,000 fewer heart attacks, 6,000 fewer emergency room visits by children with asthma, and 8,900 fewer respiratory-related hospital admissions each year in the United States.**

## **10. Health effects of Air Pollution-II**



**The US EPA estimates allowing a ground-level ozone concentration of 65 parts per billion, would avert 1,700 to 5,100 premature deaths nationwide in 2020 compared with the current 75-ppb standard.** The agency projects

the stricter standard would also prevent an additional **26,000 cases of aggravated asthma and more than a million cases of missed work or school.**

**The worst short-term civilian pollution crisis in India was the 1984 Bhopal Disaster.** Leaked industrial vapours from the Union Carbide factory, belonging to Union Carbide, Inc., U.S.A., killed more than 25,000 people outright and injured anywhere from 150,000 to 600,000.

The **United Kingdom** suffered its worst air pollution event when the **December 4 Great Smog of 1952 formed over London**. In six days more than **4,000 died, and 8,000 more died** within the following months.

An accidental leak of anthrax spores from a **biological warfare** laboratory in the former USSR in 1979 near Sverdlovsk is believed to have been the cause of hundreds of civilian deaths. The worst single incident of air pollution to occur in the US occurred in Donora, Pennsylvania in late October, 1948, when 20 people died and over 7,000 were injured.

A new economic study of the health impacts and associated costs of air pollution in the Los Angeles Basin and **San Joaquin Valley of Southern California** shows that more than **3800 people die prematurely (approximately 14 years earlier than normal)** each year because **air pollution levels violate federal standards**. The number of annual premature deaths is considerably higher than the fatalities related to auto collisions in the same area, which average fewer than 2,000 per year.

Diesel exhaust (DE) is a major contributor to combustion derived particulate matter air pollution. In several human experimental studies, using a well-validated exposure chamber setup, **DE has been linked to acute vascular dysfunction and increased thrombus formation. This serves as a plausible mechanistic link between the previously described association between particulates air pollution and increased cardiovascular morbidity and mortality.**

## **11. Loss of environmental traditions – main cause of environmental decay**

**While all ancient people had realised the mutually related and dependent relation between nature and humans, the contemporary [modern] civilisation, which had long ignored the traditional wisdom in its pursuit of economic development, came to realise the risk of the serious loss of the mutually enriching relation between nature and humans a bit late.**

Enlightenment beliefs rooted themselves in reason and logic. The leaders of enlightenment believed that the knowledge must be widely known and must be pondered. However, nature was analogous to God and could not be examined.

**The believers and leaders of enlightenment had to separate nature from God. This led to the feminization of nature, the creation of the word — “Mother Nature”.**



**Boyle** suggested that examination of man is an examination of God. Therefore, nature had to be converted to woman, “a great... pregnant automation” to be examined.

**Bacon** suggests that a man must be inquisitive to find truth through penetrating into these holes and corners, a sexual metaphor that feminizes nature.

**Carolyn Merchant** suggests that it made possible for people to exploit and study it, when nature was feminized and degraded. Hence the word Mother Nature comes into play.

**These scientists utilized sexual metaphors to create a feminized nature - Mother Nature** - so that it could be studied and exploited.

In late 1970, almost two hundred years after industrialism and modern economics redefined human relation with nature which lead to the detriment of the latter, the world woke up to the issue. **In 1972 the United Nations Conference on Human Environment [known as the Stockholm Conference] took place which proposed the concept of Sustainable development. Out of the conference was born the United Nations Environmental Programme [UNEP] to develop and recommend environmentally sound economic development programmes.**

In 1983 General Assembly realized that there was heavy deterioration of the human environment and natural resources and appointed the World Commission on Environment and Development WCED or what was known as the Bruntland commission. The commission thus defined sustainable development as **“development that meets the**

**needs of the present without compromising the ability of future generations to meet their own needs”.**

**“This commission believes that people can build a future that is more prosperous, more just, and more secure. Our report is not a prediction of ever increasing environmental decay, poverty and hardship in ever more decreasing resources. We see instead the possibility for a new era of economic growth, one that must be based on policies that sustain and expand the environmental resource base...We have the power to reconcile human affairs with the natural laws and to thrive in the process.”**

## **12. Indian traditional communities and their environmental consciousness**

In India we have several success stories of communities and traditional faiths and culture protecting environment.

Here is a great illustration of what environmental consciousness can do to motivate people to lay down their lives to prevent trees being cut.



The Bishnois is a small community in the state of Rajasthan who practiced environmental conservation as a part of their daily religious duty. The community is an off-shoot of Hinduism and was founded by Guru Maharaj Jambheshwar in the 15th century. He believed that if trees were protected, animal life would be sustained and his community would survive.

Therefore, he formulated twenty-nine injunctions. Principle among them was the ban on cutting of any green tree and killing of any animal or bird.

### 13. Research on Traditional Environmental Knowledge - Development and Its Role

For thousands of years, aboriginal people around the world have used knowledge of their local environment to sustain themselves and to maintain their cultural identity. Only in the past decade, this knowledge has been recognized by the Western scientific community as a valuable source of ecological information. Today, a growing body of literature attests not only the presence of a vast reservoir of information regarding plant and animal behaviour but also to the existence of effective indigenous strategies for ensuring the sustainable use of local natural resources.



**This knowledge is variously labeled as folk ecology, ethno-ecology, traditional environmental or ecological knowledge, indigenous knowledge, customary law, and knowledge of the land. Traditional environmental or ecological knowledge is probably the most common term.** However, there remains no universally accepted definition of the concept. As a field of study, traditional environmental knowledge is much more comprehensive than either conventional anthropology or ecology.



**Berkes** (1992) points out that the use of the term “traditional” is ambiguous and raises questions regarding the cultural dynamics of such knowledge systems.

In the dictionary sense, **“traditional” usually refers to cultural continuity transmitted in the form of social attitudes, beliefs, principles and conventions of behaviour and practice derived from historical experience.** However, societies change through time, constantly adopting new practices and technologies, making it difficult to define just how much and what kind of change would affect the labeling of a practice as “traditional.”

For this reason, some scholars prefer the term “Indigenous ecological knowledge.” This helps avoid the debate about tradition and explicitly emphasizes indigenous people. However, similar knowledge is found among nonindigenous groups such as outport fishermen and farmers. These groups have also acquired their knowledge and skills through hands-on experience living in close contact with their environment.

Traditional Environmental Knowledge [TEK], can generally be defined as a body of knowledge built up by a group of people through generations of living in close contact with nature. The quantity and quality of traditional environmental knowledge varies among community members, depending upon gender, age, social status, intellectual capability, and profession (hunter, spiritual leader, healer, etc.). With its roots firmly in the past, traditional environmental knowledge is both cumulative and dynamic, building upon the experience of earlier generations and adapting to the new technological and socioeconomic changes of the present Martha Johnson, Dene Cultural Institute, Yellowknife, NWT, Canada.

## **14. The relevance of Ancient Indian tradition for environmental sustainability**

The Environment (Protection) Act, 1986 defines the environment as follows: ‘Environment includes water air and land and the inter-relationship which exists among and between water, air and land and human beings, other living creatures, plants, micro-organisms and property.



This definition is captured in ancient Indian texts. It is known from the Vedic times that the nature and human being (Prakriti and Purusha) form an inseparable part of life support system. This is what that reflects the concept of the present day environment. **‘Wise utilize three elements variously, which are varied, visible and full of qualities.**

**These are water, air and plants or herbs. They exist in the world from the very beginning. They are called as Chandansi meaning ‘coverings available everywhere.’** It proves the knowledge of Vedic seers about the basic elements of environment.

According to one **indigenous theory established in the Upanishads, the universe consists of five basic elements they are**

- 1. Earth or land**
- 2. Water**
- 3. Light or fire**
- 4. Air and**
- 5. Ether (AitareyaUpanishad 3.3)**



The balance and mutual relationship between the PanchaBhoota concept as expounded in the Indian philosophy and the present day environmental issues has been brought out in a research paper titled “Indian Ethos in sustainability from Ancient to Gandhi: Sustainability Education at IBMT by Prof MD Saibaba, Institute of Business management and Technology, Bangalore presented at the ESCIP International Business School France, International Days 2010. The author says:

**Environmental sustainability or the code for universal existence has always been there in the Indian Philosophy through the ages. It has been an integral part of Indian Philosophy. RIGVEDA and ATHARVAVEDA (5000BC) have been the earliest known documented ancient texts of Indian Origin.**

The importance of Environmental sustainability has been propounded as the amalgamation or the proper equilibrium of five PanchaBoothas as we call it. The five elements of the Physical Universe are: Earth, Water, Fire, Air and Ether (Aakash).

The texts say that all that exists consists of these elements. Hence, we in India consider them to be reflections of Divinity. All these elements have been worshipped and revered since ancient times.

**In the Atharva Veda there is prayer, which draws attention to the ecological balance of these elements and how the earth is the upholder of the moral order. We beseech the earth to protect us and to purify us. We pray to her to give us the mountains as well as the flowing rivers. We ask her to bear herbs of manifold potency, on whom food and crops grow and animals roam. We seek the blessings of the Ether to bless us by fertilizing the earth by proper rainfall at times. We also pray that let the earth be kind to us and we too it.**

## **15. Traditional culture and ecological knowledge in sustaining natural resource management**

Demazong (the Buddhist eco-cultural landscape in Sikkim Himalayas) and Apatani eco-cultural landscape in Arunachal Pradesh illustrate the value of traditional culture and ecological knowledge in sustaining natural resource management.



### **Natural resource conservation at the village of Mendha in Gadchiroli district of Maharashtra**

In 1987, the villagers renewed their efforts at biodiversity conservation. They decided: no commercial exploitation of the

forests, except for Non-Timber Forest Produce; the villagers would themselves regulate the amount of resources they could extract from the forests and undertake measures to tackle soil erosion; forests would not be set on fire; encroachment would not be allowed; the villagers decide for themselves.

In the North-Eastern region of India, tribal communities meet a substantial proportion of their resource requirements from a relatively small catchment area in which they have been living for a long time. They live in complete harmony with nature.

## The Meetei communities in the States of Manipur and Assam



Sacred groves, or UmangLais, as they are called in the Meetei language, form an integral part of the Manipuri tradition of nature worship. Several species of plants are protected in these groves, which also offer protection to birds and animals.

These include teak, several fruit trees like lemon, plants of medicinal value such as ginger, eucalyptus and bamboo. Fishes, waterfowl and other aquatic animals like snails and insects are very common items in the diet of the Meetei. However, many of these animals are not eaten during certain periods, probably with the motive of sustainable harvesting and conservation. **Thus, in this case certain religious beliefs and practices help in the conservation of nature and its biodiversity.**

## 16. Eastern Philosophies on Environment friendliness and compatibility

Eastern philosophies of Hinduism, Buddhism, Jainism, Sikhism, Taoism and Shintoism are environment-compatible and environment-friendly and build Environmental consciousness. Isavasya Upanishad [Hindu] Kalachakra Tantra [Buddhist] Achara Sutra [Jain] Guru Granth Sahib [Sikh] Taishanghuadaodushixianjing, [Taoist] and Shinto beliefs all believe that nature and human both originate in divinity.

Environmental consciousness is not an intellectual idea. It is abiding reverence for nature. It is a spiritual value. Not a religious concept. It is a core value of Eastern philosophies even though the all ancient cultures all over the world have similar orientation. In Eastern philosophies, consisting of the Hindu, Buddhist, Jain, Sikh, Tao and Shinto traditions, humans and environment are considered inter-related. They all see divinity immanent in every tiny atom of the universe and humans. They perceive the five elements of nature — earth, water, air, fire and space — as emanating from the same source as humans. They consider nature and humans as inter-related and not independent of one another.

- **Isavasya Upanishad**, one of the most sacred ancient Hindu scriptures of ancient, as translated by Mahatma Gandhi says, "In the creation, the Divine is immanent in earth, water, air, fire and space and in every tiniest atom of this universe."
- **Kalachakra Tantra**, sacred Buddhist scripture, says "Earth, Water, Air, Fire and Human beings -- all emerged only out of the vacuum of space"
- **Acharya Sutra**, the Jain sacred text, says, "The five elements of earth, water, air, fire and space are not lifeless matter; they have soul"
- **Guru Granth Sahib**, the Sikh sacred text, says: "The five elements of earth, water, air, fire and space and all living beings are, O God, only thee
- **Taishanghuadaodushixianjing**, a Taoist scripture, says Tao is the Mother of Heaven and Earth and of Yin-Yang, and the origin of the Five Agents and of the myriad beings. Man and all other beings are born from the same primordial Breath (Qi) so that all beings emanate from Tao and obtain their essence from Tao
- **Shinto** belief regards the land, its nature, and all creatures including the human as children of Kami [the Divine]. Therefore there exist Kami of Rain, Kami of Wind, Kami of Mountain, Kami of Ocean, Kami of River, Kami of Thunder.

The entire spectrum of Eastern philosophies converges on the view that the entire creation is manifestation of the divine. They clearly distinguish themselves from the Western philosophies, which set apart humanity from nature conceptually.

Consequently the Eastern philosophies are eco-centric where humans and nature are inter-related and share common origin and share the common biological space and not anthropocentric which considers humans as the crowning glory of biological hierarchy.

## 17. “Western Faiths destroyed nature which traditional faiths had protected and preserved”-says science

More recently, ‘Eco-science’ [1977] a research book co-authored by John P Holdren, Adviser on scientific issues to US President Barack Obama [along with Paul Ehrlich, Anne Ehrlich] the author’s state:

Lynn White Jr., professor emeritus of history at the University of California, Los Angeles, and past president of the American Historical Association, has suggested that the basic cause of Western society’s destructive attitude toward nature lies in the Judeo-Christian tradition. **He pointed out, for instance, that ..... people believed trees, springs, hills, streams, and other objects of nature had guardian spirits. Those spirits had to be approached and placated before one could safely invade those territories: ‘By destroying pagan animism.., made it possible to exploit nature in a mood of indifference to the feelings of natural objects.’”** [P. 809]



In fact, Pagans were regarded as inferior and pagan beliefs were regarded Satanic, but it is that which preserved nature. **Belief in worship of trees, rivers, and other aspects of nature which Lynn White says protected nature in the traditional societies was decried and destroyed**

**by the Western religious and rationalist establishments in the last few centuries. The result was the huge destruction of nature. The reverence for nature was the samskaram which developed love, respect and care for nature in people.**

## 18. Christian Priest Deals The Ancient Hindu Literature “Atharva Veda”

Rev. Father Shaji George Kochuthara, a Christian Priest exhaustively deals with how the ancient Hindu literature Atharva Veda revered mother earth.

Father Kochuthara writes: Particularly of interest is the Hindu concept of the earth—“The earth is the foundation, the basis out of which emerges all that exists and on which everything rests. The earth is the basis of life and, when considered as divine being, she always occupies a special place among the Gods”.



Vedic Man would find any attempt at dominating or subjugating the earth incomprehensible.

The earth is an object of worship and not of exploitation, an object of awe and not of curiosity (or research, as would be said in academic circles).

Investigation of the earth is of the same nature as personal introspection.

To harm the earth is a masochist vice.

The worshipping of the earth is not adoration of a creature as an absolute, that is, it is not idolatry.

In fact, it is the veneration of the highest value in the hierarchy of existence, for “undoubtedly this earth is the first born of being”.

**The relationship between the human and the earth is one of partnership.**

Prayer to the Earth in Atharva Veda, depicts the earth, the universal mother, dispenser of every sort of good.

After describing the origins of earth, there follows a geographical description.

Then there is an account of her fragrance from plants, water, lotus, animals, human beings.

The Earth is the dwelling place of people.

It is upon her that they sing and dance and find their happiness.

She is the dwelling place of all living creatures.

She is a cosmic giant, a cosmic power, the receiver of prayers and the bestower of blessings, the protector and the inscrutable judge.

The earth is considered the mother: "The Earth is my mother, I am her son."

**This reverence for the earth and dependence on her is expressed in a touching way: Whatever I dig up of you, O Earth, May you of that have quick replenishment! O purifying one, may my thrust never reach right unto your vital points, your heart!**

In the Hindu tradition there is an underlying unity of all life, the world and all that exists.

The inter-connectedness of all life and creatures is affirmed to the scriptures.

The Divine permeates everything and radically connects all life, whether human or not.

That is, God and nature, the individual and others are all one, are all ultimately unified.

Following the same pattern, Bhagavad Gita affirms that atman is ultimately identical with Brahman. Hinduism is a religion in which the human is conceived as part and parcel of nature.

The natural phenomena are from a divine source. Behind the wide spectrum of gods and the rituals and sacrifices, there is this insight into the sacredness and divine origin of nature.

Thus, every natural force and phenomenon (for example, sky, sun, moon, rain, wind, thunder, rivers, mountains, forest, etc.) is considered to be a God and there are hymns praising and venerating it.



"Human being is not on the earth to conquer, dominate, and exploit, but to be an integral part of the organic whole. The gods, men, and nature formed one organic whole."

## 19. "Hinduism creates reverence for sacred nature and all living beings" - Rev. Kochuthara

In paper titled "Re-Discovering Christian Eco-theological Ethics" Rev Father Shaji George Kochuthara, CMI, deals with comparative philosophical position in the West and in India and how the West has to learn from India concept of reverence for nature to save the environment. Here are some extracts from Rev Father Kochuthara's paper which exhaustively deals with how the ancient Hindu literature reverts nature.

One of the fundamental cosmological insights of the Indian tradition regarding this world is that "it is indwelt by the Lord of the Universe and hence it is sacred". He quoted *Ishaavaasyam idam sarvam yat kim ca jagatyam jagat, tena tyaktena bhunjithaah maa gridhah kasyasvid dhanam*".

(Meaning:- The revolving world together with every minute particle in it is indwelt by the Lord.)

The Hindu vision affirms the sacredness not only of the human being, but everything in nature.



Space



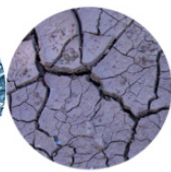
Air



Fire



Water



Earth

According to the Hindu concept, the material causes of the created world are the Pancha Bhootas (Five Great Elements), namely, Prithvi (earth), Vayu (air), Akash (space), Apah (water) and Agni (light/fire). These cosmic elements create, nurture, and sustain all forms of life; after death and decay they absorb what was created earlier. Thus, in the preservation and sustenance of the environment, these elements play a vital role. These are deified in the sacred scriptures.



In the Hindu tradition there is an underlying unity of all life, the world and all that exists. The inter-connectedness of all life and all creatures is affirmed by the scriptures.

The Divine permeates everything and radically connects all life, whether human or not. That is, God and nature, the individual and others are all one, are all ultimately unified. Following the same pattern, Bhagavad Gita affirms that atman is ultimately identical with Brahman. Hinduism is a religion in which the human is conceived as part and parcel of nature. The natural phenomena are from a divine source. Behind the wide spectrum of gods and the rituals and sacrifices, there is this insight into the sacredness and divine origin of nature. Thus, every natural force and phenomenon (for example, sky, sun, moon, rain, wind, thunder, rivers, mountains, forest, etc.) is considered to be a god and there are hymns praising and venerating them. **“Human being is not on the earth to conquer, dominate, and exploit, but to be an integral part of the organic whole. The gods, men, and nature formed one organic whole.”**

Animals, in the Vedic vision, are not inferior creatures, but manifestations of god on the lower scale of evolution compared to man. Animals like monkey, elephant, tiger, cow, bull, etc., occupy important places in the spectrum of god. “Spiritually, there is no distinction between human beings and other forms of life. All forms, including plants and animals, are manifestations of god as limited beings (jivas). Even micro organisms are jivas, having souls of their own”.

[catholicethics.com/sites/default/files/u3/Shaji\\_Hekima%2043.pdf](http://catholicethics.com/sites/default/files/u3/Shaji_Hekima%2043.pdf)

## **20. “Other civilisations have to learn from Hindu spiritualism” - Rev. Kochuthara**

In the abstract of the paper Fr.Kochuthara says that Christianity, with the theology of ‘dominating earth’, is often accused of having been responsible for the present crisis. He admits that that **certain emphases in the Christian tradition did not facilitate a reverential attitude to nature**, and says that **uncompromising commitment to a transcendental God and the prohibition of worship of any other being, implying a denial of the immanence of God in his creation. Any attempt to consider the nature as sacred**

would be labelled as pantheism and idolatry and the Christian emphasis on the spiritual nature of human beings over against the physical nature of the other creatures are some of the main reasons for the lack of reverence for nature in Christian tradition, even though he contends that it is unjust to attribute to Christianity the sole responsibility for environmental destruction. The most important part of his paper is that **Hinduism can help us [Christians] to discover further on our own eco-theology. He further says that we [Christians] develop a reverential attitude to nature.**

[catholicethics.com/sites/default/files/u3/Shaji\\_Hekima%2043.pdf](http://catholicethics.com/sites/default/files/u3/Shaji_Hekima%2043.pdf)



After exhaustively considering the sources of ancient Hindu literature that see humans as part of nature and profess and proclaim reverence to nature, the Rev Father talks about how the Christianity can learn from Hinduism on how to revere nature. The Rev Father says:

This attitude of reverence and gratitude to the earth and the whole cosmos in Hinduism shows us the possibility of working together to face the ecological crisis and to respond together to the spiritual inadequacy that many feel in the face of this crisis. There are differences in the basic faith vision and convictions, but a more critical re-evaluation of interpreting Hindu approach to nature as pantheistic and naturalistic will help us to understand better the richness of these traditions and to find common grounds to work together. Many have said the same regarding African religions which have a reverential approach to the nature. Besides convincing us of the possibility of working together, this will also help us to re-discover our own eco-theology and eco-ethics, to reconsider the interpretations in the past and to correct the imbalances.

## 21. “Religious Conversion has led to Environmental Destruction” - Henry Lamb

The Lamb report says further that **the United Nations has accepted the view that the religious beliefs which propound the world and nature were created for the enjoyment of man, have caused the havoc.**



**Lamb says:** The religions that taught the world that “In the beginning, God created...,” are condemned by the United Nations: “Societies dominated by... [such beliefs].... have gone farthest in **setting humans apart from nature and in embracing**

**a value system that has converted the world into a warehouse of commodities for human enjoyment. In the process, not only has nature lost its sacred qualities; conversion to Christianity has meant an abandonment of an affinity with the natural world for many forest dwellers, peasants and fishers all over the world. These people followed their own religious traditions, which included setting apart between 10 and 30% of the landscape as sacred groves and ponds.**

**Most of these people were drawn into the larger market economy and converted to Christianity by the late 1950s. On so converting to a religious belief system that rejects assignment of sacred qualities to elements of nature, they began to cut down the sacred groves to bring the land under cultivation....” [Ibid p839]**

This is the most explicit and authentic admission that conversion from traditional faiths has led to the destruction of environment.

## 22. The Malshegu Sacred Grove in Northern Ghana



The religious beliefs and environmental protection study by Center for International Development and Environment World Resources Institute Washington, D.C., USA study concluded: “The principal driving forces behind Malshegu’s effective protection of its sacred grove include a strong religious

belief in the grove as the sanctuary of the local god - in good measure a result of the effectiveness of the religious leader, the rules and practices established centuries ago to guide people in their use of the forest and its resources, and the growing regional importance of the sanctuary as other local sacred groves become degraded or lost.

The study also added: “villages seeking to protect sacred sites threatened by non-believers need the support and backing of the government for the legal authority to implement and enforce traditional resource management strategies and practices”.

The study noted: The government of Ghana’s recognition of the importance of traditional religious beliefs in local-level natural resource management and its recent policy, legislative, and programming actions to further empower communities to take greater control of their resources have the potential to lead to improved local initiatives in environmental protection and management. **Other governments and international development assistance agencies concerned with natural resource management may learn from Ghana’s example.**

[http://pdf.usaid.gov/pdf\\_docs/pnaca562.pdf](http://pdf.usaid.gov/pdf_docs/pnaca562.pdf)

## 23. Plants and Animals not resources but living beings - Henry Lamb

Now, a paradigm shift is taking place in the West-centric world and religions – West looks to Indian thought to protect nature. In his seminal work “ecologic Special Report titled “Green Religion and Public Policy” [October, 2001] Henry Lamb, founder of the Environmental Conservation Organisation [1988] Sovereignty International Inc [1996] and Freedom21 Inc [1999] brings out the huge paradigm shift that is taking place in the West, particularly US, in environment related religious beliefs. Extracts from his work are produced hereunder:



**“In the beginning, God created...” is the assumption on which western culture has advanced for more than two millennia. This assumption is now obsolete** - in the minds of the world’s policy makers. Western civilizations have believed that man was created in “God’s image,” and is the

crown jewel in all of God’s creation. This belief too, is obsolete in the minds of many people who implement public policy:

Lamb Concludes: “This new, “enlightened” view of the world has permeated our schools for more than a generation. Our churches and our governments -- at every level – are filled with people who subscribe to this new world view. How, exactly, this paradigm shift has occurred is worthy of close examination. More importantly, how will this change in world view impact the lives of Americans today and in the future?”

Therefore, according to Henry Lamb, **for the past one generation, environmental paradigm is effecting huge changes in the West including in the Christian Church and theology. The Hindu spiritual values in which the Ancient Indian environmental consciousness inheres is becoming relevant as the Hindu spiritualism is the only ancient model that is in a living form in the contemporary world.**

**"Human happiness..... became a cancer.....a plague upon ourselves and upon the Earth. Until such time as homo sapiens should decide to rejoin nature, some of us can only hope for the right virus to come along." So says David Graber, a research biologist with the National Park Service.**

The western world has progressed using plants and animals as resources to meet the needs of people. **Plants and animals are no longer resources; they are living beings, of equal value to humans, with equal rights.** The **United Nations agrees with this view.**

In its 1140-page instruction book for implementing the Convention on Biological Diversity, Global Biodiversity Assessment, (Cambridge University Press, for the United Nations Environment Program, 1995), p. 787

## 24. Animals and Birds as Part of Environment

Animals and birds are part of nature and environment. It is natural, therefore, that Vedic seers have mentioned about their characteristics and activities and have desired their welfare.

Rig-veda classifies them in three groups - sky animals like birds, forest animals and animals in human habitation. - *Rigveda 10.90.8*



All the three types of living creatures found in the universe have distance environment and every living creature has an environment of its own. But when we look from man's perspective all of them constitute his environment. There is a general feeling in the Vedic texts that animals should be safe, protected and healthy. (*Yajurveda 19.20, 3.37; Atharvaveda 11.2.24*)

Domestic animals, as well as wild animals along with human beings should live in peace under the control of certain deities like Rudra, Pushan etc.

## 25. Environment Compatible - Ancient Philosophy

**The environment - compatible ancient philosophy incorporated cultural and religious rituals, which ingrained and implanted sentimental attachment for environment - including trees, plants, animals, rivers, ponds lakes and actualise the philosophic idea of oneness of humans and nature.**

The earth is worshipped [Bhoomi Vandanam] whenever people use the earth, whether for ploughing or for constructing a house or even to put a stage for any art or music performances such rituals were practiced because nature was considered sacred and as part of divinity, but not as a secular phenomenon.

Hundreds of millions of people practice these rituals. This is manifest in the following results :

- Even though India has only 2.4 % of world's landscape and 17% of world's population,
- It has 18% world's population of cattle.
- It has a fourth of its area covered by forest
- It has 8% world's recorded species
- 41% of Indians vegetarians are the largest vegetarian population in the world.

Vegetarianism is the biggest sustainer of environment ["10 ways Vegetarianism can help save the planet" The Guardian UK. 18 July 2010]

According to a 2006 United Nations initiative, the livestock industry is one of the largest contributors to environmental degradation worldwide, and modern practices of raising animals for food contribute on a "massive scale" to air and water pollution, land degradation, climate change, and loss of biodiversity. The initiative concluded that "the livestock sector emerges as one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global.

Livestock's Long Shadow – Environmental issues and options". Fao. org. Retrieved August 9, 2009.

<http://www.diseaseproof.com/archives/cat-green-living.html>

<http://www.theguardian.com/lifeandstyle/2010/jul/18/vegetarianism-save-planet-environment>



## 26. Excessive Meat Eating Damages Environment Ecology And Global Climate – I



The United Nations Environment Program (UNEP) has dubbed beef – a Climate Harmful Meat'. It is very energy intensive to produce every gram of beef, on an average every hamburger results in 3 kg of carbon emissions to the atmosphere. Today, saving the planet is really

about ensuring sustainable consumption, but meat production is unfortunately a highly energy intensive exercise.

Meat eaters in general, beef eaters in particular are among the most non-friendly to the global environment, reports the United Nations body, the Food and Agriculture Organisation (FAO) in Rome.

It may come as a surprise but globally beef production is one of the leading culprits for climate change. Some even suggest that beef is the devil or the 'Shaitan' of the meat production industry. That having said, the lynching of a man on the suspicion that he consumed beef can never be justified in any society.

Experts suggest that giving up beef will reduce the global carbon footprint on earth far more than avoiding use of cars!

If one examines the numbers closely, livestock production contributes more towards global warming than does the transport sector in total, through emissions of gases that result in changing the climate.

According to FAO, the livestock sector is responsible for 18 per cent of the global greenhouse gas emissions as compared to the transport sectors' 15 per cent.

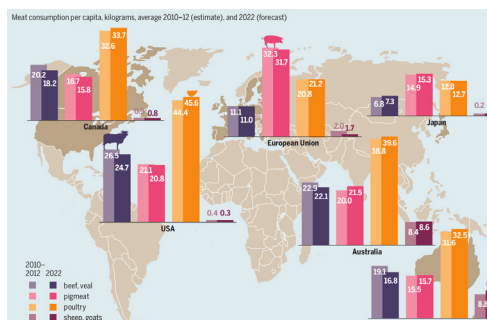
In a study 'Livestock's Long Shadow: Environmental Issues and Options', the FAO concludes that "the livestock sector is major player and its contributions to climate change has a higher share than transport".



Earth lovers are voicing their concern and shaming meat eaters. Most recently Laurence Tubiana, the charismatic French Ambassador for Climate Change Negotiations for the big climate summit that is to be held in a few weeks in Paris said, “This over consumption of meat is really killing many things (there has to be a campaign) that big meat consumers should stop that. At least try one day without meat.”

## 27. Excessive Meat Eating Damages Environment Ecology And Global Climate - II

According to a 2012 estimate by Ministry of Agriculture, India is home to 512 million livestock of which cows and buffaloes together account for 111 million animals. Most of the animals in India are not reared for slaughtering, but prized for milk and ploughing. UNEP estimates that in 2012 the world was home to 1.43 billion cattle.



In comparison in 2009, the world produced 278 million tons of meat, which means that India accounts for just about 2 per cent of the world's meat production while housing 17 per cent of the world's cattle population.

## **28. Excessive Meat Eating Damages Environment Ecology And Global Climate - III**

**It may sound astounding but beef production on an average requires 28 times more land and causes 11 times more global warming as compared to other livestock categories found a 2014 study by the prestigious Yale University in US, published in the Proceedings of the National Academy of Sciences which concluded that “minimising beef consumption mitigates the environmental costs of diet most effectively”.**



Tim Benton of the University of Leeds, UK, not associated with US study felt “the biggest intervention people could make towards reducing their carbon foot prints would not be to abandon cars, but to eat significantly less red meat”.

Beef production is also bad for water conservation since cattle rearing for beef require almost 10 times more water as compared to staple crops like wheat and rice.

In contrast, pork production uses three times less water as compared to beef ranching. Cattle also emit a highly potent climate changing gas called ‘methane’ in their farts and through belching. Also called ‘marsh gas’ this inflammable gas is produced in the guts of cattle by the bacteria as they digest the food of ruminants and methane is 21 times more potent than carbon di-oxide in causing global warming.

[<http://economictimes.indiatimes.com/news/science/beef-eating-bad-for-environment-experts/articleshow/49307401.cms>]

## 29. Excessive Meat Eating Damages Environment Ecology And Global Climate - IV

Using data from a Swedish study the UNEP says “in terms of greenhouse gas emissions the consumption of 1 kg domestic beef in a household represents automobile use of a distance of 160 kilometers”.



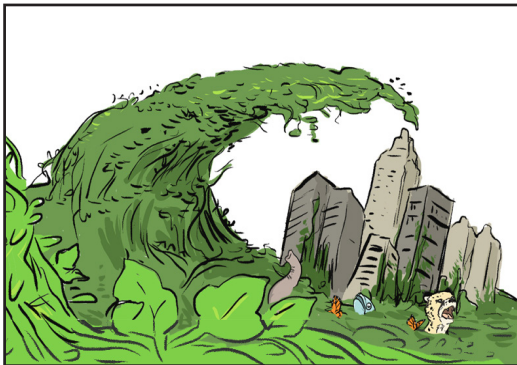
This means a car traveling all the way from New Delhi to Agra would cause about the same amount of global climate change as is done by consuming just one kg of beef! No wonder beef is considered highly environmentally unfriendly.

Nevertheless, at the same time in dry and arid regions of the world livestock are considered a ‘savings bank’ by local people as they form part of the life-saving kit to overcome the harsh environment.

Meat eating may not be ‘green’ but as more and more people become affluent, meat is becoming chic and fashionable. FAO estimates that by 2050 the global meat consumption will rise to 460 million tonnes. The, global environment watchdog the UNEP recommends a shift to ‘less climate harmful’ meats and emphasises that “healthy eating is not just important for the individual but for the planet as whole”.

[<http://economictimes.indiatimes.com/news/science/beef-eating-bad-for-environment-experts/articleshow/49307401.cms>]

## 30. India has a great responsibility to save the world from environmental and ecological destruction



**The modern life style of the West based on comfort for humans has caused discomfort for animals and destruction of nature.** The Western life model has reached a dead end in the environmental sense.

India is the only ancient civilisation, which has retained its ancient wisdom in practical life. **Indians still revere nature. They worship trees. They regard the entire creation as manifestation of divinity.** These are not habits which were cultivated in one day. This was founded on their philosophy of life given by rishis and saints and followed by their forefathers.

The Indian faith and lifestyle, particularly in villages, is largely environment friendly. There is still simplicity in villagers's life style and habits. Indians still have fewer wants. **Indians turn waste into wealth – like repairing and using things** and not throwing old things as useless but finding use for them like the younger brothers using the clothes which do not fit the elder ones. They still use natural products for **their day to day needs.**

India has the environmental-philosophy and Indians, particularly in the villages have environment-friendly lifestyle to demonstrate to the world a living model which, can save the flora and fauna from destruction and extinction. India has its **ancient wisdom which protects environment and is in current practice.** It is their greatest advantage to present before the modern world a functioning life model that protects and sustains environment.

The **young Indians must be made aware of the scientific basis of their traditions and samskarams and should be persuaded to participate voluntarily in the samskarams.** This will enable them to **tell the world that the Indian philosophy and lifestyle are the basis for the future world.**

**The National Intelligence Council of America [attached to the powerful spy agency CIA] declared that India would be among the three major world powers. India is projected increasingly as the global leader.** It therefore has the duty to expound a new environmental paradigm for the future world based on its ancient wisdom to save the world from environmental chaos.

It is with this object in view the IMCT has devised series of thematic samskarams for awareness and protection of environment – including protection of forests and wild animals.

### 31. Prayers in Vedas to Sustain Environment

In the Atharva Veda there is prayer which draws attention to the ecological balance of these elements and how the earth is the upholder of the moral order.

We beseech the earth to protect us and to purify us.

We pray to her to give us the mountains as well as the flowing rivers.

We ask her to bear herbs of manifold potency on whom food and crops grow and animals roam.

We seek the blessings of the Ether to bless us by fertilizing the earth by proper rainfall at times.

We also pray that let the earth be kind to us and we should be kind to it.

This philosophy of coexistence given by the Indians tells us about the high level of importance given by our ancestors for sustainability.

We have lot of reverence to our plants.

The Rig-Veda tells about the importance of plants & herbs with respect to their medicinal value and personifies the jungle as the mocking genius of the woods.



The Vedas devote many hymns to the water. We consider them to be the great superintendent of the cosmic moral order. It is he who looks after the heaven, earth and well beyond that boundary. Air is similarly considered to be the basic life giver and any kind of disrespect to it is abhorred.

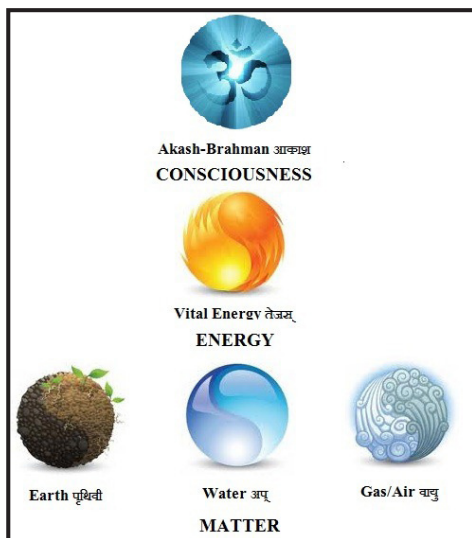
The Indian philosophical thought is in tune with nature. The present generation has to fall back upon the previous wisdom and learn by their mistakes.

It is by integrating the five elements of Mother Nature in a balanced proportion that it is possible for us to achieve sustainability of environment.

"Bless that Mother Nature be kind to us; the heavens give us peace. The earth be gentle; Gentle be the waters that flow; Gentle be the plants and herbs that grow. May the past be kind; the future benign. (Atharva-veda.19.9.1).

This in a nutshell gives us the much required knowledge for preserving our environment for future generations to come.

## 32. Creation of Nature



Air provides the connectivity to the Earth on one hand and the three lokas above viz. the heaven, sky and the intermediate ones as that universal link is the catalytic agent in the context of Creation of the Universe. This is also the overall connection for meditation of the Deities- first commencing with Agni denoting the foremost and bright entity while the third one being Surya while water is the rallying point or the junction as lightning

provides the link; this is in the context of Connectivity of the Basic Elements of the Universe. On the mortal plane of creation, the first letter is mother and the father is the last letter while the focal point or the junction constitutes progeny and the connection is generation. Similarly Guru is the first letter; Shishya is the third letter while the rallying medium or junction is knowledge, Teaching or imparting knowledge is the connection while active meditation is the end product. While referring to an individual body, the lower jaw is the first letter, upper jaw is the latest letter and tongue is the connection and speech is the 'Sandhi' the junction! These are the examples of combinations resulting in progeny and so on. Vidya or awareness and Reality are thus linked by Meditation in essence.



**Akashat Vayuhu, Vayur Agnihi, Agnir Apaha, Adyah Pruthivi,**

**Pruthivya Oshadhayaha, Oshadhayo Annam, Annaath Purushaha**

"Akashat Vayuhu," From the space, the air came. **Space is the first manifestation.**

Prana created its own abode by generating Air. **Air is the second manifestation.**

"Vayur Agnihi" From the air, fire came. **Fire is the third manifestation.**

And "Agnir Apaha" **Water is the fourth manifestation.**

"Adyah Pruthivi" From this water manifested the earth. **Earth is the fifth manifestation.**

"Pruthivya Oshadhayaha" From the earth, vegetation came. **This is the sixth manifestation.**

"Oshadhayo Annam" From the vegetation, food came. **This is the seventh manifestation.**

"Annaath Purushaha" From this food, the Jeevi came. **This is the eighth manifestation.**

**The five elements in human body are classified as follows:**



1. Entire physic emotions in us which are likes, dislikes, modesty, fear, ignorance are qualities of Akasha Bhuta, the Space element in the body.

2. Inhaling, exhaling, running, walking, contraction, expansion are qualities of Vayu Bhuta, the Air Element in the body.

3. Body Heat, hunger, thirst are qualities of Agni Bhuta, the Fire element in the body.



4. Blood, semen, bone-marrow, urine, and saliva are qualities of Aapa Bhuta, the Water Element in the body.
5. Bones, flesh, veins, and arteries are qualities of Prithivi Bhuta, the Earth Element in the body.

<http://www.speakingtree.in/blog/the-chronology-of-the-five-elements>

### 33. Concept of Ether ['AKASHA']



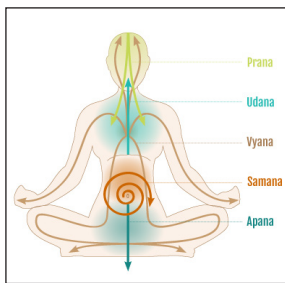
Modern environmentalists discuss sound or noise pollution. There is a relation between ether and sound. The sound waves move in sky at various frequencies. Scientist could see the sky which exists only in the vicinity of earth, but Taittiriya Upanishad throws light on two types of ether i.e: one inside the body

and the other outside the body. - *Taittiriya Upanishad* 1.6.1; 1.5.1

The ether inside the body is regarded as the seat of mind. An interesting advice to the mankind is found in the Yajurveda, 'Do not destroy anything of the sky and do not pollute the sky Do not destroy anything of Antariksha.' - *Yajurveda* 5.43

Sun shines in Dyuloka and we get light from sky. The sunrays strengthen our inner power and are essential for our life. Thus importance and care for ether is openly mentioned in the Vedic verses.

### 34. Concept of Air ['VAYU']



The observer space is the abode of matter particles, light space is the abode of energy and the intermediate space 'Antariksha' is the abode of field. The principal deity of Antariksha is Vayu. JaiminiyaBrahmana quotes, 'Vayu brightens in Antariksha.' Field is another form of energy and, therefore, Yajurveda says, 'Vayu has penetrating brightness.' The meaning of Vayu is made

clear in ShatapathaBrahmana in the following Mantra: 'Sun and rest of universe is woven in string. What is that string, that is Vayu.' - *Yajurveda* 1.24 This verse clearly shows that here Vayu cannot mean air alone. Apparent meaning of Vayu is air.



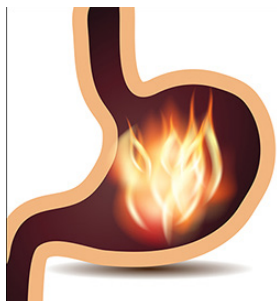
The Vedic seers knew the importance of air for life. They understood all about air in the atmosphere and also about the air inside the body. The Taittiriya Upanishad throws light on five types of wind inside the body: "Prana, Vyana, Apana, Udana and Samana" Air resides in the body as life. - *Taittiriya Upanishad, 2.4*

Concept and significance of air is highlighted in Vedic verses. Rigveda mentions 'O Air! You are our father, the protector.'- *Rigveda 10.186.2*; 'Air has medicinal values.' - *Ibid, 1.37.2*; 'Let wind blow in the form of medicine and bring me welfare and happiness.' - *Ibid 10.186.1*

Medicated air is the international physician that annihilates pollution and imparts health and hilarity, life and liveliness to people of the world. Hilly areas are full of medicated air consisted of herbal elements. Another verse describes characteristics of air. 'The air is the soul of all deities. It exists in all as life-breath. It can move everywhere. We cannot see it. Only one can hear its sound. We pray to air God.' - *Ibid 10.168.4*

Ancient Indians, therefore, emphasized that the unpolluted, pure air is source of good health, happiness and long life. Air pollution causes many diseases are discovered by Caraka in about 200 BCE. 'The polluted air is mixed with bad elements. The air is uncharacteristic of season, full of moisture, stormy, hard to breathe, icy cold, hot and dry, harmful, roaring, coming at the same time from all direction, bad smelling, oily, full of dirt, sand, steam, creating diseases in the body and is considered polluted. ' – *Caraka Samhita, Vimanastanam III 6:1*

### 35. Concept of the Fire ['AGNI']

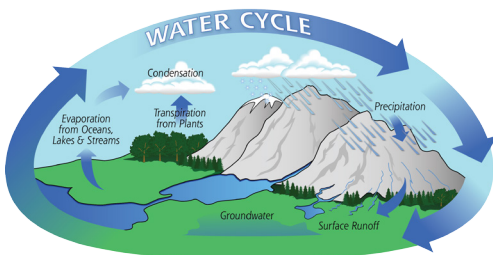


There are several instances of references to Agni in Vedas — eg O' pious fire, your flames are expanding all sides flickering by air bright, your flames bring destroying darkness and devours forest... - *Rig Veda*. The earth is fully responsible for our food and prosperity. She is praised for her strength. She is served day and night by rivers and protected by sky. The immortal heart of earth is in the highest

firmament (Vyoma). Her heart is sun.

'She is one enveloped by the sky or space and causing the force of gravitation. She is described as holding Agni. It means she is described as the geothermal field. She is also described as holding Indra i.e., the geomagnetic field. The earth is described then as being present in the middle of the oceans (sedimentary rocks) and as one having magical movements.' The hymn talks about different energies, which are generated from the form of the earth. 'O Prithivi! thy centre, thy navel, all forces that have issued from thy body- Set us amid those forces; breathe upon us.' (*Atharvaveda* 12.1.12) Thus, the earth holds almost all the secrets of nature, which will help us in understanding the universe. She is invested with divinity and respected as mother. The earth is my mother and I am Her son.'- *Atharvaveda*, 12.1.12 The geographical demarcations on this earth have been made by men and not by nature.

### 36. Concept of Water ['APAH']



'All living beings are dependent on water. The water which comes in the form of rain goes to rivers, ponds and wells. The food grains are grown by this water.'- *Rig-veda*. 7.101.3-4.

Water is essential to all forms of life. According to *Rig-veda* the water as a part of human environment occurs in five forms:

1. Rain water (Divyah)
2. Natural spring (Sravanti)
3. Wells and canals (Khanitrimah)
4. Lakes (Svayamjah)
5. Rivers (Samudrarthah)

#### **Water pollution:**

"Water is considered polluted when it is excessively smelly, unnatural in color, taste and touch, slimy, not frequented by aquatic birds, aquatic life is reduced, and the appearance is unpleasing". (*Caraka Samhita, Vimanastanam III 6:2*)

### Instruction for reducing water pollution:

"One should not cause urine, stool, cough in water. Anything which is mixed with these un-pious objects, blood, poison, should not be thrown into water". – *Manusmriti IV: 56*

### Warning:

Persons doing such unsocial activities and engaging in acts polluting the environment were cursed: " A person, who is engaged in killing creatures, polluting the wells, and ponds, and tanks and destroying gardens, certainly goes to hell" – *Padmapurana, Bhoomikhanda 96: 7-8*

## 37. Concept of The Earth ['PRITHVI']

The concept of the form of the earth in the Rig-veda is most fascinating. It is mostly addressed along with the heaven into a dual conception (Rodasi, Dyavaprithivi). There is one small hymn addressed to Prithivi, while there are six hymns addressed to Dyavaprithivi. Prithivi is considered the mother and Dyau is considered the father in the Vedas, and they form a pair together. One of the most beautiful verse of the Rig-veda says, '**Heaven is my father, brother atmosphere is my navel, and the great earth is my mother.**' *Rigveda 1.164.33*

Heaven and earth are parents: Matara, Pitara, Janitara (*Rigveda 1.159,160*) in union while separately called as father and mother. They sustain all creatures. They are parents of all gods. They are great (Mahi) and widespread. Earth is described as a goddess in Rig-veda.

In the Atharvaveda, the earth is described in one hymn of 63 verses. This famous hymn called as Bhoomisukta or Prithivisukta indicates the environmental consciousness of Vedic seers. The seers appear to have advanced understanding of the earth through this hymn. She is called Vasudha for containing all wealth, Hiranyavaksha for having gold bosom and Jagato Niveshani for being abode of whole world. She is not for the different races of men alone but for other creatures also. (*Atharvaveda 12.1.15;12.1.45*)

## 38. Bhoomi Vandanam – in other Ancient Traditions-I

**Mother Nature** (sometimes known as **Mother Earth** or the **Earth-Mother**) is a common personification of nature that focuses on the life-giving and nurturing aspects of nature by embodying it in the

form of the mother. Images of women representing mother earth, and Mother Nature, are timeless.

In prehistoric times, goddesses were worshipped for their association with fertility, fecundity, and agricultural bounty. Priestesses held dominion over aspects of Incan, Algonquian, Assyrian, Babylonian, Slavonic, Germanic, Roman, Greek, Indian, and Iroquoian religions in the millennia prior to the inception of patriarchal religions.

The word nature comes from the Latin word, *natura*, meaning birth or character (see nature (innate)). In English its first recorded use, in the sense of the entirety of the phenomena of the world, was very late in history in 1266; however *natura*, and the personification of Mother Nature, was widely popular in the Middle Ages and as a concept seated between the properly divine and the human, it can be traced to Ancient Greece - though Earth or Eorthe in the Old English period may have been personified as a goddess and the Norse also had a goddess called Jord *Earth*.

The earliest written and safely dated literal references to the term "Mother Earth" occur in Mycenaean Greek *ma-ka* (transliterated as *ma-ga*), "Mother Gaia", written in Linear B syllabic script (13th or 12th century BC). The various myths of nature goddesses such as Inanna/Ishtar (myths and hymns attested on Mesopotamian tablets as early as the 3rd millennium BC) show that the personification of the creative and nurturing sides of Nature as female deities had deep roots. In Greece, the pre-Socratic philosophers had "invented" nature when they abstracted the entirety of phenomena of the world as singular: *physics* and this was inherited by Aristotle. Later medieval Christian thinkers did not see nature as inclusive of everything, but thought that she had been created by God; her place lay on earth, below the unchanging heavens and moon. Nature lay somewhere in the centre, with agents above her (angels) and below her (demons and hell). For the medieval mind she was only a personification, not a goddess.

In Greek mythology, Persephone, the daughter of Demeter, goddess of the harvest, was abducted by Hades, god of the dead, and taken to the underworld as his queen. Demeter was so distraught that no crops would grow and the "entire human race [would] have perished of cruel, biting hunger if Zeus had not been concerned" (Larousse 152). Zeus forced Hades to return Persephone to her mother, but

while in the underworld, Persephone had eaten pomegranate seeds, the food of the dead and thus, she must spend part of each year with Hades in the underworld. Demeter's grief for her daughter in the realm of the dead, is reflected in the barren winter months and her joy when Persephone returns is reflected in the bountiful summer months. Demeter would take the place of her grandmother, Gaia, and her mother, Rhea, as goddess of the earth in a time when humans and gods thought the activities of the heavens more sacred than those of earth. [Leeming, *Creation Myths of the World: An Encyclopedia*]

### 39. Bhoomi Vandanam – in other Ancient Traditions-II

Algonquian legend says that "beneath the clouds lives the Earth-Mother from whom is derived the Water of Life, who at her bosom feeds plants, animals and human" (Larousse 428). She is also known as **Nokomis**, the Grandmother.

In Inca mythology, *Mama Pacha* or Pachamama is a fertility goddess who presides over planting and harvesting. Pachamama is usually translated as "Mother Earth", but a more literal translation would be "Mother Universe" (in Aymara and Quechua *mama* = mother / *pacha* = world, space-time or the universe). [6] Pachamama and her husband, Inti are the most benevolent deities and are worshiped in parts of the Andean mountain ranges, also known as Tawantinsuyu (stretching from present day Ecuador to Chile and Argentina).

In the Southeast Asian Indochina countries of Cambodia, Laos and Thailand, earth (*terra firma*) is personified as Phra Mae Thorani, but her role in Buddhist mythology differs considerably from that of Mother Nature.

In the Malay Archipelago, that role is filled by Dewi Sri, The Rice-mother in the East Indies.

The Earth Mother is a motif that appears in many mythologies. The Earth Mother is a fertile goddess embodying the fertile earth and typically, the mother of other deities, and so, also is seen as patronesses of motherhood. This is generally thought of as being because the earth was seen as being the mother from whom all life sprang.

In South America, contemporary Andean Indian peoples such as the

Quechua and Aymara believe in the Mother Earth Pachamama, whose worship cult is found in rural areas and towns at Ecuador, Peru, Bolivia, Northern Chile and Northwestern Argentina. Andean migrants carried the Pachamama cult to cities and many other extra-Andean places, including metropolitan Buenos Aires.

#### 40. Bhoomi Vandanam in Other Traditions –III

1. In Sumerian mythology “**Ki**” is the earth goddess.
2. In Akkadian orthography she has the syllabic values *gi, ge, qi, qe* (for toponyms). Some scholars identify her with Ninhursag (lady of the mountains), the earth and fertility Mother Goddess, who had the surnames Nintu (lady of birth), Mamma, and Aruru.
3. An Egyptian earth and fertility deity, Geb, was male and he was considered father of all snakes, however, the mound from which all life was created by parthenogenesis, represents Mut, the primal “mother of all who was not born of any”. She is the more appropriate figure to discuss as the mother goddess in Ancient Egyptian religion. The number of Egyptian goddesses who are depicted as important mother deities is numerous because of regional cults of many very early cultures and a major unification of two ancient countries into one, whose written history only begins at approximately 3150 B.C. It is estimated that some early cultures that eventually became parts of Ancient Egypt date back to 8000 B.C. and that human occupation of the Nile Valley by modern hunter gatherer societies dates back 120 thousand years.
4. The title “The mother of life” later was given to the Akkadian Goddess Kubau, and hence to Hurrian Hepa, emerging in Hebrew as Eve (Heva) and Phygian Kubala (Cybele).
5. In Norse mythology the earth is personified as Jörð, Hlöðyn, and Fjörgyn and Fjörgynn.
6. In Germanic paganism, the Earth Goddess is referred to as *Nertha*. The Irish Celts worshipped Danu, whilst the Welsh Celts worshipped Dôn. Hints of their names occur throughout Europe, such as the Don river, the Danube River, the Dnepr, and the Dnepr, suggest that they stemmed from an ancient Proto-Indo-European goddess.[26] In Lithuanian mythology Gaia - Žemė (Lithuanian for “Earth”) is daughter of Sun and Moon. Also she is wife of Dangus (Lithuanian for “Sky”) (Varuna).

## 41. Bhoomi Vandanam in other traditions- IV

1. In Pacific cultures, the Earth Mother was known under as many names and with as many attributes as cultures who revered her, such as the Māori, whose creation myth included Papatuanuku (Earth Mother), partner to Ranginui (Sky Father) or Varima-te-takere (goddess of the beginning), the primordial mother in Cook Islands mythology.
2. In South America in the Andes a cult of the Pachamama still survives (in regions of Bolivia, Peru, Ecuador, Argentina, and Chile). The name comes from Pacha (Quechua for *change, epoch*) and Mama (mother).
3. While ancient Mexican cultures referred to Mother Earth as Tonantzin Tlalli that means “Revered Mother Earth”. Phra Mae Thorani is recognized as the Goddess of the earth in Burma, Cambodia, Laos, Thailand, and other Southeast Asian countries.
4. Only in late Egyptian Mythology does the reverse seem true - Geb is the Earth Father while Nut is the Sky Mother, but the primordial and great goddess of Egypt was Mut, the source of all life and the mother of all. The mound of earth from which life sprang was Mut.
5. In Theosophy, the Earth Goddess is called the “Planetary Logos of Earth”.
6. In Wicca, the Earth Goddess is sometimes called Gaia. The name of the Mother Goddess varies depending on the Wiccan tradition.
7. Carl Gustav Jung suggested that the archetypal mother was a part of the collective unconscious of all humans, and various Jungian students, e.g. Erich Neumann and Ernst Whitmont have argued that such mother imagery underpins many mythologies, and precedes the image of the paternal “father”, in such religious systems. Such speculations help explain the universality of such mother goddess imagery around the world. The Upper Paleolithic Venus figurines have been sometimes explained as depictions of an Earth Goddess similar to Gaia.

8. In Native American Indian storytelling, “The Earth Goddess”, is one of several Creator-based titles and names given to the Spider Grandmother. In ancient Hawaii, Nuakea was a mother goddess of lactation.

## **42. Co-ordination Between All Natural Powers**

Modern Indian Scientists should be astonished and also feel proud of our ancestors for their knowledge and views about environment. Ancient seers knew about various aspects of environment, about cosmic order, and also about the importance of co-ordination between all natural powers for universal peace and harmony.

When they pray for peace at all levels in the ‘Shanti Mantra’ they side by side express their belief about the importance of coordination and interrelationship among all natural powers and regions.

Shanti Mantra in Yajur Veda and Atharva Veda pray for concordance among all natural forces - Heaven, Sky, Earth, Water, Herbs, Vegetation, Forests, Rulers, Spiritual Quest and Realisation and for all, every where and in every thing.

The prayer says, not-only regions, water, plants trees, natural energies but also all creatures should live in harmony and peace. Peace should remain everywhere.

The Mantra runs like this

***Om Dyauh Shaantir-Antarikssam Shaantih***

***Prthivii Shaantir-Aapah Shaantir-Ossadhayah Shaantih |***

***Vanaspatayah Shaantir-Vishve-Devaah Shaantir-Brahma***

***Shaantih***

***Sarvam Shaantih Shaantireva Shaantih Saa Maa Shaantir-Edhi |***

***Om Shaantih Shaantih Shaantih ||***

Meaning:

- 1: Om, May there be Peace in Heaven, May there be Peace in the Sky,
- 2: May there be Peace in the Earth, May there be Peace in the Water, May there be Peace in the Plants,
- 3: May there be Peace in the Trees, May there be Peace in the Gods in the various Worlds, May there be Peace in Brahman,



- 4: May there be Peace in All, May there be Peace Indeed within  
Peace, Giving Me the Peace which Grows within Me,  
5: Om, Peace, Peace, Peace.

(Yajurveda 36.1; Atharvaveda 19.9.94.).

[http://www.greenmesg.org/mantras\\_slokas/vedas-om\\_dyauha\\_shantirantariksha\\_shantihi.php](http://www.greenmesg.org/mantras_slokas/vedas-om_dyauha_shantirantariksha_shantihi.php)

The mantra takes about the concord with the universe peace of sky, peace of mid-region, peace of earth, peace of waters, peace of plants, peace of trees, peace of all-gods, peace of Brahman, peace of universe, peace of peace; May that peace come to me! (Yajurveda 36.1; Atharvaveda 19.9.94.)

From the above detailed discussion, some light is thrown on the awareness of our ancient seers about the environment, and its constituents. It is clear that the Vedic vision to live in harmony with environment was not merely physical but was far wider and much comprehensive.

The Vedic people desired to live a life of hundred years and this wish can be fulfilled only when environment will be unpolluted, clean and peaceful. The knowledge of Vedic sciences is meant to save the human beings from falling into an utter darkness of ignorance.

The unity in diversity is the message of Vedic physical and metaphysical sciences.

## Ganga Vandanam

### 1. Composition of environment

**Earth science generally recognizes four spheres:- the Lithosphere, the Hydrosphere, the Atmosphere, and the Biosphere as correspondent to rocks, water, air, and life.** Some scientists include, as part of the spheres of the Earth, the cryosphere (corresponding to ice) as a distinct portion of the hydrosphere, as well as the pedosphere (corresponding to soil) as an active and intermixed sphere. Earth science (also known as geoscience, the geosciences or the Earth Sciences), is an all-embracing term for the sciences related to the planet Earth.

There are four major disciplines in earth sciences, namely geography, geology, geophysics and geodesy. These major disciplines use physics, chemistry, biology, chronology and mathematics to build a qualitative and quantitative understanding of the principal areas or *spheres* of the Earth system.

## 1. Ocean

An ocean is a major body of saline water, and a component of the hydrosphere. Approximately 71% of the Earth's surface (an area of some 362 million square kilometers) is covered by ocean, a continuous body of water that is customarily divided into several principal oceans and smaller seas. More than half of this area is over 3,000 meters (9,800 ft) deep. Average oceanic salinity is around 35 parts per thousand (ppt) (3.5%), and nearly all seawater has a salinity in the range of 30 to 38 ppt.

Though generally recognized as several 'separate' oceans, these waters comprise one global, interconnected body of salt water often referred to as the World Ocean or global ocean. **This concept of a global ocean as a continuous body of water with relatively free interchange among its parts is of fundamental importance to oceanography.**

The major oceanic divisions are defined in part by the continents, various archipelagos, and other criteria. These divisions are (in descending order of size) the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Southern Ocean and the Arctic Ocean.

## 2. Rivers

A river is a natural watercourse, usually freshwater, flowing toward an ocean, a lake, a sea or another river. In a few cases, a river simply flows into the ground or dries up completely before reaching another body of water. Small rivers may also be termed by several other names, including stream, creek and brook.

In the United States a river is generally classified as a watercourse more than 60 feet (18 metres) wide. The water in a river is usually in a channel, made up of a stream bed between banks. In larger rivers there is also a wider floodplain shaped by waters over-topping the channel.

Flood plains may be very wide in relation to the size of the river channel. Rivers are a part of the hydrological cycle. **Water within a river is generally collected from precipitation through surface runoff, groundwater recharge, springs, and the release of water stored in glaciers and snowpacks.**

### 3. Stream

A stream is a flowing body of water with a current, confined within a bed and stream banks. Streams play an important corridor role in connecting fragmented habitats and thus in conserving biodiversity. **The study of streams and waterways in general is known as surface hydrology.** Types of streams include creeks, tributaries, which do not reach an ocean and connect with another stream or river, brooks, which are typically small streams and sometimes sourced from a spring or seep and tidal inlets.

### 4. Lake

A lake (from Latin *lacus*) is a terrain feature, a body of water that is localized to the bottom of a basin. **A body of water is considered a lake when it is in land, is not part of an ocean, is larger and deeper than a pond, and is fed by a river.** Natural lakes on earth are generally found in mountainous areas, rift zones, and areas with ongoing or recent glaciation. Other lakes are found in endorheic basins or along the courses of mature rivers. In some parts of the world, there are many lakes because of chaotic drainage patterns left over from the last Ice Age. **All lakes are temporary over geologic time scales, as they will slowly fill in with sediments or spill out of the basin containing them.**

### 5. Pond

A pond is a body of standing water, either natural or man-made, that is usually smaller than a lake. A wide variety of man-made bodies of water are classified as ponds, including water gardens designed for aesthetic ornamentation, fish ponds designed for commercial fish breeding, and solar ponds designed to store thermal energy. **Ponds and lakes are distinguished from streams via current speed.**

While currents in streams are easily observed, ponds and lakes possess thermally driven micro-currents and moderate wind driven currents. These features distinguish a pond from many other aquatic terrain features, such as stream pools and tide pools.

## 2. Effects of Water Pollution- I

1. **Water pollution** is the contamination of water bodies: (eg.lakes, rivers, oceans, aquiferand groundwater).

Water pollution occurs when pollutants are directly or indirectly discharged into water bodies without adequate treatment to remove harmful compounds.Water pollution affects plants and organisms living in these bodies of water. In almost all cases the effect is damaging not only to individual species and populations, but also to the natural biological communities.

Water pollution is a major global problem, which requires ongoing evaluation and revision of water resource policy at all levels (international down to individual aquifers and wells). It has been suggested that it is the leading worldwide cause of deaths and diseases,and that it accounts for the deaths of more than 14,000 people daily.An estimation of 580 people in India die of water pollution related sickness every day.

Some 90% of China's cities suffer from some degree of water pollution,and nearly 500 million people lack access to safe drinking water.In addition to the acute problems of water pollution in developing countries, developed countries continue to struggle with pollution problems as well. In the most recent national report on water quality in the United States, 45 percent of assessed stream miles, 47 percent of assessed lake acres, and 32 percent of assessed baysand estuarine square miles were classified as polluted.

Water is typically referred to "**as polluted**" when it is impaired by anthropogeniccontaminants and either does not support a human use, such asdrinking water, or undergoes a marked shift in its ability to support its constituent biotic communities, such as fish. Natural phenomena such asvolcanoes, algae blooms, storms, and earthquakes also cause major changes in water quality and the ecological status of water.

### Category

Surface water and groundwater have often been studied and managed as separate resources, although they are interrelated.

**Surface water seeps through the soil and becomes groundwater. Conversely, groundwater can also feed surface water sources.**

Sources of surface water pollution are generally grouped into two categories based on their origin.

#### **a. Point sources**

Point source water pollution refers to contaminants that enter a waterway from a single, identifiable source, such as a pipe or ditch. Examples of sources in this category include discharges from a sewage treatment plant, a factory, or a city storm drain. **The U.S. Clean Water Act (CWA) defines point source for regulatory enforcement purposes. The CWA definition of point source was amended in 1987 to include municipal storm sewer systems, as well as industrial stormwater, such as from construction sites.**

#### **b. Non-point sources**

Nonpoint source pollution refers to diffuse contamination that does not originate from a single discrete source. **NPS pollution is often the cumulative effect of small amounts of contaminants gathered from a large area.** A common example is the leaching out of nitrogen compounds from fertilized agricultural lands. Nutrient runoff in storm water from “sheet flow” over an agricultural field or a forest is also cited as examples of NPS pollution.

**Contaminated storm water washed off of parking lots, roads and highways, called urban runoff, is sometimes included under the category of NPS pollution.** However, this runoff is typically channeled into storm drain systems and discharged through pipes to local surface waters, and is a point source.

### **3. Effects of Water Pollution-II**

#### **Groundwater pollution**

Interactions between groundwater and surface water are complex. Consequently, groundwater pollution, sometimes referred to as groundwater contamination, is not as easily classified as surface water pollution. By its very nature, groundwater aquifers are susceptible to contamination from sources that may not directly affect surface water bodies, and the distinction of point vs non-point source may be irrelevant.

**A spill or ongoing releases of chemical or radionuclide contaminants into soil (located away from a surface water body)**

**may not create point source or non-point source pollution, but can contaminate the aquifer below, defined as a toxin plume. The movement of the plume, called a plume front, may be analyzed through a hydrological transport model or groundwater model.** Analysis of groundwater contamination may focus on the soil characteristics and site geology, hydrogeology, hydrology, and the nature of the contaminants.

[https://en.wikipedia.org/wiki/Plume\\_hydrodynamics](https://en.wikipedia.org/wiki/Plume_hydrodynamics)

### Causes

The specific contaminants leading to pollution in water include a wide spectrum of chemicals, pathogens, and physical or sensory changes such as elevated temperature and discoloration. While many of the chemicals and substances that are regulated may be naturally occurring (calcium, sodium, iron, manganese, etc), the concentration is often the key in determining what is the natural component of water, and what is a contaminant. High concentrations of naturally occurring substances can have negative impacts on aquatic flora and fauna.

Oxygen-depleting substances may be natural materials, such as plant matter (e.g. leaves and grass) as well as man-made chemicals. Other natural and anthropogenic substances may cause turbidity (cloudiness) which blocks light and disrupts plant growth, and clogs the gills of some fish species.

Many of the chemical substances are toxic. Pathogens can produce waterborne diseases in either human or animal hosts. Alteration of water's physical chemistry includes acidity (change in pH), electrical conductivity, temperature, and eutrophication. Eutrophication is an increase in the concentration of chemical nutrients in an ecosystem to an extent that increases in the primary productivity of the ecosystem. Depending on the degree of eutrophication, subsequent negative environmental effects such as anoxia (oxygen depletion) and severe reductions in water quality may occur, affecting fish and other animal populations.

#### 4. Pollution of the Sacred Ganga

In a country where all Revere Rivers and worship Ganga, the mighty perennial river is amongst the most polluted ones in the world.

The Ganges is the largest river in India with an extraordinary religious importance for Hindus. Along its banks are some of the world's oldest inhabited places like Varanasi and Patna. It provides water to about 40% of India's population in 11 states with an estimation of 500 million people or more, which is larger than any other river in the world. Today, it is fifth most polluted river in the world. Recently a drive was undertaken, in which the river has to be cleaned. The municipal commissioner urged people to refrain from polluting.

##### Human waste

The Ganges river basin is one of the most fertile and densely populated regions in the world and covers an area of 1,080,000 km<sup>2</sup> (400,000 square miles). The river flows through 29 cities with population over 100,000, 23 cities with population between 50,000 and 100,000, and about 48 towns. A large proportion of the waste in the Ganges is from this population through domestic usage like bathing, laundry and public defecation.

##### Industrial waste

Countless tanneries, chemical plants, textile mills, distilleries, slaughterhouses, and hospitals contribute to the pollution of the Ganges by dumping untreated waste into it. Industrial effluents are about 12% of the total volume of effluent reaching the Ganges. Although a relatively low proportion, they are a cause for major concern because they are often toxic and non-biodegradable.

##### Dams

Built in 1854 during the British colonization of India, the Haridwar dam has led to decay of the Ganges by greatly diminishing the flow of the river. The Farakka Barrage was built originally to divert fresh water into the Bhagirathi River but has caused an increase of salinity in the Ganges, having a damaging effect on the ground water and soil along the river. The barrage has caused major tension between Bangladesh and India. The government of India has planned about 300 dams on the Ganges and its tributaries in the near future despite a government-commissioned green panel report that has

recommended scrapping 34 of the dams citing environmental concerns.

The Ganga is polluted because rivers are seen more as resources rather than living bodies- like humans and other living beings. This attitudinal change is because of the paradigm shift of people's outlook which preserves Ganga water as an asset rather than as a sacred river. Even though there are efforts to remove the pollution of the Ganga, the real change can come only if the consciousness that rivers and waters are sacred. It calls for reinstating our tradition of "Ganga Vandanam" that needs to be revived-not only to protect Ganga, but all rivers and water bodies.

#### 5. Water and Rivers as sacred in ancient Indian Traditions

In ancient India, water has been an object of worship from time immemorial. It has diverse socio-religious uses and plays a central role in many religious ceremonies and rites. Water and in turn water bodies have been traditionally held sacred for the following reasons:

1. Almost all rivers, lakes, springs are attributed some degree of holiness and are often associated with the local pantheon of Gods and Goddesses.
2. Most Indian rivers are usually believed to be manifestations (avatars) of Goddesses. Rivers have been given a divine status and have been worshipped since ancient times.
3. Water plays a vital role in holy rituals / rites. It cleanses our body and hence, symbolizes purification.

The ecological significance of water—asa source and sustainer of life. The rhythm of life is dictated by water and Hindus hold rivers in great reverence. India is a country that not only nurtures the resources that nature has bestowed upon her, but also worships them for the all-round prosperity they bring in their wake. Rivers are one such gift, which is considered highly sacred throughout the length and breadth of the country. This is primarily because these mighty rivers have perennially been a source of livelihood to millions of people living in areas lying along their courses. No wonder people see in them a manifestation of divine female power (shakthi).

"Sindhu in might surpasses all the streams that flow.... His roar is lifted up to heaven above the earth; he puts forth endless vigour with a



flash of light. Even as cows with milk rush to their calves, so other rivers roar into the Sindhu. As a warrior- king leads other warriors, so does Sindhu lead other rivers. Rich in good steeds is Sindhu, rich in gold, nobly fashioned, rich in ample wealth”says the Rig Veda.

#### 6. River Water as divine in other ancient traditions

Water is a primordial element which underlays creation myths and stories around the world.

1. The Egyptian Heliopolitan creation story recounts that the sun-god Atum (*Re*) reposed in the primordial ocean (*Nun*).

2. In Assyro-Babylonian mythology, first the gods and subsequently all beings arose from the fusion of salt water (*Tiamat*) and sweet water (*Apsu*). Water divinities of various kinds appear in the mythologies of many cultures.

3. And not surprisingly, the world abounds in sacred springs, rivers, and lakes. **Even within the Judeo-Christian tradition, which generally avoids the veneration of the various phenomena of Nature, there are numerous examples of sacred springs or wells, and rivers.**

4. The water of the River Jordan is sacred because Jesus Christ was baptized in it by Saint John, Baptist. The spring at Lourdes is sacred because of its healing properties in connection with the appearance of the Virgin Mary to Bernadette.

5. **In Japan**, water prefigures the purity and pliant simplicity of life. The Japanese make pilgrimages to waterfalls.

6. The lotus-stream of the Buddha or Bodhisattvarises up from the waters of the soul, in the same way the spirit, illumined by knowledge, frees itself from passive existence.

7. **The Roman** philosopher Seneca declared that where a spring rises or water flows there we ought to build altars and offer sacrifices.

8. **The Celts** venerated natural springs of water for their sacred and medicinal value and many examples of holy wells are known, many of them were later Christianized through rededication to a saint. This practice of venerating sacred wells continued into the Christian era in the West, though they were now referred to as wishing wells.

9. **In China**, the water of the fountain at Pon Lai was believed to confer a thousand lives on those who drink it and a similar reputation was attached to the springs of Mount Lao Shan.

10. Sacred springs were enshrined by **the Ancient Greeks**.

11. Goddesses and nymphs were connected with certain rivers, springs, and wells by the **Celts and Romans**.

12. Often the river was named after the goddess, such as the Shannon River, after Sinann, and the Boyne, after Boann, **in Ireland**,

13. And the Seine, after Sequana, in Gaul (**France**). ....

14. **The Celts** subsequently established a shrine there dedicated to Sulis, and later **the Romans** built on the same spot a temple to Sulis Minerva (and renamed the town AquaeSulis). In 218 CE, after defeating the Romans, Hannibal and his armies stopped to imbibe the waters at Perrier in the south of France.

15. The water at Evians-les-Bains, on the southern side of Lake Geneva, was discovered in ancient times; in 363 CE, the Roman emperor Flavius Claudius Jovianus stopped there on his way to Germany. The natural spring waters at Evians-les-Bains are marketed today as Evian.

16. The waters at San Pellegrino in Lombardy in northern Italy have been known since Roman times. Rediscovered in the 12th century, one of the famous pilgrims (*pellegrino* means pilgrim) who came to take the waters there was Leonardo da Vinci. The spa was established there in 1848, and bottling of the water begun in 1899.

<http://witcombe.sbc.edu/sacredplaces/water.html>

## 7. Names of sacred lakes and Rivers in India

Indian Traditions consider that most of the rivers are feminine because of their producing nature and revere them as goddess. Most of the lakes are designated as masculine.

Some of the well-known sacred lakes and rivers of India are as follows:

-

LAKES: -

1. Drongasagar
2. Gurudongmar
3. Hemakund
4. Khecheopalri
5. Mani Mahesh
6. Manikaran
7. Pushkar
8. Tsomgo

RIVERS: -

1. Bhagirathi
2. Brahmaputra
3. Chambal
4. Gandaki
5. Ganga
6. Ghaghara
7. Godavari Gomti
8. Gumti
9. Jhelum
10. Kali Ben
11. Kaveri
12. Krishna
13. Mahanadhi
14. Narmada
15. Pamba
16. Phalgu
17. Pykara
18. Shipra
19. Tapti
20. Thamirabarani
21. Tungabhadra

22. Vaigai

23. Yamuna

[http://www.cpreecenviis.nic.in/Database/Sacred\\_rivers\\_885.aspx](http://www.cpreecenviis.nic.in/Database/Sacred_rivers_885.aspx)

## 8. Ganga Vandanam

The rivers are generally female divinities, food and life bestowing mothers. As such, they are prominent among the popular divinities represented in the works of art of the classical period. The most holy of rivers, the best known and most honored, is the Ganga or Ganges. She is personified as Goddess Ganga. The sacred river Ganges not only provides water for the land; the water is itself the symbol of life without end. The doorway of every temple in India is guarded by an anthropomorphic representation of river Ganga.

'O Mother Ganga, may your water,  
abundant blessing of this world,  
treasure of Lord Shiva, playful Lord of all the earth,  
essence of the scriptures and  
embodied goodness of the gods,  
May your water, sublime wine of immortality,  
Soothe our troubled souls.'

The story of the descent of the Ganga is an ecological story. The above hymn is a tale of the hydrological problem associated with the descent of a mighty river like the Ganga. H.C. Reiger, the German Himalayan ecologist, described the material rationality of the hymn in the following words:

"In the scriptures a realization is there that if all the waters which descend upon the mountain were to beat down upon, the naked earth would never bear the torrents... In Shiva's hair we have a very well-known physical device which breaks the force of the water coming down... the vegetation of the mountains".

The ancient city of Allahabad (formerly known as Prayag) lies at the confluence of the Ganga (Ganges) and the Yamuna, two sacred rivers that have been the cradles of Indian civilisation. The city is mentioned in the oldest Indian literature such as the Vedas, Ramayana, Mahabharata and the Puranas. According to Hindu tales, Lord Brahma, the creator chose a place where three of the holiest

rivers on earth could meet in harmony. The city is also referred to as 'Tirth Raj' or the 'king of pilgrimage centers'.

"The Ganga is a living presence, a protector, a healer of ills. The Ganga is as alive as it ever was with the hopes and dreams of an entire culture.

Says Pundit Jawaharlal Nehru *"I am proud of this noble heritage which was and still is ours, and I am aware that I too, like all of us, am a link in that uninterrupted chain which finds its origin in the dawn of history, in India's immemorial past. It is in testimony of this and as a last homage to the cultural heritage of India that I request that a handful of my ashes be thrown in the Ganga at Allahabad, so that they may be borne to the vast ocean that bears on the shores of India."*

(source: The India I Love - By Marie-Simone Renou p.128). Refer to If the Ganga lives, India lives. If the Ganga dies, India dies - By Vandana Shiva

[http://www.hinduwisdom.info/Nature\\_Worship4.htm](http://www.hinduwisdom.info/Nature_Worship4.htm)

## Thematic Quiz : Sustain Environment

### The Earth and Water as the Centre of Natural Environment

1. The \_\_\_\_\_ environment encompasses all living and non-living things occurring naturally on Earth **(Natural)**
2. The natural environment encompasses the interaction of all living \_\_\_\_\_ **(species)**
3. Complete \_\_\_\_\_ units function as natural systems without massive human intervention.  
A. Eco friendly **B. Ecological** C. Green D. Environment
4. The natural environment is contrasted with the \_\_\_\_\_ environment strongly influenced by humans. **(Built)**
5. A \_\_\_\_\_ area without human intervention is regarded as a natural environment  
A. Historical **B. Geographical** C. Earthly D. Regional
6. Natural environment is often used as a synonym for \_\_\_\_\_  
A. Dwelling B. Environment **C. Habitat** D. Locality
7. It is the earth and water - the oceans and rivers which constitute the \_\_\_\_\_ of natural environment  
A. Body B. Middle C. Bulk **D. Core.**

### Composition of Environment

8. A \_\_\_\_\_ is a terrain feature, a body of water that is localized to the bottom of a basin  
A. Pond B. Creek **C. Lake** D. tank
9. A body of water is considered a lake when it is \_\_\_\_\_  
A. Coaster **B. Inland** C. Central D. Border
10. Natural lakes on Earth are generally found in \_\_\_\_\_ areas.  
A. Colossal B. Enormous **C. Mountainous** D. Elevated
11. Other lakes are found in endorheic basins ( that do not flow into the seas ) or along the courses of \_\_\_\_\_ **(Mature rivers)**
12. In some parts of the world, there are many lakes because of \_\_\_\_\_ patterns left over from the last Ice Age.  
A. Systematic drainage **B. chaotic drainage** C. turbulent D. Lawless

13. All lakes are \_\_\_\_\_ over geologic time scales, as they will slowly fill in with sediments  
A. Lasting B. Shifting **C. Temporary** D. Unstable
14. A \_\_\_\_\_ is a body of standing water either natural or man-made (**pond**)
15. What is usually smaller than a lake?  
A. River B. Ocean **C. Pond** D. Stream
16. A wide variety of man-made bodies of water are classified as \_\_\_\_  
A. Lagoon **B. Ponds** C. Pool D. Small lake
17. Fish ponds are designed for commercial fish \_\_\_\_\_  
A. Culture B. Polish C. Development **D. Breeding**
18. Solar ponds are designed to store \_\_\_\_\_  
A. Melting energy **B. Thermal energy**  
C. Luke warm D. Sweltering
19. Ponds and lakes are distinguished from \_\_\_\_\_  
A. Shed B. Cascade C. **Streams** D. Repress
20. While currents in streams are easily observed Ponds and lakes possess thermally driven \_\_\_\_\_ (**micro-currents**)
21. The atmosphere of the Earth serves as a key factor in sustaining the \_\_\_\_\_ (**planetary ecosystem**)
22. The thin layer of gases that envelops the Earth is held in place by the \_\_\_\_\_ (**planet's gravity**)
23. How much of nitrogen does the dry air consist?  
A. 20% **B. 78%** C. 50% D. 64%
24. How much of Oxygen does the dry air consist?  
A. 41% B. 1% **C. 21%** D. 26%
25. Filtered air includes trace amounts of many \_\_\_\_\_  
A. Alchemical B. Enzymatic  
C. Synthesized **D. chemical compounds .**
26. Which of following contains a variable amount of vapor and suspensions of water droplets?  
A. Water B. Fire **C. Air** D. Clouds



27. The ozone layer of the Earth's atmosphere plays an important role in depleting the amount of \_\_\_\_\_ radiation that reaches the surface.  
 A. Gamma Radiation                      **B. Ultraviolet**  
 C. Beta Particles                          D. Alpha Particles
28. As \_\_\_\_\_ is readily damaged by UV light, the ozone layer serves to protect life at the surface \_\_\_\_\_  
 A. WBC   B. RNA   **C. DNA**   D. RBC
29. The atmosphere also retains \_\_\_\_\_ during the night, thereby reducing the daily temperature extremes. (**Heat**)

### What is Environmental Pollution?

30. \_\_\_\_\_ pollution is the biggest menace to the human race on this planet today  
 A. Noise   B. Water   **C. Environmental**   D. Air
31. Due to trees being cut down rapidly, and earth pollution our earth is becoming \_\_\_\_\_  
 A. Stormy   B. Pleasant   C. Flushed   **D. Warmer.**
32. If pollution continues, the day is not far when our earth will be a \_\_\_\_\_ and become a \_\_\_\_\_  
 A. Solitary, bare                      **B. Boiling pan, Desert**  
 C. Wild, infertile                      D. Sterile, Lonely
33. \_\_\_\_\_ is always needed for inhaling (**Pure air**)
34. What causes diseases and impairs our health and causes our death?  
 A. Pure air   B. Unhealthy food   **C. Impure air**   D. Pollution
35. \_\_\_\_\_ pollutes the air. It is the root of air pollution  
 A. Pollution   **B. Smoke**                      C. Vapor                      D. Fog
36. The smoke which is discharged from \_\_\_\_\_ and \_\_\_\_\_ is the mixture of carbon monoxide etc. (**Industries, automobiles**)
37. Carbon monoxide, carbon dioxide etc are called \_\_\_\_\_ gases  
 A. Non toxic   B. Infective                      **C. Poisonous**   D. Septic
38. The carbon monoxide, carbon dioxide etc cause \_\_\_\_\_ which take a heavy toll of life  
 A. **Lung Cancer**   B. Throat Cancer   C. Heart disease   D. Jaundice

39. In which year did the Bhopal gas leak, a glaring incident of air pollution, happen?  
A. 1980      **B. 1984**      C. 1992      D. 1970
40. Due to a gas leak in Bhopal, thousands of the residents died due to \_\_\_\_\_ which was caused by methyl isocyanate gas  
A. Liver problem      B. Heart problem  
**C. Lungs problem**      D. Kidney problem
41. The decaying \_\_\_\_\_ and \_\_\_\_\_ also cause air pollution  
A. Fruits, vegetable      B. Fruits, Plants  
C. Vegetable, Animals      **D. Plants, Animals .**
42. The harsh sounds of buses, mopeds etc, affect our power of hearing and causes \_\_\_\_\_  
A. Wind trouble      **B. Heart trouble**  
C. Vapors trouble      D. Loss of hearing
43. In which place near the Dum Dum airport have a large number of people lost their power of hearing?  
A. Cochin      B. Baroda      C. Calcutta      D. Hyderabad
44. The waters of \_\_\_\_\_ and \_\_\_\_\_ are being constantly polluted all over the world by various dangerous chemicals  
**(Rivers, Seas )**
45. \_\_\_\_\_ and \_\_\_\_\_ discharge very harmful waste waters into many rivers and seas  
A. Shops, Firm      B. Foundry, Mint  
C. Salt mines, Forge      **D. Mills, Factories.**
46. The water of the \_\_\_\_\_ flowing by the side of both Varanasi and Calcutta is extremely polluted  
A. Yamuna      **B. Ganges**      C. Narmada      D. Cauvery
47. The Indians even drink water of the Ganges for \_\_\_\_\_
48. A. Preservation      B. Exemption      **C. Salvation**      D. Pardon
49. Reckless application of chemical fertilizers, insecticides and pesticides pollutes the \_\_\_\_\_  
A. Air      B. Water      C. Land      **D. Soil.**
50. Vegetables and fruits are quite injurious today, because they contain the poison of \_\_\_\_\_ and \_\_\_\_\_  
A. Bacteria, Fungus      **B. Insecticides, Pesticides**  
C. Fungicide, loam      D. Organic fertilizers, Weed killer

51. Realizing the danger, we must \_\_\_\_\_ in large numbers to absorb impure air (**plant trees**)
52. Impure water from industries can be sent back for \_\_\_\_\_ and then it can be used for \_\_\_\_\_ purpose
53. A. Distillation, Purge                      B. Absolution, Logging  
**C. Purification, Irrigation**              D. grace, Irrigation

### Main causes of Soil Pollution

54. Soil pollution is often associated with indiscriminate use of \_\_\_\_\_  
 A. Cultivation                      B. Feeding  
 C. Landscaping                      **D. Farming chemicals.**
55. \_\_\_\_\_ applied to plants can also leak into the ground leaving long-lasting effects  
 A. Fungicide    **B. Pesticides**    C. Paraquat    D. Defoliant
56. Some of the \_\_\_\_\_ found in the fertilizers may accumulate above their toxic levels  
 A. Powder    B. Gunpowder    **C. Harmful chemicals**    D. Armament
57. Some chemicals found in the fertilizers ironically lead to the poisoning of \_\_\_\_\_  
 A. Fruits    **B. Crops**    C. Yield    D. Vegetable
58. Heavy metals can enter the soil through the use of \_\_\_\_\_ for crops  
 A. Fertilizers    B. Poisons    **C. polluted water**    D. Powder
59. Bursting of underground bins and seepage from faulty sewage systems could cause the leakage of \_\_\_\_\_ into the soil  
 A. Germs    B. Virus    **C. Toxins**    D. Venom
60. \_\_\_\_\_ caused by industrial fumes mixing in rain falls on the land  
 A. Sun shower    **B. Acid rains**    C. Flood    D. Rainstorm
61. Which of the following could dissolve away some of the important nutrients found in soil?  
 A. Chemicals    B. Fertilizers    C. Germs    **D. Acid rain.**
62. Which of the following is one of the biggest soil-pollution factors?  
 A. Contaminated materials                      B. Pollution  
**C. Industrial waste**                      D. Nuclear waste
63. Iron, steel, and chemical Industries irresponsibly use the Earth as a \_\_\_\_\_ ground  
 A. Disposition    **B. Dumping**    C. Discarding    D. Scrapping

64. \_\_\_\_\_ from automobiles, which get washed by rain, can seep into the nearby soil, polluting it.  
A. Nourishments B. Propellant **C. Fuel leakages** D. Incitement
65. Which of the following is the major cause for soil erosion?  
A. Logging B. Denuding **C. Deforestation** D. Erosion
66. Due to deforestation, soil particles are \_\_\_\_\_ and carried away by water or wind  
A. Disturb B. Eject C. Dislocate **D. Dislodged.**
67. Due to deforestation, the soil loses its structure as well as important \_\_\_\_\_ found in the soil  
A. Chemicals **B. Nutrients** C. Mineral D. Fuel

### Effects of Soil Pollution

68. The effects of pollution on soil are quite disturbing and can result in huge disturbances in the \_\_\_\_\_ (**Ecological balance**)
69. Soil Pollution causes disturbance in the balance of \_\_\_\_\_ and \_\_\_\_\_ inhabiting in the soil  
A. Verdure, Plants B. Fruits, animals  
**C. Flora, Fauna** D. Plants, vegetables
70. Contaminated soil decreases \_\_\_\_\_ and hence there is decrease in the soil yield.  
A. Infertility **B. Soil fertility** C. Richness D. Sterility
71. Normally crops cannot grow and flourish in a \_\_\_\_\_ soil  
A. Sterilize B. Debase **C. Polluted** D. Cleanse
72. If some crops manage to grow in polluted soil, then these crops might have absorbed the \_\_\_\_\_ in the soil  
A. Harmless **B. Toxic chemicals** C. Septic D. Healthy
73. Soil pollution is in the form of increased \_\_\_\_\_ of the soil  
A. Chemicals B. Fertilizers C. Healthy **D. Salinity.**
74. The polluted soil becomes unhealthy for \_\_\_\_\_ and often becomes useless and barren.  
A. Flora **B. Vegetation** C. Herbage D. Greenery
75. When soil pollution modifies the soil structure, deaths of many \_\_\_\_\_ in the soil could take place.  
A. Plant B. Inanimate **C. Soil organisms** D. Abstract

76. Reduced ability of the soil to support life, could also have an effect on the larger \_\_\_\_\_  
A. Vehicles B. Meat eater **C. Predators** D. Beast of prey
77. People living near \_\_\_\_\_ tend to have higher incidences of miscarriages and even miscarriages.  
A. Sanctify B. Sully area C. Spoil area **D. Polluted land.**
78. The health problems in certain areas could be a result of \_\_\_\_\_ by the polluted land  
A. Adulterated **B. Direct poisoning** C. Murder D. Injure

## 6. Air Pollution

79. \_\_\_\_\_ is the introduction into the atmosphere of chemicals or biological materials that cause damages.
80. A. Water Pollution **B. Air pollution**  
C. Noise pollution D. Environmental pollution
81. The \_\_\_\_\_ is a complex dynamic natural gaseous system that is essential to support life on planet Earth  
A. Air B. Sky **C. Atmosphere** D. Heavens
82. \_\_\_\_\_ ozone depletion due to air pollution has long been recognized as a threat to human health as well as to the Earth's ecosystems (**Stratospheric**)
83. \_\_\_\_\_ pollution and \_\_\_\_\_ quality are listed as two of the World's Worst Toxic Pollution Problems in 2008 (**Indoor air, Urban air**)
84. A substance in the air that can be adverse to \_\_\_\_\_ and the environment is known as an air pollutant  
A. Body B. Soul C. Mortal **D. Humans .**
85. Pollutants can be in the form of \_\_\_\_\_ liquid droplets, or gases  
A. Stable **B. Solid particles** C. Materials D. Rooted
86. Pollutants may be natural or \_\_\_\_\_
87. Unnatural B. False **C. Man-made** D. Manufactured
88. Pollutants can be classified as \_\_\_\_\_ and \_\_\_\_\_  
A. Leading, Simple B. Central, Dominant  
C. Chief, Secondary **D. Primary or Secondary.**
89. Usually, primary pollutants are directly produced from a process, such as ash from a \_\_\_\_\_
90. A. Inflammable **B. Volcanic eruption** C. Volatile D. Impulsive

91. Secondary pollutants form in the air when \_\_\_\_\_ react or interact.  
A. Particles B. Ash **C. Primary Pollutants** D. Articles
92. \_\_\_\_\_ is one of the many secondary pollutants that make up photochemical smog (Ground level ozone)

## 6. Health effects of Air Pollution

93. Air pollution is a significant risk factor for multiple health conditions including \_\_\_\_\_ according to the WHO  
A. Kidney problem B. Jaundice  
C. Throat cancer **D. Respiratory infections.**
94. Which pollution affects health, aggravating respiratory problems, and cardiac conditions?  
A. Water **B. Air** C. Sound D. Environmental
95. The most common sources of air pollution include particulates \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ **(ozone, nitrogen dioxide, and sulfur dioxide)**
96. How many million deaths have approximately happened due to both indoor and outdoor air pollution?  
A. 3 million **B. 3.3 million** C. 4 million D. 4.3 million
97. Children aged less than \_\_\_\_\_ that live in developing countries are the most vulnerable population terms of total deaths attributable to indoor and outdoor air pollution  
A. 3 years B. 10 years **C. 5 years** D. 2years
98. According to WHO, how many people die each year from causes directly attributable to air pollution?  
A. 2 million **B. 2.4 million** C. 3 billion D. 2.4 billion
99. Epidemiological studies suggest that more than 500,000 Americans die each year from \_\_\_\_\_ disease  
A. Lung cancer B. Kidney C. Liver **D. Cardiopulmonary .**
100. A study by the University of Birmingham has shown a strong correlation between \_\_\_\_\_ related deaths and air pollution from motor vehicles.  
A. Heart **B. pneumonia** C. Liver D. Jaundice
101. More deaths per year worldwide, are linked to \_\_\_\_\_ than to automobile accidents  
A. Disease B. Suicide **C. Air pollution** D. Accidents
102. The US EPA estimates that a proposed set of changes in \_\_\_\_\_ technology could result in 12,000 fewer premature mortalities  
A. Mechanism B. Power train C. Cylinder **D. Diesel Engine**

103. The US EPA estimates, allowing a \_\_\_\_\_ concentration of 65 parts per billion would avert 1,700 to 5,100 premature deaths compared to the present 75ppb. (**Ground-level ozone**)
104. The worst short-term civilian pollution crisis in India was the \_\_\_\_\_ (**Bhopal Disaster**)
105. Which country suffered its worst air pollution event on December 4 of 1952 when a Great Smog formed over its city?  
A. United States **B. United Kingdom** C. India D. Srilanka
106. During it's the worst air pollution disaster in United Kingdom of 1952, in six days more than \_\_\_\_\_ died.  
A. 300 B. 880 **C. 4000** D. 10000
107. How many people died in the incident of air pollution that occurred in the US in Donora, Pennsylvania?  
A. 500 **B. 20** C. 1200 D. 400
108. The number of annual premature deaths due to air pollution is considerably higher than the fatalities related to \_\_\_\_\_  
A. Disease **B. Auto collisions** C. Suicide D. Air pollution
109. \_\_\_\_\_ is a major contributor to combustion derived particulate matter air pollution. (**Diesel exhaust**)
110. Studies show that, due to air pollution in the Los Angeles Basin California more than \_\_\_\_\_ people die prematurely every year.  
A. 3200 B. 1500 **C. 3800** D. 4000

## 7. Loss of environmental traditions—main cause of environmental decay

111. To ancient people, Nature was \_\_\_\_\_ to God and was not to be examined  
A. Related B. Uniform **C. Analogous** D. Resembling
112. The believers and \_\_\_\_\_ of Modern Enlightenment had to separate nature from God  
A. Counsellor **B. Leaders** C. Employees D. Superior
113. Beliefs of the Modern Enlightenment led to the \_\_\_\_\_ of nature. (**Feminization**)
114. Boyle suggested that examination of man is an examination of \_\_\_\_  
A. Power B. Soul **C. God** D. Creator
115. \_\_\_\_\_ converted Nature as “an automation” to be examined (**Modern Enlightenment**)
116. When nature was feminized and degraded, \_\_\_\_\_ suggests that it made possible for people to exploit and study it  
A. Boyle **B. Carolyn Merchant** C. Bacon D. William Alston

117. The scientists utilized undignified metaphors to create a \_\_\_\_\_ so that it could be studied and exploited.  
A. Soft nature B. Polluted nature  
**C. Feminized nature** D. Masculine nature
118. In which year, did the United Nations Conference on Human Environment at Stockholm that proposed the concept of sustainable development take place?  
A. 1980 **B. 1972** C. 1973 D. 1985
119. In 1983 The General Assembly realized that there was heavy \_\_\_\_\_ of the human environment and natural resources.  
A. Spoiling B. Atrophy **C. Deterioration** D. Improvement
120. The Bruntland Commission defined \_\_\_\_\_ as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”  
A. Continual B. Renewable  
C. Imperishable development **D. Sustainable development.**
121. The Bruntland Commission believes that people can build a future that is more \_\_\_\_\_ more just, and more secure  
A. Blooming B. Lucky **C. Prosperous** D. Fortunate
122. The Bruntland Commission says “Our report is not only a \_\_\_\_\_ of ever increasing environmental decay, and hardship in ever more decreasing resources”  
A. Indicator **B. Prediction** C. Dope D. Divination
123. The Bruntland Commission says “We have the power to \_\_\_\_\_ human affairs with the natural laws and to thrive in the process”  
A. Compose B. Rectify **C. Reconcile** D. Regulate

## 8. The relevance of Ancient Indian tradition for environmental sustainability –Study

124. Environment includes water air and land and the inter- relationship which exists among and between water, air and land and \_\_\_\_\_ (living creatures)
125. It is known from the Vedic times that the \_\_\_\_\_ and \_\_\_\_\_ form an inseparable part of life support system (**Nature, Human being**)
126. The wise mention three elements which are water, air and plants or herbs that are called \_\_\_\_\_ meaning ‘coverings available everywhere (**Chandansi**)
127. According to one indigenous theory established in the \_\_\_\_\_, the universe consists of five basic element.  
A. Vedics B. Epics **C. Upanishads** D. Vedas



128. \_\_\_\_\_ and \_\_\_\_\_ have been the earliest known documented ancient texts of Indian Origin  
 A. Yajurveda, Samaveda B. RIGVEDA, Yajurveda  
 C. ATHARVAVEDA, Samaveda **D. RIGVEDA, ATHARVAVEDA .**
129. The importance of Environmental sustainability has been propounded as the \_\_\_\_\_ or the proper equilibrium of five Pancha Boothas as we call it  
 A. Combination B. Fusion **C. Amalgamation** D. Blend
130. The five elements of the Physical Universe are Earth, Water, Fire, Air and \_\_\_\_\_ (**Ether**)
131. The five elements of the Physical Universe are considered in India to be reflections of \_\_\_\_\_  
 A. Devil **B. Divinity** C. Evil D. Higher power
132. All the five elements of the Physical Universe have been worshipped and revered since \_\_\_\_\_  
 A. Current times B. Venerable  
**C. Ancient times** D. Fossil times
133. In the \_\_\_\_\_ there is prayer which draws attention to the ecological balance of these elements  
 A. Yajur veda **B. Atharva Veda** C. Sama Veda D. Rig Veda
134. A prayer in Atharva Veda says “We beseech the \_\_\_\_\_ to protect us and to purify us”  
 A. Water B. Nature **C. Earth** D. Plants
135. A prayer in Atharva Veda says “We pray earth to give us the \_\_\_\_\_ as well as the flowing rivers”  
 A. Depression B. Stack C. Volcano **D. Mountains.**
136. A prayer in Atharva Veda says “We ask earth to bear \_\_\_\_\_ of manifold potency, on whom food and crops grow and animals roam.  
 A. Grasses **B. Herbs** C. Flowers D. Saplings
137. Atharva Veda says “We seek the blessings of the Ether to bless us by \_\_\_\_\_ the earth by proper rainfall at times.  
 A. Treat B. Inseminate **C. Fertilizing** D. Germinate
138. Atharva Veda says “We also pray that let the \_\_\_\_\_ be kind to us and we, to it”.  
 A. Nature **B. Earth** C. Star D. Planet
139. We have lot of \_\_\_\_\_ to our plants  
 A. Dishonor B. Love **C. Reverence** D. Loyalty
140. Which Veda tells about the importance of plants & herbs with respect to their medicinal value and personifies the jungle as a mocking genius?  
 A. Sama Veda **B. Rig Veda** C. Yajur Veda D. Atharva Veda

141. The Rig Veda explains the importance of plants & herbs with respect to their \_\_\_\_\_ value  
A. Salutory B. Remedial C. Tonic **D. Medicinal.**
142. The Vedas devote many hymns to \_\_\_\_\_  
A. Nature B. Earth **C. Water** D. Rain
143. We consider water to be the great superintendent of the \_\_\_\_\_ order  
A. Global **B. Cosmic moral** C. Catholic D. Planetary
144. It is water who looks after the heaven, earth and well beyond that, \_\_\_\_\_  
A. Perimeter B. Verge C. Extent **D. Boundary.**
145. \_\_\_\_\_ is similarly considered to be the basic life giver and any kind of disrespect to it is abhorred  
A. Nature **B. Air** C. Water D. Fire
146. Water, earth, tree and plant maintain the \_\_\_\_\_ balance of the cosmos  
A. Structural B. Dimensional **C. Spatial** D. Geographical
147. The night and dawn are the keepers of \_\_\_\_\_ order and each is the goddess, mother, wife, woman or girl  
A. Angelic **B. Celestial temporal** C. Immortal temporal D. Blessed
148. Any disturbance in the order needs \_\_\_\_\_, ritual or sacrifice thereby placing the factor of sustainability at its highest order  
A. Suffering B. Purgation **C. Penance** D. Remorse
149. The Indian philosophical thought is in \_\_\_\_\_ with nature  
A. Strain B. Silence C. Aria **D. Tune**
150. The present generation has to fall back upon the previous \_\_\_\_\_ and learn by their mistakes  
A. Knowledge B. Enlightenment **C. Wisdom** D. Stability
151. Sustainability of the environment is possible by integrating the five elements of \_\_\_\_\_ in a balanced proportion (**Mother Nature**)
152. Due to balanced proportion of Nature it is possible for us to achieve \_\_\_\_\_ of environment.  
A. Verify **B. Sustainability** C. Preserve D. Save
153. Atharva Veda says, "Bless that Mother Nature be kind to us; the heavens give us \_\_\_\_\_"  
A. Unity B. Love **C. Peace** D. Truce
154. Atharva Veda prays, "The earth be gentle; Gentle be the \_\_\_\_\_ that flow"  
A. Rain B. River C. Mountain Falls **D. Water**

155. Atharva Veda prays, “ Gentle be the plants and \_\_\_\_\_ that grow”  
 A. Flowers    B. **Fruits**    C. **Herbs**    D. Vegetables
156. The prayer from Atharva Veda in a nutshell, gives us the much required knowledge for preserving our \_\_\_\_\_ for future generations to come.  
 A. Nature    B. **Environment**    C. Water    D. Jungle
157. \_\_\_\_\_ is a social sciences’ philosophy that has a strong foundation on biological and ecological concepts  
 A. Wisdom    B. **Eco-philosophy**  
 C. social philosophy    D. Convictions
158. Social sciences’ philosophy is the study of the aims and methods of \_\_\_\_\_  
 A. Social philosophy    B. Wisdom  
 C. Eco philosophy    D. **Social science**
159. \_\_\_\_\_ organize their material around such questions as whether natural things differ fundamentally from social things (**Standard anthologies**)
160. Who is the modern connect between ancient Indian humanistic traditions and modern values?  
 A. Jawaharlal Nehru    B. **Mahatma Gandhi**  
 C. Bharathiyar    D. Indira Gandhi
161. Truth and Harmony according to Gandhi are the \_\_\_\_\_ codes for Sustainability  
 A. Wrong    B. Correct    C. **Ethical**    D. Bad

## **8. Traditional culture and ecological knowledge in sustaining natural resource management**

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162. Demazong and Apatani eco-cultural landscape in \_\_\_\_\_  
**Arunachal Pradesh**    (b) Uttar Pradesh  
 (c) Andhra Pradesh    (d) Tamil Nadu
163. In \_\_\_\_\_ the villagers renewed their efforts at biodiversity conservation.  
 (a) 1974    (b) **1987**    (c) 2012    (d) 1998
164. No \_\_\_\_\_ exploitation of the forests.  
 (a) Economical    (b) Advertisement  
 (c) **Commercial**    (d) Profitability
165. The villagers would themselves regulate the amount of resources

- they could extract from the \_\_\_\_\_ and undertake measures to tackle soil erosion.
- (a) Ocean (b) Desert (c) Mountain (d) **Forests**
166. Forests would not be set on \_\_\_\_\_.  
(a) Air (b) **Fire** (c) Water (d) All the above
167. In the \_\_\_\_\_ region of India, tribal communities meet a substantial proportion of their resource.  
(a) North – Westen (b) East – Southern  
(c) Western - Southern (d) **North-Eastern**
168. They live in complete \_\_\_\_\_ with nature.  
(a) Co-operation (b) Disagreement  
(c) **Harmony** (d) Conformity
169. Sacred groves, or UmangLais, as they are called in the Meetei language, form an integral part of the \_\_\_\_\_ of nature worship.  
(a) **Manipuri Tradition** (b) Tamil Nadu Tradition  
(c) Gujarat Tradition (d) Tradition
170. Several species of plants are protected in these \_\_\_\_\_, which also offer protection to birds and animals.  
(a) Forest (b) **Groves** (c) Bushes (d) All of these
171. However, many of these animals are not eaten during certain periods, probably with the motive of sustainable \_\_\_\_\_ and conservation.  
(a) Farming (b) Threshing (c) Cultivate (d) **Harvesting**

## 9. Eastern Philosophies on

### Environment friendliness and compatibility

172. Environmental consciousness is not an \_\_\_\_\_ idea  
a) Ignorant b) Rational c) **Intellectual** d) Creative
173. Environmental consciousness is a \_\_\_\_\_ value  
a) Secular b) **Spiritual** c) Earthly d) Holy
174. In Eastern philosophies, consisting of the Hindu, Buddhist, Jain and \_\_\_\_\_ are considered inter-related  
a) Nature b) Jungle c) **Environment** d) Climate
175. \_\_\_\_\_ Upanishad, one of the most sacred ancient Hindu scriptures of ancient.  
a) Sarvasara b) **Isavasya**  
c) Subala d) Jabaladarsana
176. Isavasya Upanishad translated by \_\_\_\_\_  
a) Mangal Pandey b) Rajendra Prasad  
c) Bahadur Shah d) **Mahatma Gandhi**

177. Kalachakra Tantra, sacred is \_\_\_\_\_ scripture  
a) Jainism b) Sikhism c) **Buddhist** d) Zoroastrianism
178. Achara Sutra, the \_\_\_\_\_ sacred text, says, the five elements are not lifeless matter they have soul  
a) **Jainism** b) Sikhism c) Buddhist d) Zoroastrianism
179. Shinto belief regards the land, its nature, and all creatures including the human as children of \_\_\_\_\_  
a) Nature b) Environment c) **Divine** d) Celestial
180. The entire \_\_\_\_\_ of Eastern philosophies converges on the view that the entire creation is manifestation of the divine.  
a) Nature b) World c) Human d) **Spectrum**
181. The Eastern philosophies are eco-centric where \_\_\_\_\_ and natures are inter-related  
a) **Humans** b) Rivers c) Animals d) All of these

## 10. Science says : Western Faiths Destroyed Nature Which Traditional Faiths Had Protected And Preserved

182. \_\_\_\_\_ destroyed Nature which \_\_\_\_\_ had Protected and Preserved (**Western Faiths, traditional Faiths**)
183. \_\_\_\_\_ a research book co-authored by \_\_\_\_\_ Advisor on scientific issues to US President Barack Obama (**Eco-science, John P Holdren**)
184. \_\_\_\_\_ of trees, rivers, and other aspects of nature will protect nature in traditional societies. (**Worship**)
185. Western society's destructive attitude towards nature lies in the \_\_\_\_\_. (**Judeo-Christian tradition**)
186. Destroying \_\_\_\_\_ made it possible for humans to exploit nature in a mood of indifference to the feeling of the natural object. (**Pagan animism**)
187. Belief in worship of \_\_\_\_\_ and other aspects of nature are destroyed by the western religious. (**Trees & rivers**)
188. Due to the activities by the western religious and rationalist establishments, in the last few centuries, the result was the huge \_\_\_\_\_ (**Destruction of nature**)
189. The reverence for the nature through \_\_\_\_\_ develops love and care for nature in people. (**Samskaram**)

## 11. Christian Priest Deals The Ancient Hindu Literature "Atharva Veda"

190. Earth occupies a special place among the \_\_\_\_\_  
a) Divine b) **Gods** c) Delightful d) Human

191. \_\_\_\_\_ Man would find any attempt at dominating or subjugating the earth incomprehensible  
a) Sacred b) Secular c) **Vedic** d) None of these
192. \_\_\_\_\_ of the earth is of the same nature as personal introspection.  
a) **Investigation** b) Worship c) Reverence d) Survey
193. The worshipping of the earth is not \_\_\_\_\_ of a creature as an absolute.  
a) Disregard b) Devotion c) **Adoration** d) Shine
194. The relationship between the human and the \_\_\_\_\_ is one of partnership  
a) Nature b) **Earth** c) Forest d) Animals
195. Prayer to the Earth in \_\_\_\_\_ Veda, depicts the earth, dispenser of every sort of good.  
a) Sama b) Yajur c) **Atharva** d) Rig
196. The Earth is the \_\_\_\_\_ place of people  
a) Quarters b) Abode c) **Dwelling** d) Castle
197. The earth is considered as the \_\_\_\_\_  
a) Divine b) **Mother** c) Sacred d) Earthly
198. The inter-connectedness of all life and creatures is affirmed to the \_\_\_\_\_  
a) Literature b) Vedas c) **Scriptures** d) None of these
199. \_\_\_\_\_ affirms that atman is ultimately identical with Brahman  
a) **Bhagavad Gita** b) Ramayana  
c) Mahabaratham d) Srimad Bhagavatham
200. \_\_\_\_\_ is a religion in which the human is conceived as part and parcel of nature.  
a) Jainism b) Buddhism c) Sikhism d) **Hinduism**
201. Every natural force and phenomenon is considered to be a \_\_\_\_\_  
a) Idol b) Influential c) **God** d) Crucial
202. \_\_\_\_\_ is not on the earth to conquer, dominate, and exploit, but to be an integral part of the organic whole  
a) Males b) **Human being** c) Creatures d) Animals
203. The gods, men, and \_\_\_\_\_ formed one organic whole.  
a) **Nature** b) Women c) Animals d) Forest

**“Hinduism creates reverence for sacred nature and all living beings” - Rev. Kochuthara**

204. In a paper titled “Rediscovering Christian Eco – theological Ethics” \_\_\_\_\_ deals with comparative philosophical position in the West and in India? (**Rev Father Shaji George Kochuthara**)
205. One of the fundamental \_\_\_\_\_ of the Indian traditions regarding this world, is that it is indwelt by Lord of the universe and hence sacred. (**Cosmological insights**)
206. The Hindu vision affirms the sacredness not only of the \_\_\_\_\_ but everything in Nature. (**human being**)
207. According to the Hindu concept, the material causes of the created world are \_\_\_\_\_ (**Pancha Bhootas**)
208. These \_\_\_\_\_ create nature and sustain all forms of life (**Cosmic elements**)
209. Pancha Boothas, which are vital in the Preservation and sustenance of the environment, are deified in the Hindu \_\_\_\_\_ scriptures. (**Sacred**)
210. The \_\_\_\_\_ everything and radically connects all life whether human or not (**Divine Permeates**)
211. After \_\_\_\_\_ and \_\_\_\_\_ nature absorbs what was created earlier (**death and decay**)
212. Which of the following books affirm that atman is ultimately identical with Brahman?  
 A. Ramayana                      **B. Bhagavad Gita**  
 C. Tulasi Ramayana          D. Vedas
213. The Gods, Men and nature form one \_\_\_\_\_ (**Organic Whole**)
214. The interconnectedness of all life and all creatures is affirmed by the \_\_\_\_\_  
 A. Vedas   B. Upanishads   **C. scriptures**   D. Smritis
215. Animals, in the \_\_\_\_\_ are not inferior creatures (**Vedic vision**)
216. Animals like \_\_\_\_\_ and \_\_\_\_\_ occupy important places in the spectrum of God (**Monkey, Cow and Elephant**)
217. All forms including plants and animal are manifestation of God as \_\_\_\_\_ (**Jivas**)
218. Animals are manifestations of gods on the lower scale of evolution compared to \_\_\_\_\_ (**Man**)
219. Animals occupy important places in the \_\_\_\_\_ of God (**spectrum**)

220. \_\_\_\_\_ are also jivas, having souls of their own.
221. A. Bacteria B. Pathogen **C. Micro-organisms** D. Disease
222. The protection and the worship of the cow symbolizes human responsibilities to \_\_\_\_\_ (**Sub-human world**)
223. Worship of Cow stresses the \_\_\_\_\_ for all forms of life.
224. A. Admiration **B. Reverence** C. Respect D. Homage
225. Spiritually, there is no distinction between \_\_\_\_\_ and other forms of life (**human beings**)

### **“Other civilizations have to learn from Hindu spiritualism”**

#### **- Rev. Kochuthara**

226. Fr.Kochuthara says that Christianity, with the theology of \_\_\_\_\_ is often accused responsible for the present crisis (**dominating earth**)
227. Rev Kochuthara admits that certain emphases in the \_\_\_\_\_ did not facilitate a reverential attitude to nature (**Christian tradition**)
228. In the Christian Tradition, any attempt to consider the nature as sacred would be labeled as \_\_\_\_\_. (**pantheism**)
229. Hinduism can help us [Christians] to discover further on our own says Rev Father Kochuthara (**eco-theology**)
230. Rev Kochuthara further says that Christians develop a \_\_\_\_\_ to nature. (**reverential attitude**)
231. \_\_\_\_\_ which have a reverential approach to the nature (**African religions**)
232. The Rev Father talks about how Christianity can learn from Hinduism on how to \_\_\_\_\_ (**Revere nature**)

### **“Religious Conversion has led to environmental destruction”-Henry Lamb**

233. The belief that the world was created for the enjoyment of man has caused the \_\_\_\_\_  
A. Calamity **B. Havoc** C. Destruction D. Disorder
234. In the process of conversion to Christian beliefs, not only has nature lost its \_\_\_\_\_, \_\_\_\_\_ was abandoned (**sacred qualities, affinity with the Natural World**)
235. On \_\_\_\_\_ belief system that rejects assignment of sacred qualities to elements of nature, sacred groves were cut. (**converting to a religious**)



236. In which decade did most conversions to the Christianity happen?

**A. 1950s** B.1960s C. 1980s D. 1930s

237. The new converts even began to cut down sacred groves to bring the land under \_\_\_\_\_. (**cultivation**)

### **Plants and Animals not resources but living beings**

**-Henry Lamb**

238. \_\_\_\_\_ civilizations have believed that man was created in God's image

a) Eastern b) Northern c) **Western** d) Southern

239. Human happiness became a \_\_\_\_\_, plague upon ourselves and upon the Earth

a) **Cancer** b) Divine c) Disease d) All of these

240. The western world has progressed using \_\_\_\_\_ and animals as resources to meet the needs of people

a) Trees b) River c) Herbs d) **Plants**

241. The past one generation, environmental paradigm is effecting huge changes in the \_\_\_\_\_

a) Europe b) **West** c) United States d) None

242. Hindu spiritualism is the only ancient model that is in a living form in the \_\_\_\_\_ world

a) Recent b) Preceding c) **Contemporary** d) Ancient

243. This new, \_\_\_\_\_ view of the world has permeated our schools for more than a generation.

a) Refined b) Literate c) **Enlightened** d) Reasonable

### **Animals and Birds part of Environment**

244. \_\_\_\_\_ and \_\_\_\_\_ are the part of nature and environment (**Animals, Birds**)

245. In which Veda have the animals and birds been classified in three groups?

A. Sama Veda **B. Rig Veda** C. Yajur Veda D. Atharva Veda

246. Rig Veda mentions sky animals like birds, forest animals and animals in \_\_\_\_\_.

A. Civilized B. Flesh **C. Human habitation** D. Creatural

247. According to Yajur Veda, every living creature has its own \_\_\_\_\_

A. Jungle B. Nature C. Macrocosm **D. Environment.**

248. There is a general feeling in the Vedic texts that animals should be \_\_\_\_\_ and \_\_\_\_\_ (**Safe, healthy**)

249. Vedic Texts say, domestic animals, as well as wild animals along with human beings should live in \_\_\_\_\_.  
A. Friendship **B. Peace** C. Union D. Accord

250. Vedic Texts say, domestic animals, as well as wild animals along with humans should live under the control of certain \_\_\_\_\_ like Rudra, Pushan etc  
A. Immortal B. Idol **C. Deities** D. Animals

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### Environment Compatible--Ancient Philosophy

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251. The earth is \_\_\_\_\_ whenever people use the earth, whether for ploughing or for constructing a house  
a) Blame b) Esteem c) **Worshipped** d) Chant

252. Earth has 18% world's population of \_\_\_\_\_.  
a) Species b) Forest c) **Cattle** d) None of these

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253. Earth has a fourth of its area covered by \_\_\_\_\_.  
a) **Forest** b) Humans c) Cattle d) Species

254. Earth has a \_\_\_\_\_ world's recorded species  
a) 10% b) **8%** c) 18% d) 17%

255. \_\_\_\_\_ of Indians vegetarians are the largest vegetarian population in the world.  
a) 30% b) 28% c) **41%** d) 42%

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256. Vegetarianism is the biggest sustainers of \_\_\_\_\_.  
a) Nature b) **Environment** c) Life d) Years

257. According to a 2006 \_\_\_\_\_ initiative, the livestock industry is one of the largest contributors to environmental degradation world-wide  
a) **United Nations** b) United Kingdom  
c) Canada d) Europe

### Excessive meat eating damages environment ecology and global, climate

258. The \_\_\_\_\_ has dubbed beef as a 'climate harmful meat'.  
**A. United Nations Environment Programme**  
B. United Nations Development Programme  
C. United Nations Economic and Social Council  
D. United Nations Population Fund

259. On an average every hamburger results in \_\_\_\_\_ of carbon emissions to the atmosphere.  
A. 5 Kgs **B. 3 kgs** C. 6 Kgs D. 4kgs

260. \_\_\_\_\_ is unfortunately a highly energy intensive exercise.  
 A. Beef Production **B. Meat production**  
 C. Livestock Production D. Pork production
261. Meat eaters and beef eaters are the most unfriendly to the global environment, reports the United Nations body, \_\_\_\_\_.  
 A. **Food and Agriculture Organisation**  
 B. Centre for Food Safety and Applied Nutrition  
 C. Food Safety and Inspection Service  
 D. Ministry for Health, Welfare and Family Affairs
262. \_\_\_\_\_ is one of the leading culprits for climate changes.  
 A. Meat production B. Livestock Production  
**C. Beef Production** D. Pork production
263. \_\_\_\_ is the devil or the 'shaitan' of the meat production industry.  
 A. Livestock B. Pork C. Meat **D. Beef**
264. The lynching of a \_\_\_\_\_ on the suspicion that he consumed beef can never be justified in any society.  
 A. Animals **B. Man** C. Human D. Living beings
265. What will reduce the global carbon footprint on earth far more than avoiding use of cars by giving up?  
 A. Meat **B. Beef** C. Pork D. Livestock
266. The numbers closely \_\_\_\_\_ contributes more towards global warming than does the transport sector that result in changing the climate.  
 A. Meat production **B. Livestock Production**  
 C. Beef Production D. Pork production
267. The livestock sector is responsible for \_\_\_\_\_ of the global greenhouse gas.  
 A. 12% B. 15% C. 17% **D. 18%**
268. The livestock sector is responsible global greenhouse gas emissions as compared to the transport sectors \_\_\_\_\_.  
 A. 12% **B. 15%** C. 17% D. 18%
269. In which study, the FAO concludes that "the livestock sector is major role and its contributions to climate change than transport"?  
 A. Effects of human activity on the biophysical environment  
**B. Livestock's Long Shadow- Environmental Issues and Options**  
 C. An invaluable Environmental Management Tool  
 D. Biogeoclimate Zones and Vegetation Types.

270. Most recently who expressed that “Earth lovers are voicing their concern and shaming meat eaters”?  
 A. Pierre Jacquet B. Francois Gemenne  
 C. Frederic Mion **D. Laurence Tubiana**
271. The charismatic \_\_\_\_\_ Ambassador for Climate Change Negotiations for the big climate summit in Paris.  
 A. Indian B. Russian **C. French** D. United Nations
272. Who said this “This over consumption of meat is really killing many things there has to be a campaign consumers should stop that”.  
 A. Indian Ambassador B. Russian Ambassador  
**C. French Ambassador** D. United Nations Ambassador
273. According to a 2012 estimate by Ministry of \_\_\_\_\_, India is home to 512 million livestock.  
 A. Food Processing **B. Agriculture** C. Environment D. Farmers
274. Out of 512 million livestock of India, cows and buffaloes together account for \_\_\_\_\_ million animals.  
 a. 222 B. 112 **C. 111** D. 121
275. Most of the animals in India are not reared for slaughtering, but prized for \_\_\_\_\_ and \_\_\_\_\_.  
**A. Milk and Ploughing** B. Milk and Manure  
 C. Manure and ploughing D. Transport and ploughing
276. \_\_\_\_\_ estimates that in 2012 the world was home to 1.43 billion cattle.  
 A. UNDP **B. UNEP** C. UNFP D. UNO
277. Who are highly environments friendly when measured on the scale of meat eating and livestock numbers?  
 A. United Nations **B. Indians** C. Europeans D. Americans
278. UNEP finds that on an average Indians consume only \_\_\_\_\_ grams of meat per person per day.  
 A. 11 B. 10 **C. 12** D. 13
279. Average consume of meat by Indians is almost \_\_\_\_\_ lower than the global average of 115 grams.  
**A. 10 times** B. 20 times C. 15 times D. 25 times
280. In comparison, the US leads with over \_\_\_\_\_ grams of meat being eaten per person per day.  
 A. 320 B. 321 **C. 322** D. 312
281. On an average a meat eating \_\_\_\_\_ contributes more to global warming.  
**A. American** B. Indians C. China D. United Nation

282. \_\_\_\_\_ contributes 25 times more as compared to a non-vegetarian Indian.  
A. Indians B. China C. United nations **D. American**
283. Who says the country produced 5.9 million tonnes of meat?  
**A. Department of Animal Husbandry, Dairying and Fisheries**  
B. Department of Food processing  
C. Department of Agriculture  
D. Department of Environmental issue
284. \_\_\_\_\_ contribution to the total meat production is about half with less than 5 per cent of the meat coming from beef.  
A. Mutton B. Pork **C. Poultry** D. Prawn
285. In \_\_\_\_\_, the world produced 278 million tonnes of meat.  
A. 2003 B. 2006 **C. 2009** D. 2012
286. India accounts for just about \_\_\_\_\_ per cent of the world's meat production.  
A. 1% **B. 2%** C. 20% D. 10%
287. \_\_\_\_\_ provide the vital protein and nutrients needed for proper human development.  
A. Milk B. Vegetables **C. Meat** D. Beef
288. \_\_\_\_\_ is a healthy substitute.  
**A. Milk** B. Vegetables C. Meat D. Beef
289. \_\_\_\_\_ Production on an average requires 28 times more land.  
A. Meat **B. Beef** C. Pork D. Vegetables
290. Production causes 11 times more global warming as compared to other \_\_\_\_\_.  
A. Food material B. Milk product C. Meat **D. Livestock**
291. Who published in the Proceedings of the National Academy of Sciences?  
A. University of Pennsylvania in US  
B. University of Illinois at Urbana–Champaign in US  
C. University of Maryland, College Park in US  
**D. Yale University in US**
292. In which concluded that “minimising beef consumption mitigates the environmental costs of diet most effectively”?  
**A. National Academy of Sciences**  
B. National Academy of Art  
C. National Academy of Engineering  
D. National Academy of Medical Sciences

293. \_\_\_\_\_ says that “the biggest intervention people could make towards reducing their carbon foot prints would not be to abandon cars, but to eat significantly less red meat”.  
A. Pierre Jacquet    B. Francois Gemenne  
C. Frederic Mion    **D. Tim Benton**
294. Beef production is also bad for \_\_\_\_\_ conservation.  
A. Air    B. Environment    **C. Water**    D. Soil
295. Cattle rearing for beef require almost \_\_\_\_\_ times more conservation.  
A. 5    **B. 10**    C. 15    D. 20
296. \_\_\_\_\_ Production uses three times less as compared to beef ranching.  
**A. Pork**    B. Cattle    C. Rice    D. Wheat
297. Cattle also emit a highly potent climate changing gas called \_\_\_\_\_.  
A. Nitrogen    B. hydro chlorofluoro carbon  
C. Carbon di oxide    **D. Methane**
298. \_\_\_\_\_ which is inflammable gas is produced in the guts of cattle by the bacteria.  
A. Ethylene Gas    B. Methane Gas  
C. Swamp gas    **D. Marsh Gas**
299. Methane is \_\_\_\_\_ times more potent than carbon di-oxide in causing global warming.  
A. 20    **B. 21**    C. 22    D. 23
300. Consumption of 1 kg domestic beef in a household represents automobile use of a distance of \_\_\_\_\_ kilometres.  
A. 161    B. 116    **C. 160**    D. 106
301. Car travelling all the way from \_\_\_\_\_ would be the same amount of global climate change done by consuming just 1 kg of beef.  
**A. New Delhi to Agra**    B. Tamilnadu to Chennai  
C. Karnataka to Bangalore    D. Tamilnadu to Kerala
302. No wonder beef is considered highly environmentally \_\_\_\_\_.  
A. Friendly    **B. Un friendly**    C. Distant    D. Far
303. What are considered as savings bank?  
A. Beef    B. Meat    **C. Livestock**    D. Milk
304. \_\_\_\_\_ is life-saving kit to overcome the harsh environment.  
A. Meat    B. Milk    C. Beef    **D. Livestock**

305. As more and more people become affluent meat is becoming \_\_\_\_\_ and \_\_\_\_\_.  
 A. Modish and Trendy    **B. Chic and Fashionable**  
 C. Chichi and Modern    D. Voguish and Dashy
306. Who estimates that by 2050 the global meat consumption will rise?  
 A. UNO    **B. FAO**    C. UNEP    D. UNFP
307. The global meat consumption will rise to \_\_\_\_\_ million tonnes.  
**A. 460**    B. 360    C. 630    D. 640
308. UNEP recommends a shift to 'less \_\_\_\_\_ harmful' meats.  
 A. Environment    **B. Climate**    C. Pollution    D. Food processing
309. Healthy eating is not just important for the \_\_\_\_\_ but for the planet as whole.  
 A. Man    B. Humans    C. Animals    **D. Individuals**

### **India Has A Great Responsibility To Save The World From Environmental And Ecological Destruction**

310. India has a \_\_\_\_\_ to save the world from environmental and ecological destruction (**great responsibility**)
311. \_\_\_\_\_ has caused discomfort for animals and destruction of nature (**Modern life style**)
312. India is the only ancient \_\_\_\_\_ which retained its ancient wisdom in practical life (**civilization**)
313. Indians still worship \_\_\_\_\_. (**Trees**)
314. These worships were found by \_\_\_\_\_ and \_\_\_\_\_ followed by our forefathers. (**rishis and saints**)
315. There is still simplicity in the life style and habits of \_\_\_\_\_ in India. (**villagers**)
316. Indians turn \_\_\_\_\_ into \_\_\_\_\_ like repairing and using things and not throwing old things. (**waste, wealth**)
317. Which products are primarily still being used by Indians for their day-to-day needs?  
 A. Habitual product    B. Anticipated products  
**C. natural products**    D. unnatural product
318. India has its \_\_\_\_\_ which protects environment is in current practice. (**ancient wisdom**)
319. Which has reached a dead end in the environmental sense?  
 A. Westerly    **B. Western lifestyle**    C. Traditional life    D. Eastern
320. Ancient Indians regard the entire creation as a manifestation of \_\_\_\_\_ (**divinity**)

321. The environment friendly habits are not the ones \_\_\_\_\_ in one day (**cultivated**)
322. The young Indians must be made aware of the scientific basis of their \_\_\_\_\_ and \_\_\_\_\_. (**Traditions and samskarams**)
323. Samskarams will enable young Indians to tell the world that the \_\_\_\_\_ are the basis for the future world (**Indian philosophical thoughts**)
324. India is projected by the \_\_\_\_\_ to be among the three major world powers and increasingly a global leader. (**National Intelligence Council of America**)

### Prayers in Vedas to Sustain Environment

325. In the \_\_\_\_\_ Veda there is prayer which draws attention to the ecological balance of these elements.  
a) Sama b) **Atharva** c) Rig d) Yajur
326. We \_\_\_\_\_ the earth to protect us and to purify us.  
a) **Beseech** b) Reply c) Offer d) Entreat
327. We pray to earth to give us the \_\_\_\_\_ as well as the flowing rivers.  
a) Trees b) Rain c) **Mountains** d) Plants
328. We ask earth to bear \_\_\_\_\_ of manifold potency on whom food and crops grow and animals roam.  
a) Forest b) Grass c) Land d) **Herbs**
329. We seek the blessings of the Ether to bless us by \_\_\_\_\_ the earth by proper rainfall at times.  
a) Breed b) **Fertilizing** c) Compost d) Treat
330. We have lot of reverence to our \_\_\_\_\_.  
a) Trees b) Animals c) **Plants** d) Nature
331. The \_\_\_\_\_ Veda tells about the importance of plants & herbs with respect to their medicinal value  
a) Sama b) Atharva c) **Rig** d) Yajur
332. The \_\_\_\_\_ devote many hymns to the water  
a) Upanishad b) Smritis c) **Vedas** d) Puranas
333. \_\_\_\_\_ is similarly considered to be the basic life giver  
a) Water b) **Air** c) Nature d) River
334. Any kind of disrespect to air is \_\_\_\_\_.  
a) **Abhorred** b) Detest c) Loathe d) Cherish
335. Bless that Mother Nature be kind to us the heavens give us \_\_\_\_\_.  
a) Truce b) **Peace** c) Distress d) Unity



## Creation of Nature

336. \_\_\_\_\_ provides the connectivity to the Earth on one hand and the three lokas.  
a) Water b) **Air** c) Nature d) Forest
337. \_\_\_\_\_ is the first manifestation.  
a) **Space** b) Tree c) River d) None
338. Air is the \_\_\_\_\_ manifestation.  
a) First b) Fourth c) **Second** d) Third
339. \_\_\_\_\_ is the fourth manifestation  
a) Air b) Fire c) **Water** d) Space
340. Fire is the \_\_\_\_\_ manifestation.  
a) Second b) Sixth c) **Third** d) Fifth
341. Earth is the \_\_\_\_\_ manifestation  
a) First b) Fourth c) Third d) **Fifth**
342. \_\_\_\_\_ is the seventh manifestation.  
a) **Oshadhayo Annam** b) Vayur Agnihi  
c) Akashat Vayuhu d) Adyah Pruthivi
343. From the Annaath Purushaha \_\_\_\_\_ came  
a) Vegetation b) Fire c) **Jeevi** d) Water
344. Inhaling, exhaling, running, walking, contraction are qualities of \_\_\_\_\_  
a) Adyah Pruthivi b) **Vayu Bhuta**  
c) Annaath Purushaha d) Agnir Apaha
345. Body Heat, hunger, thirst are qualities of Agni Bhuta, the \_\_\_\_\_ element in the body  
a) **Fire** b) Water c) Air d) None of these
346. Blood, semen, bone-marrow, urine, and saliva are qualities of \_\_\_\_\_, the Water Element in the body.  
a) Akashat Vayuhu b) Oshadhayo Annam  
c) Agnir Apaha d) **Aapa Bhuta.**
347. Bones, flesh, veins, and arteries are qualities of Prithivi Bhuta, the \_\_\_\_\_ Element in the body  
a) Water b) Air c) **Earth** d) Fire

## CONCEPT OF ETHER ['AKASHA']

348. There is a relation between \_\_\_\_\_ and sound.  
A. Cosmos **B. Ether** C. Celestial D. Paradise
349. The sound \_\_\_\_\_ move in sky at various frequencies  
A. Air B. Billow **C. Waves** D. Surge

350. Scientists could see the sky which exists only in the \_\_\_\_\_ of earth (**vicinity**)
351. \_\_\_\_\_ throws light on two types of ether i.e: one inside the body and the other outside the body  
A. Vedas B. Scriptures **C. Taittiriya Upanishad** D. Epics
352. The \_\_\_\_\_ inside the body is regarded as the seat of mind  
A. Air **B. Ether** C. Blood D. Nerves
353. Which Veda says “Do not destroy anything of the sky and do not pollute the sky”?  
A. Atharva Veda B. Rig Veda **C. Yajur Veda** D. Sama Veda
354. Sun shines in Dyuloka and we get light from \_\_\_\_\_  
A. Moon B. Stars C. Sun **D. Sky.**
355. The sunrays strengthen our \_\_\_\_\_ and are essential for our life  
A. Skin **B. Inner Power** C. Mind D. Central power
356. Importance and care for ether is clearly mentioned in the \_\_\_\_\_ (**Vedic verses**)

### CONCEPT OF AIR [‘VAYU’]

357. The principal deity of Antariksha the intermediate space is \_\_\_\_\_ (**Vayu**)
358. Jaiminiya Brahmana quotes, ‘Vayu brightens in \_\_\_\_\_ (**Antariksha**)
359. Yajur Veda says, ‘Vayu has penetrating \_\_\_\_\_  
A. Darkness B. Illumination **C. Brightness** D. Shine
360. Sun and rest of universe is woven in the \_\_\_\_\_ of Vayu  
A. Twist **B. String** C. Rope D. Cord
361. Apparent meaning of Vayu is \_\_\_\_\_ (**Air**)
362. Which Veda says the universe is bound by the string, that is Vayu.?  
A. Atharva Veda B. Rig Veda **C. Yajur Veda** D. Sama Veda
363. The Vedic seers knew the importance of \_\_\_\_\_ for life  
A. Luxuries B. Money C. Wind **D. Air.**
364. The Vedic seers understood all about air in the \_\_\_\_\_ and also about the air inside the \_\_\_\_\_  
A. Sky, Pressure **B. Atmosphere, Body**  
C. Heavens, Mortal part D. Troposphere, Frame
365. The Taittiriya Upanishad throws light on \_\_\_\_\_ types of wind inside the body  
A. Six B. Ten **C. Five** D. Two

366. Concept and significance of air is highlighted in \_\_\_\_\_  
A. Scriptures B. Epics C. Smrithi **D. Vedic verse** .
367. Rig Veda mentions "O Air! You are our \_\_\_\_\_ the protector"  
A. Mother **B. Father** C. Life D. Breath
368. Air has \_\_\_\_\_ Values  
A. Healing B. Salutary **C. Medicinal** D. Curing
369. Medicated air is the international physician that \_\_\_\_\_ pollution and imparts health  
A. Cancel **B. Annihilates** C. Approve D. Quell
370. \_\_\_\_\_ are full of medicated air consisting of herbal elements.  
A. Steep area B. Flat area **C. Hilly areas** D. Elevated areas
371. The air is the \_\_\_\_\_ of all deities  
A. Genius **B. Soul** C. Heart C. Spirit
372. Air exists in all as life \_\_\_\_\_ It can move everywhere and we cannot see it.  
A. Wheeze B. Ozone **C. Breath** D. Inspiration
373. \_\_\_\_\_ emphasized that the unpolluted, pure air is source of good health  
A. Modern people B. Venerable C. Age old **D. Ancient Indians** .
374. Air pollution causes many diseases discovered \_\_\_\_\_ in about 200 BCE (**Caraka**)
375. The polluted air, Caraka says is mixed with \_\_\_\_\_  
(**Bad elements**)
376. The polluted air, Caraka says is \_\_\_\_\_ of season, coming at the same time from all directions, bad smelling, full of dirt.  
A. Unrelated B. Immaterial **C. uncharacteristic** D. Accidental

### CONCEPT OF THE EARTH ['PRITHVI']

377. The concept of the form of the earth in the Rig-Veda is most \_\_\_\_\_  
A. Ridiculous B. Awful **C. Fascinating** D. Gripping
378. There is one small hymn in Rig Veda addressed to \_\_\_\_\_ while there are \_\_\_\_\_ hymns addressed to Dyavaprithivi (**Prithivi, six**)
379. Prithivi is considered the \_\_\_\_\_ and Dyau is considered the \_\_\_\_\_ in the Vedas (**Mother, Father** )
380. One of the most beautiful verse of the Rig-veda says, Heaven is my \_\_\_\_\_ brother atmosphere is my \_\_\_\_\_ and the great earth is my \_\_\_\_\_ (**Father, navel, mother**)

381. \_\_\_\_\_ and \_\_\_\_\_ are parents in union while separately called as father and mother  
 A. Paradise, Planet B. Earth, Stars  
**C. Heaven, Earth** D. Heaven, Planet
382. Earth is described as a goddess in \_\_\_\_\_ Veda  
 A. Atharva **B. Rig Veda** C. Yajur Veda D. Sama Veda
383. In which Veda is the earth described in one hymn called Bhoomisukta or Prithvisuktha of 63 verses?  
 A. Yajur Veda **B. Atharva Veda** C. Sama Veda D. Rig Veda
384. Prithvisukta indicates the \_\_\_\_\_ consciousness of Vedic seers  
 A. Coincidental B. Amplified **C. Environmental** D. Nature
385. The seers appear to have advanced understanding of the earth through this hymn. She is called \_\_\_\_\_ for containing all \_\_\_\_\_ (**Vasudha, wealth**)
386. There are several many instances of Agni being invoked in the \_\_\_\_\_  
 A. Upanishads **B. Vedas** C. Smriti D. Epics
387. The earth is fully responsible for \_\_\_\_\_ and \_\_\_\_\_  
 A. Inflation, Growth B. Luxury, Fortune  
**C. Food, Prosperity** D. Wealth, Inflation
388. The immortal heart of earth is in the highest \_\_\_\_\_, Her heart is \_\_\_\_\_  
 A. Vault, Moon **B. Firmament, Sun** C. Lid, Stars D. Vault, Planet
389. The hymn says "Earth is one enveloped by the sky or space and causing the force of \_\_\_\_\_"  
 A. Planetary motion B. Enticement **C. Gravitation** D. Fascination
390. The Earth is described as the \_\_\_\_\_ field by the Vedic hymn.  
 A. Thermic B. Lukewarm C. Sweltering **D. Geothermal.**
391. The earth is described then as being present in the middle of the \_\_\_\_\_ and as one having magical movements by the hymn(-**oceans**)
392. The hymn talks about different \_\_\_\_\_ which are generated from the form of the earth  
 A. Power **B. Energies** C. Strength D. Force
393. The Earth is invested with \_\_\_\_\_ and respected as mother  
 A. Holiness B. Celestial **C. Divinity** D. Higher Power
394. In which Veda have the seers said that "The earth is my mother and I am Her son"?  
 A. Sama Veda **B. Atharva Veda** C. Yajur Veda D. Rig Veda

395. The geographical demarcations on this earth have been made by \_\_\_\_\_ and not by \_\_\_\_\_ (Men, Nature)

### **Bhoomi Vandanam – in other ancient traditions**

396. Images of \_\_\_\_\_ representing mother earth, and Mother Nature, are timeless  
A. Mother B. Matron **C. Women** D. Man
397. In \_\_\_\_\_ goddesses were worshipped for their association with fertility and agricultural bounty.  
A. Primitive **B. Prehistoric times**  
C. Ancient times D. Modern times
398. \_\_\_\_\_ held dominion over aspects of Incan, Algonquian, Greek, Indian religions.  
A. God B. Saints **C. Priestesses** D. Divine
399. The word nature comes from the Latin word \_\_\_\_\_ (**Natura**) meaning birth or character
400. In Greek mythology, \_\_\_\_\_ the daughter of Demeter, goddess of the harvest, was abducted by Hades and taken to the underworld as his queen (**Persephone**)
401. Demeter was so distraught that no \_\_\_\_\_ would grow and the “entire human race have perished of cruel, biting hunger if Zeus does not rescue her”  
A. Plants B. Fruits **C. Crops** D. Vegetable
402. In Inca mythology, Mama Pacha or Pachamama is a fertility goddess who presides over \_\_\_\_\_ and \_\_\_\_\_  
A. Accumulation, Harvest **B. Planting, Harvesting**  
C. Implant, Collection D. Scatter, Farm
403. In Inca Mythology, Pachamama is usually translated as “Mother Earth”, but a more literal translation would be \_\_\_\_\_ (**Mother Universe**)
404. In Inca Mythology, Pachamama and her husband, Inti are the most \_\_\_\_\_ deities  
A. Big hearted B. Helpful C. Cruel **D. Benevolent**
405. Pachamama and her husband, Inti are worshiped in parts of the \_\_\_\_\_ ranges (**Andean mountain**)
406. In the Southeast Asian Indochina countries of Cambodia Laos and Thailand earth is personified as \_\_\_\_\_ (**Phra Mae Thorani**)
407. \_\_\_\_\_ did not see Nature as inclusive of everything, but thought she had been created by God.  
A. Hindu Thinkers B. Buddhist Thinkers  
C. Jains **D. Medieval Christian Thinkers**

408. In the Malay Archipelago, earth's role is filled by Dewi Sri  
The \_\_\_\_\_ in the East Indies  
A. **Rice mother** B. Mother Nature  
C. Mother earth D. Earth mother
409. The Earth Mother is a motif that appears in many \_\_\_\_\_  
A. Stories B. Tradition C. **Mythologies** D. Convictions
410. The Earth Mother is a \_\_\_\_\_ goddess who embodies the  
fertil  
earth and typically the mother of the deities  
A. Plentiful B. **Fertile** C. Rich D. Bearing
411. In which continent, contemporary Indian people of Andes such as  
the Quechua and Aztec believe in the Mother earth  
A. North America B. **South America** C. England D. Australia
412. Andean migrants carried the \_\_\_\_\_ cult to cities and many  
other extra-Andean places including metropolitan Buenos Aires.  
A. Parvathi B. Lakshmi C. **Pachamama** D. Bharath mata
413. In \_\_\_\_\_ mythology Ki is the earth goddess.  
A. Hinduism B. **Sumerian** C. Buddhist D. Jainism
414. In \_\_\_\_\_ orthography earth has the syllabic values gi, ge, qi, qe  
(**Akkadian**)
415. In Akkadian orthography, some scholars identify Gi with  
\_\_\_\_\_ the earth and fertility mother goddess ( **Ninhursag** )
416. An \_\_\_\_\_ earth and fertility deity Geb was male and he was  
considered as father of all snakes  
A. Tibetan B. **Egyptian** C. Chinese D. Japanese
417. The number of \_\_\_\_\_ goddesses who are depicted as impor-  
tant mother deities is numerous because of regional cults of many  
very early cultures.  
A. Buddhist B. Chinese C. **Egyptian** D. Japanese
418. In \_\_\_\_\_ mythology the earth is personified as Joro, and  
Frigg  
A. Sumerian B. Japanese C. **Norse** D. Egyptian
419. In \_\_\_\_\_ paganism the earth goddess is referred to as Nertha  
The Irish Celts worshipped Danu.  
A. Chinese B. **Germanic** C. Zoroastrian D. Japanese
420. In Lithuanian mythology Gaia Zem Lithuanian for earth is daugh-  
ter of \_\_\_\_\_ and \_\_\_\_\_  
A. Stars, Moon B. Plants, Sun C. **Sun, Moon** D. Nature, Sky
421. In \_\_\_\_\_ cultures the Earth mother was known under as  
many names such as Mami

- A. Indian **B. Pacific** C. Buddhist D. Chinese
422. Ancient \_\_\_\_\_ cultures referred to Mother Earth as Tonantzin Tlalli that means revered Mother Earth  
A. **Mexican** B. Japanese C. Chinese D. Indian
423. Only in late Egyptian mythology does the reverse seem true. Geb is the earth \_\_\_\_\_  
A. Mother B. Partner **C. Father** D. Brother
424. The \_\_\_\_\_ of earth from which life sprang was Mut, the great goddess of Egypt  
A. Mountain B. Pile C. Hillock **D. Mound**
425. In \_\_\_\_\_ the earth goddess is called the planetary logos of earth  
A. Philosophy **B. Theosophy** C. Mythology D. Culture
426. In Wicca the earth goddess is sometime called \_\_\_\_\_  
A. Mother B. Father **C. Gaia** D. Nature
427. In Native American Indian storytelling "The Earth Goddess" is one of several creator based titles and name given to the spider \_\_\_\_\_  
A. Mother **B. Grand mother** C. Father D. Grand father
428. In ancient \_\_\_\_\_ Naukea was a mother goddess of lactation.  
A. Indian B. Sumerian **C. Hawaii** D. Mexican

### **Bhoomi Suktam [Bhoomi Vandanam] In Atharva Veda**

429. *The \_\_\_\_\_ being the core of natural environment the safety of the earth is the security of the people and all living beings*  
A. Nature B. Planet **C. Earth** D. Star
430. *In the ancient tradition and Vedic literature the rishis have celebrated the earth and revered her as \_\_\_\_\_ (The Mother)*
431. *According to the Hindu concept, the earth is the basis of life and, is considered as \_\_\_\_\_*  
A. Irreverent B. Heavenly **C. Divine** D. Spiritual
432. \_\_\_\_\_ always occupies a special place among the Gods  
A. Nature B. Planets **C. Earth** D. Sun
433. The earth is an object of \_\_\_\_\_ and not of exploitation  
A. Ritual B. Nature **C. Worship** D. Respect
434. Investigation of the earth is of the same nature as personal \_\_\_\_\_ as Earth is an object of awe and not of curiosity.  
A. Contemplation **B. Introspection** C. Reflection D. Rumination
435. \_\_\_\_\_ is from the earth and part of the earth.  
A. Plant B. Tree C. Forest **D. Man.**

436. The worshipping of the earth is not adoration of a creature as an absolute, that is, it is not \_\_\_\_\_  
A. Idolism    **B. Idolatry**    C. Adoration    D. Worship
437. The relationship between the human and the earth is one of \_\_\_\_\_  
A. Friendship    B. Cooperation    **C. Partnership**    D. Combination
438. Prayer to the Earth in the Atharva Veda, after describing the origins of earth, follows it up with a \_\_\_\_\_ description (**Geographical**)
439. The Earth is the \_\_\_\_\_ place of people  
A. Establishment    B. Lodging    C. Dump    **D. Dwelling .**
440. Earth is the conveyer of \_\_\_\_\_ the Universal Fire, and the place where men offer ritual sacrifices (**Agni**)
441. Who is a cosmic giant, a cosmic power, the protector and the inscrutable judge?  
A. Planet    B. Star    **C. Earth**    D. Universe
442. In the Hindu tradition there is an underlying \_\_\_\_\_ of all life, the world and all that exists.  
A. Peace    B. Integrity    C. Harmony    **D. Unity**
443. The \_\_\_\_\_ affirm the interconnectedness of all life and all creatures.  
A. Epics    B. Vedas    **C. Scriptures**    D. Upanishads
444. Which of the following affirms that atman is ultimately identical with Brahman?  
A. Valmiki Ramayana    **B. Bhagavad Gita**    C. Mahabaratha    D. Tulasi Ramayana
445. \_\_\_\_\_ is a religion in which the human is conceived as part and parcel of nature  
A. Jainism    B. Buddhism    **C. Hinduism**    D. Zoroastrian
446. The natural phenomena are from a \_\_\_\_\_ source  
A. Unsacred    **B. Divine**    C. Beautiful    D. Glorious
447. Thus, every natural force and phenomenon is considered to be \_\_\_\_\_  
A. Soul    B. Creator    C. Demon    **D. God**
448. \_\_\_\_\_ is not on the earth to conquer, dominate, but to be an integral part of the organic whole  
A. Animal    **B. Human being**    C. Mortal    D. Plants



## Ganga Vandanam

### Pollution of the Sacred Ganga

449. The \_\_\_\_\_ is the largest river in India with an extraordinary religious importance for Hindus  
a) Yamuna b) **Ganges** c) Brahmaputra d) Indus
450. Along Ganges banks are some of the world's oldest inhabited places like \_\_\_\_\_ and Patna  
a) Tulsi Ghat b) Man Mandir Ghat  
c) **Varanasi** d) Kedar Ghat
451. Ganga provides water to about 40% of India's population in \_\_\_\_\_ states with an estimation of 500 million people  
a) **11** b) 20 c) 12 d) 15
452. Today, Ganga is fifth most \_\_\_\_\_ river in the world  
a) Purify b) Divine c) Honor d) **Polluted**
453. The Ganges river basin is one of the most \_\_\_\_\_ and densely populated regions in the world  
a) Sparse b) **Fertile** c) Lush d) Plentiful
454. A large proportion of the waste in the Ganges is from this population through \_\_\_\_\_ usage  
a) Industrial b) calm c) **Domestic** d) Alien
455. Industrial effluents are about \_\_\_\_\_ of the total volume of effluent reaching the Ganges  
a) 15% b) **12%** c) 18% d) 20%
456. Dams are built in \_\_\_\_\_ during the British colonization of India  
a) **1854** b) 1850 c) 1910 d) 1844
457. The \_\_\_\_\_ dam has led to decay of the Ganges by greatly diminishing the flow of the river  
a) Indira Sagar b) Mettur c) Koyna d) **Haridwar**
458. The government of India has planned about \_\_\_\_\_ dams on the Ganges  
a) 500 b) **300** c) 600 d) 1000
459. The Ganga is polluted because rivers are seen more as \_\_\_\_\_ rather than living bodies- like humans  
a) Debt b) Divine c) **Resources** d) Earthly
460. Even though there are efforts to remove the pollution of the Ganga, the real change can come only if the consciousness that rivers and waters are \_\_\_\_\_  
a) Secular b) Material c) Hollowed d) **Sacred**

## Water and Rivers as sacred in ancient Indian Traditions

461. In ancient India, \_\_\_\_\_ has been an object of worship from time immemorial  
a) Trees    b) Animals    c) **water**    d) Plants
462. Most Indian rivers are usually believed to be \_\_\_\_\_ of Goddesses  
a) Reality    b) Concealment    c) Mark    d) **Manifestations**
463. Rivers have been given a divine status and have been worshipped since \_\_\_\_\_ times.  
a) Historic    b) Modern    c) **Ancient**    d) Current
464. \_\_\_\_\_ plays a vital role in holy rituals  
a) Trees    b) **Water**    c) Animals    d) Elders
465. Water \_\_\_\_\_ our body and hence, symbolizes purification.  
a) Pollute    b) Rinse    c) **Cleanses**    d) Restore
466. \_\_\_\_\_ are one such gift, which is considered highly sacred  
a) Mountains    b) **Rivers**    c) Trees    d) Animals
467. \_\_\_\_\_ in might surpasses all the streams that flow.  
a) Yamuna    b) Ganga    c) **Sindhu**    d) Narmada
468. Sindhu river is \_\_\_\_\_  
a) **Masculine**    b) Feminine    c) Neutral    d) None of these
469. As a warrior- king leads other warriors, so does \_\_\_\_\_ lead other rivers  
a) Ganga    b) **Sindhu**    c) Krishna    d) Tapti
470. The \_\_\_\_\_ Veda says sindhu is rich in gold, nobly fashioned, rich in ample wealth  
a) Atharva    b) **Sama**    c) Rig    d) Yajur

## IMCTF ORGANISING COMMITTEE

### Convenor

**Smt. Sheela Rajendra,**

Deputy Dean, Director & Correspondent, PSBB Schools.,

### Co-Convenors

**Sri. M.N.Venkatesan,**

Joint Secretary,  
Vivekananda Educational Society

**Sri. R.J.Bhuvanesh,**

CEO, Kaligi Ranganathan  
Group of Schools

**Sri. Rajendran,**

CEO, DAV School,  
Adambakkam

### Secretary

**Smt. Mohini Chordia**

AM Jain Group of Schools

### Members

**Sri. Mukesh Mehta**

AB Parekh  
Senior Secondary School

**Brother Vijayan,**

Amrita Vidyalayam

**Sri. Vikas Arya**

Vice President  
Arya Samaj

**Sri. Sankar Ramakrishnan**

Sankara Group of Schools

**Sri. Atul Nangia**

Punjab Association Group of Schools

## IMCTF Co-ordinators

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Member, Core Team  
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## IMCTF Pledge

*I revere "**Trees**" as symbol of **Forests***

*I revere "**Snakes**" as symbol of **Wild Life***

*I revere "**Cows**" as symbol of all **Living Beings***

*I revere "**Ganga**" as symbol of **Nature***

*I revere "**Mother Earth**" as Symbol of **Environment***

*I revere my "**Parents**" as symbol of **Human Values***

*I revere my "**Teachers**" as symbol of **Learning***

*I revere "**Women**" as symbol of **Motherhood***

*I revere "**War Heroes**" as symbol of **Bharat***



# Initiative for Moral and Cultural Training Foundation [IMCTF]



## Six Thematic Samskarams

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