



NAAC Accredited with Grade "A"

सा विद्या या विमुक्तये

Sant Gadge Baba Amravati University, Amravati

# AVISHKAR 2018



**Creative Innovations for Skill India**

A Research Convention that provides a Platform to Exhibit Innovative Ideas, Original Thinking, Scientific Attitude and Creativity

Create

Sustain

Prosper

## Phase - I

### District Level Avishkar Venues :

Amravati District	: Shri Shivaji Science College, Amravati (December 18, 2018)
Akola District	: Shri Shivaji College of Arts, Commerce & Science, Akola (December 17, 2018)
Buldhana District	: Shri Shivaji Arts & Science College, Chikhli (December 17, 2018)
Washim District	: Yashwantrao Chavan Arts & Science Mahavidyalaya, Mangrulpir (December 18, 2018)
Yavatmal District	: Amolakchand Mahavidyalaya, Yavatmal (December 18, 2018)

## Phase - II

### University Level Avishkar

Sant Gadge Baba Amravati University, Amravati ( December 26-27, 2018, 9.00 am to 6.00 pm)

#### Levels of Participation \*

Under Graduate (UG)  
(below Age of 25 years)

Post Graduate (PG)  
(below Age of 30 years)

Post PG (PPG)  
(Registered for M.Phil. & Ph.D.)

Teachers (TH)  
(Approved & Registered )

\*Each participant Should Produce  
Identity Card Duly Signed by  
Competent Authority

#### Modes of Presentation

Poster  
Model (Working/ Static)

Language of Presentation  
English ■ Marathi ■ Hindi

#### Rules and Guidelines

For registration form,  
"Rules and Guidelines"  
and other details please  
visit university website :  
[www.sgbau.ac.in](http://www.sgbau.ac.in)

#### State Level Avishkar

Total 48 winners  
(2 each from 4 levels  
of 6 theme areas)  
will represent the  
University to be held at  
Gondwana University,  
Gadchiroli during Jan. 2019

#### Chief-Patron

**Dr. M. G. Chandekar**

Hon'ble Vice-Chancellor

#### Co-Patrons

**Dr. R. S. Jaipurkar**

Hon'ble Pro-Vice-Chancellor

#### Nodal Officer

**Dr. D. T. Ingole**

Director, Innovation, Incubation & Linkages

**Dr. A. P. Deshmukh**

Registrar

#### Co-ordinator

**Dr. A. S. Aswar**

Prof. & Head, Department of Chemistry

### ORGANIZERS

Amravati	: Dr. V. G. Thakare (Principal)	M. 9422858934
	Dr. D. V. Hande (Co-ordinator)	M. 9422736736
	Dr. A.K. Maldhure (Co-coordinator)	M. 9822939260
Akola	: Dr. R. M. Bhise (Principal)	M. 9970151348
	Dr. G. V. Korpe (Co-ordinator)	M. 9822643575
	Dr. A. B. Pande (Co-coordinator)	M. 9422893162
Buldhana	: Dr. A. M. Garode (Principal)	M. 9850363280
	Dr. M. A. Rithe (Co-coordinator)	M. 9421494069
Washim	: Dr. V. R. Bhonde (Principal)	M. 9422748486
	Dr. A. H. Shinde (Co-ordinator)	M. 9423651979
	Dr. S. N. Patil (Co-coordinator)	M. 9272771700
Yavatmal	: Dr. R. A. Mishra (Principal)	M. 9890047278
	Dr. A. B. Lad (Co-ordinator)	M. 9822460072
	Dr. C.R. Kasar (Co-coordinator)	M. 9960315171
University level	: Dr. A. S. Aswar (Co-ordinator)	M. 9421790866

### MEMBERS

Dr. M. R. Kherde  
Dr. P. A. Wadegaonkar  
Dr. D. Y. Chacharkar  
Dr. P. A. Gawande  
Shri. M. K. Warkhede

Dr. S. D. Katore  
Dr. M. M. Chimote  
Dr. N. B. Selukar  
Dr. Mrs. S. N. Kale

" Take risk in life ... If you win you can lead, If you lose you can guide ... "

#### Prizes at University Level Avishkar

First Prize - Rs. 1500 /- ; Second Prize - Rs. 1000 /-

**Kindly Display**

#### Theme Area Groups

1. Social Sciences, Education, Languages, Humanities, Fine Arts, etc.
2. Commerce, Management, Law, etc.
3. Pure Sciences: Chemical, Physical, Life, Mathematical, Environmental, Home and Computer Sciences.
4. Agriculture and Animal Husbandry
5. Engineering & Technology: All Branches of Engineering and Technology.
6. Medicine and Pharmacy

**Last date of entries  
for University level  
December 20, 2018**

All UG / PG / Ph. D. /  
Teachers categories from  
University Departments  
and Engineering &  
Technology category  
should send their entries  
directly to the University  
Coordinator, Dr. A. S. Aswar  
Avishkar Cell, Sant Gadge  
Baba Amravati University,  
Amravati- 444 602  
on or before

December 20, 2018

Email: [coordinatoravishkar@sgbau.ac.in](mailto:coordinatoravishkar@sgbau.ac.in)

M:9421790866 / 9637650791





# SANT GADGE BABA AMRAVATI UNIVERSITY

NAAC Reaccredited with 'A' Grade  
Regional Level Students Research Convention  
"AVISHKAR – 2018"

No. SGBAU/Chem./343/2018 dated 17/10/2018

Dr. D.T. Ingole  
Director, Innovation, Incubation &  
Linkages (IIL)  
Sant Gadge Baba Amravati  
University, Amravati-444602

Dr. A.S. Aswar  
Coordinator, Avishkar Cell &  
Prof. & Head, Department of Chemistry  
Sant Gadge Baba Amravati University  
Amravati-444602

**Subject: Circular of Inter-Collegiate/Department Students Research Convention "AVISHKAR- 2018".**

Dear Sir/Madam,

Academics in the 21<sup>st</sup> Century is at a crossroads of knowledge and research. There is a tremendous desire to unveil the unknown and unexplored areas of knowledge in all fields of academic enquiry. Due to the tremendous interdisciplinary approach no discipline goes untouched from the research activity. The genesis of 'Avishkar- A State level Students Research Convention' lies in the success of Sports meet "Ashwamedh" and Inter-University Cultural Festival "Indradhanushya" which provide opportunity for all round development of personality of students. His Excellency, Dr. S. M. Krishna, the then Chancellor mooted the concept of providing a platform/opportunity for expression of research talent among the students. It is for inculcating research culture, to encourage original thinking among students and provide an opportunity for expression of academic talent. This will also help to promote interaction among academia, R & D Institutes and Industries. Such type of activity is essential in the era of intellectual property rights with the implementation of WTO-GATS and patenting of research. To make the country competent and competitive, promoting research activities at the right age is the only solution.

This activity, unique in its nature will help to develop skill to review new dimensions of explored areas of knowledge as well as the unexplored areas of enquiry. Sant Gadge Baba Amravati University has established the Avishkar Cell to promote research and innovation amongst students and teachers, to reach to the objectives set by AVISHKAR. The Avishkar cell has taken special efforts to increase the participation of the desirous and deserving students from rural and urban areas. The cell also put in strength efforts to organize regional competitions and to provide special training to these students towards guiding them to enhance their abilities to showcase their research model work in an effective manner. This activity has generated a lot of scientific temperament in research and innovation amongst students and the participation is ever increasing.

It is our pleasure to share with you that Sant Gadge Baba Amravati University contingent of 40 students at the UG, PG, Post PG (PPG) and Teachers pursuing M.Phil., Ph.D had participated at 12<sup>th</sup> Maharashtra State Inter-University Research convention - Avishkar hosted by M.P.K.V., Rahuri, in January 15-17, 2018, wherein our University secured the first prize in Pure Sciences (UG), Engineering & Technology (UG) and Agriculture & Animal Husbandry (PPG) during the Academic year 2017-18.

Sant Gadge Baba Amravati University has a long tradition of 35 years with almost 400 affiliated Colleges and over 5 lakh students studying in the various departments, institutions and affiliated colleges. It is the collective responsibility of all of us to sensitize the students and build confidence among them to venture into research and imbibe in them, the spirit of healthy competition.

There is a total flexibility of participation without any restriction on cross faculty participation. Avishkar involves all disciplines and grouped them into six categories as listed below:

- |  |   |
|--|---|
| 1. Humanities, Languages, Fine Arts etc. (HLF) | 2. Commerce, Management, Law etc. (CML)   |
| 3. Pure Sciences (PS)                          | 4. Agriculture and Animal Husbandry (AAH) |
| 5. Medicine and Pharmacy (MP)                  | 6. Engineering and Technology (ET)        |

Students of UG, PG, PPG and Teacher (pursuing M.Phil/Ph.D) can participate. Student from any level /discipline can participate under any of the above six disciplines.

- At the college level multiple entries can be accommodated.
- However, while participating at the Qualifying/Preliminary round only 40 entries per college are permissible.
- Also the Maharashtra University of Health Sciences, Nashik from last three years onwards begun participation with the National Convention on "Inclusive Innovations". Hence, the participant can also enrol for the same.
- For details, please visit the website: [www.inclusiveinnovation.in](http://www.inclusiveinnovation.in).

1. Every college is entrusted with the responsibility to organize its own research convention at the college level in all first five categories whereas competition for engineering & Technology category will be held directly at University level as per the University norms. The Principal/Director / shall be the convenor and Teacher In -charge will be the co-convenor of the Avishkar Convention. One Teacher **co-ordinator** be designated for this activity to undertake the responsibilities of creating the research culture in the college and his name be forwarded/ mailed to respective District coordinator as well as to the Avishkar Cell, Sant Gadge Baba Amravati University.

For the purpose of judging the research projects, the college should invite experts from other colleges and institution and shortlist two entries in each category irrespective of their levels (UG/PG / PPG/TH (M.Phil-Ph.D.) (maximum 40 best projects) for the purpose of participation for Avishkar at the District /University preliminary round.

Those colleges who do not conduct Avishkar activities at the college level, the University shall reserve its right to restrict their participation in the University/state level Research convention.

Following the Inter-Collegiate research convention (preliminary/Qualifying round) the selected entries shall compete at the final round of the research convention at University level. From every level only two from each level of six theme areas total 48 winners will represent University at the state level Avishkar.

2. Each college/institution is expected to send a maximum of two entries in each category (40 entries maximum after the college level Avishkar) from Under Graduate (UG), Post Graduate (PG) and Post PG, and teachers pursuing their research (Ph.D.) in all above five categories to the District Coordinator as given in the time table.

All UG / PG / Ph D/ Teachers categories **from University departments and Engineering & Technology** category should send their entries directly to the University Coordinator, **Dr. A.S. Aswar**, Avishkar Cell, Sant Gadge Baba Amravati University on or before **20/12/2018**. The upper Age limit for UG & PG candidates are **25 and 30** years respectively while for Teachers there is no age barring.

3. All participants should prepare their poster/model based on their own work/innovation (Maximum two participants are allowed per poster). Category wise entries and soft copy of the project should be mailed to the Coordinator, Avishkar Cell, Sant Gadge Baba Amravati University on E-mail ID: [coordinatoravishkar@sgbau.ac.in](mailto:coordinatoravishkar@sgbau.ac.in) at least three days before the respective districts/ university final level rounds, mentioning the following:

- Title and abstract of the project: (200 Words compulsorily be submitted during registration)
- Name of the participant: (Each participant should produce identity card duly signed by competent authority).
- Their level UG / PG / Ph D (Registration No with date)/ Teachers pursuing M.Phil/Ph.D.

4. The research project to be presented should be in the form of a poster (with / without a model) and an oral presentation (power point, soft copy to be mailed to the Coordinator, Avishkar Cell, Sant Gadge Baba Amravati University. (Email ID: [coordinatoravishkar@sgbau.ac.in](mailto:coordinatoravishkar@sgbau.ac.in) ; Fax-0721-2662135).

5. Each oral presentation will be given 8 minutes and 2 minutes for question and answers.

6. The poster should be of **1meter x 1meter** in size and **Name of the College / Department / Institute or Student should NOT be inscribed on the poster / oral presentation** (Annexure – A). Model space of 1m X 1m along with electric or water supply, if required will be provided for assembling the working / static model. Participants have to specify the requirements in the entry form which are essential for their model presentation.

7. The entry should reach the respective centres for the district level competition at least three days prior to the commencement of competitions. (Annexure – B) [One copy to be mailed on above email address] .

8. The judging of the posters/ oral presentation at the District/University level would be done by the panel of eminent judges appointed by the University/District coordinators.

9. The participants of the selected projects will have to remain present along with their posters (**1meter x 1meter, Flex**) and or models and oral presentations at Sant Gadge Baba Amravati, Amravati. Entry form may be downloaded from the University website [www.sgbau.ac.in](http://www.sgbau.ac.in)

10. Cash prize of Rs.1500/-(First) and Rs.1000/-(Second), Certificates and Mementoes will be awarded to Winners of each level at University level competition. Certificate of participation will be awarded to all the participants.

11. Orientation cum guidance workshops will be organised for the benefit of the students and teachers. The schedule for the same will be provided on the website of the University [www.sgbau.ac.in](http://www.sgbau.ac.in)

May we request you to take initiative and send your selected students with their research projects for participating in the District/University level research Convention (Avishkar). Your initiation, involvement, participation & guidance will certainly help the university to make this research Convention a grand success.

Sd/-  
Dr.D.T.Ingole  
Director, IIL

Sd/  
Dr. A.S.Aswar  
Coordinator, Avishkar Cell

Encls: i. District wise Schedule & Annexure A & B  
ii. Instructions

To,  
The Principals / Directors of the recognized Institutions & affiliated colleges and Heads of the Departments of Sant Gadge Baba Amravati University.

**SANT GADGE BABA AMRAVATI UNIVERSITY**  
**Regional Level Students Research Convention**  
**“AVISHKAR – 2018”**  
**SCHEDULE AT A GLANCE**

<b>District</b>	<b>Name of Region</b>	<b>Date</b>	<b>Organizing College &amp; District Co-ordinator &amp; Co-coordinator Names (Contact No. &amp; E-mail)</b>	<b>Principal Name (Contact No. &amp; E-mail)</b>
<b>Amravati</b>	All colleges from <b>Amravati District</b>	<b>18/12/2018</b>	<b>Shivaji Science College, Amravati- 444 602</b> <b>District Co-ordinator: Dr. D.V. Hande</b> Shri Shivaji Science College, Amravati-444602; <b>Cell: 9422736736</b> <b>Email: <a href="mailto:dvhande@gmail.com">dvhande@gmail.com</a></b> District Co-coordinator : <b>Dr. A.K. Maldhure</b> Arts, Commerce and Science College, Kiran Nagar, Amravati- 444606, <b>E-mail: <a href="mailto:atishkmaldhure@yahoo.co.in">atishkmaldhure@yahoo.co.in</a></b> <b>Mob. No.: 09822939260</b>	<b>Dr. V.G. Thakare</b> Email:Shivajiscamt@gmail.com <b>Cell:9422858934</b>
<b>Akola</b>	All colleges from <b>Akola District</b>	<b>17/12/2018</b>	<b>Shri Shivaji College of Arts, Commerce &amp; Science, Akola – 444 003</b> <b>District Co-ordinator: Dr. G.V. Korpe</b> <b>Cell:9822643575</b> Email: <a href="mailto:korpegv@rediffmail.com">korpegv@rediffmail.com</a> District Co-coordinator: Dr. A. B. Pande Smt. R.D.G. College for Women, Akola E-mail: <a href="mailto:a_bpande@rediffmail.com">a_bpande@rediffmail.com</a> , <b>Mob. 9422893162</b>	<b>Dr. R.M. Bhise</b> Email:rambhiseiii@gmail.com <b>Cell:9970151348</b>
<b>Buldhana</b>	All colleges from <b>Buldana District</b>	<b>17/12/2018</b>	<b>Shri Shivaji Arts &amp; Science College Chikhli - 443201</b> <b>District Co-ordinator: Dr. A. M. Garode</b> Shri Shivaji College of Arts, Commerce & Science, Chikhli - 443201 <b>Cell:9850363280</b> E-mail- <a href="mailto:anilgarode@gmail.com">anilgarode@gmail.com</a> District Co-coordinator: Dr. M. A. Rithe Raje Chhatrapati Kaka Mahavidyalaya, Dhamangaon Badhe, Tq. Motala, Dist: Buldana E-mail: <a href="mailto:rithemahesh@gmail.com">rithemahesh@gmail.com</a> Mob. No. 09421494069	<b>Dr. A. M. Garode</b> Email:shivajichk@rediffmail.com <b>Cell:9850363280</b>
<b>Washim</b>	All colleges from <b>Washim District</b>	<b>18/12/2018</b>	<b>Yashwantrao Chavan Arts &amp; Science Mahavidyalaya, Mangrulpir</b> <b>District Co-ordinator: Dr. A.H. Shinde</b> Yashwantrao Chavan Arts & Science Mahavidyalaya, Mangrulpir <b>Dist. Washim. Cell: 9423651979</b> Email: <a href="mailto:anantshinde007@rediffmail.com">anantshinde007@rediffmail.com</a> District Co-coordinator: Dr. S. N. Patil Savitribai Phule Mahila Mahavidyalaya Washim; E-mail:snpatilwashin@gmailcom Mob.No.9272771700	<b>Dr. V.R. Bhonde</b> Email:principalyccmp@rediffmail.com <b>Cell:9422748486</b>
<b>Yavatmal</b>	All colleges from <b>Yavatmal District</b>	<b>18/12/2018</b>	<b>Amolakchand Mahavidyalaya, Yavatmal</b> <b>District Co-ordinator: Dr. A.B. Lad</b> Amolakchand Mahavidyalaya ,Yavatmal <b>Cell: 9822460072</b> Email: <a href="mailto:drajaylad@rediffmail.com">drajaylad@rediffmail.com</a> District Co-coordinator: Dr. C.R. Kasar S.P.M. Science and Gilani Arts, Commerce College, Ghatanji Dist. Yavatmal E-mail: <a href="mailto:drckkasar@rediffmail.com">drckkasar@rediffmail.com</a> <b>Mob.No. 09960315171</b>	<b>Dr. R. A. Mishra</b> Email:mishrammanohar@gmail.com <b>Cell:9890047278</b>
<b>University Campus</b>	All University Depts. + <b>All Engg. Colleges</b> + Shortlisted candidates from Five Districts	<b>26&amp;27 December 2018</b>	<b>Dr. A. S. Aswar</b> <b>Co-ordinator, Avishkar Cell &amp; Prof. &amp; Head</b> <b>Department of Chemistry</b> <b>Sant Gadge Baba Amravati University, Amravati</b> <b>Email: coordinatoravishkar@sgbau.ac.in Cell : 9421790866</b>	

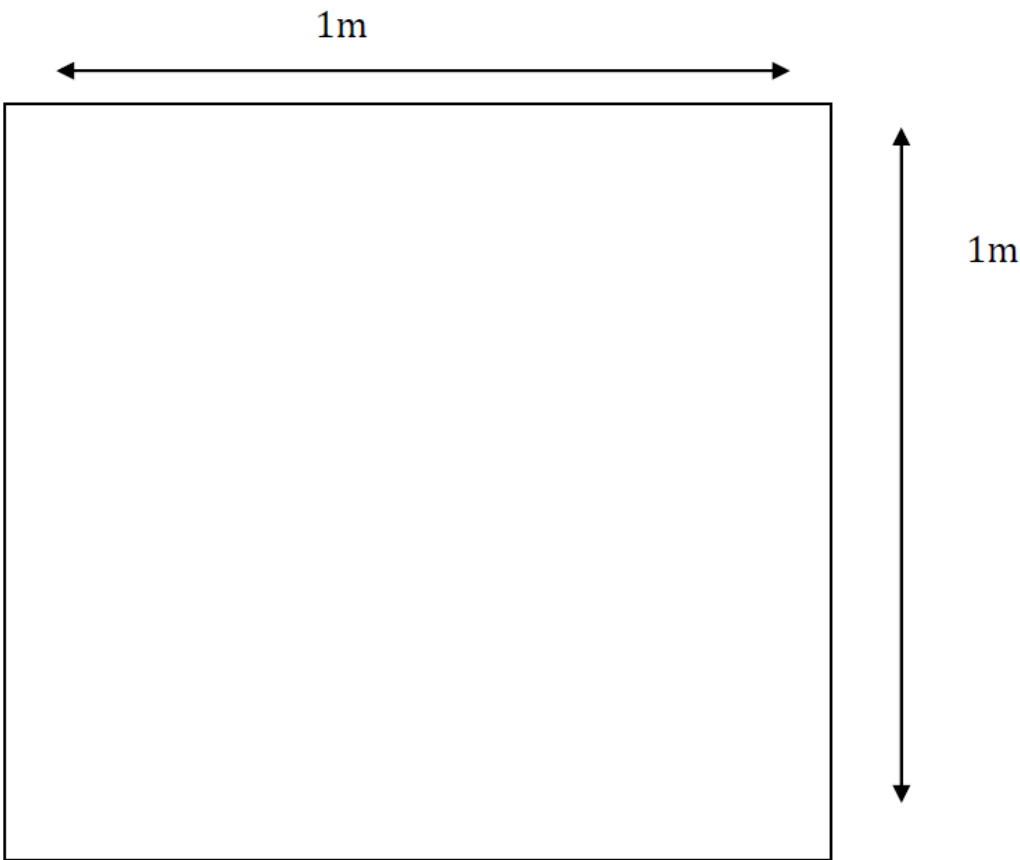
\* Please send your entries to the respective **District /University** coordinators only.

Sd/-  
Dr. D.T. Ingole  
Director, IIL

Sd/-  
Dr. A.S. Aswar  
Coordinator, Avishkar Cell

SANT GADGE BABA AMRAVATI UNIVERSITY  
Regional Level Students Research Convention  
“AVISHKAR – 2018”

Title of the Project:  
Inter University Research Convention -Avishkar 2018-19  
Category: PS/ET/MP/AAH/CML/HLF  
Level: UG/PG/PPG/Teacher (TH)



Layout of the poster to be presented at Avishkar 2018-19  
NOTE: **Please do not disclose the name and identity of the participant(s) and the College/department /University on poster or any other means.**

SANT GADGE BABA AMRAVATI UNIVERSITY  
Regional Level Students Research Convention  
“AVISHKAR – 2018”  
Avishkar Cell

Level: - **UG/PG/Post PG (M.Phil./Ph.D. Registered )/Teacher** (Approved & Registered)

Category: **PS/ET/MP/AAH/HLF/CML**

Title of the Project: -----

Name of the Participant: -----  
(Participants should specify the essential requirements for their **model presentation**)

Mode of Presentation: **Poster/Model**

Gender (M/F) :----- ( Age) -----Date of Birth: -----/-----/-----, Class: -----

Email ID: - -----

Mobile No.:-----

Name of the College /Institution/Department: -----

Name of Guide/Supervisor: -----

Mobile No.:-----Email ID: -----

Name of the other team members, if any (Maximum two participants are allowed per poster):  
1. \_\_\_\_\_

Signature of Student

This is to certify that Dr./Shri./Smt. -----  
----- is a bonafide student of this college/regular faculty member of this college. I  
further certify that He /She is participating as per norms of the Avishkar -Research Convention 2018-19.

Name of the principal: \_\_\_\_\_Signature with seal

Place:

Date:

**SANT GADGE BABA AMRAVATI UNIVERSITY**  
**UNIVERSITY LEVEL STUDENTS RESEARCH CONVENTION**

**“AVISHKAR – 2018”**  
**Important Instructions for participants**

The shortlisted candidates from STAGE-I (District Level) will have to submit their projects along with research papers and CD's to the Convener for their evaluation by subject experts and final selection of University team.

The selected team at STAGE-II will be entitled to present their projects at Inter-University (STATE) Research Competition AVISHKAR -18 to be held **during January 15-17, 2019.**

An orientation cum guidance workshop of the selected candidates for STAGE-III will be organized on **9<sup>th</sup>** January 2019 to prepare the candidate for presentations at STAGE -III (State) level. At stage III level only one candidate/entry will participate.

**PROGRAMME FOR STAGE -II**

**Day-1: 26<sup>th</sup> December 2018**

Poster/Model display of research projects in the form of exhibition to be judged at elimination round by at least 3 eminent experts, in each category, who are acclaimed researchers in the respective disciplines which they are judging. The final selection of the projects is based on the cumulative weightage given all the criteria such as Scientific thoughts and principles, creativity, Thoroughness, skill, relevance, cost effectiveness, team work etc. The decision of judges will be final.

**Venue: Vidyarthi Bhavan**, Sant Gadge Baba Amravati University, Amravati

**Day-2: 27<sup>th</sup> December 2018**

Oral presentation strictly by the participant/s of the selected/short listed research projects in each category which will normally be in the 8 minutes for presentation and 2 minutes for question and answers and not more than 10 in minutes in any case in each of the 24 categories.

**General Instructions:**

- The entries must be forwarded through principal/Head of the institution.
- Registration is compulsory for all participants. There will be no registration fee
- LCD facility will be provided.
- Exhibits will be displayed on **26<sup>th</sup> December 2018 from 9.00 am onwards.**
- Participants will be allowed to exhibit only after the confirmation of their college /institute identity card.
- The shortlisted participants will have to make oral presentation of their research projects. So each team should come prepared for oral power point presentation of not more than 8 min duration which will be followed by questions and answers for 2 minutes.
- Size of exhibit (Poster or Model) should not exceed **1mx1m and there should not be any identification on exhibit/Flex.**
- The decision of subject experts/judges will be final and binding all participants.
- All winning teams will be informed about their selection on the same day.
- Certificate of participation will be awarded to all the participants.

Sd/-  
Dr. D.T. Ingole  
Director, IIL

Sd/-  
Dr. A. S.Aswar  
Coordinator, Avishkar Cell