

**CHILDREN'S EDUCATION SOCIETY (Regd.)**  
**THE OXFORD COLLEGE OF ENGINEERING**

(Recognised by the Govt. of Karnataka, Affiliated to Visvesvaraya Technological University, Belagavi.  
 Approved by A.I.C.T.E. New Delhi.  
 Recognised by UGC Under Section 2(f)  
 Bommanahalli, Hosur Road, Bangalore - 560 068.  
 Ph: 080-61754601/602, Fax: 080 - 25730551  
 E-mail: engprincipal@theoxford.edu Web: www.theoxfordengg.org

**Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five year**

**Copy of circular/brochure of such programs along with the details of the resource persons for last five years**

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**SUMMARY**

This is to certify that the following file has the details of circular/brochure of competitive examination/career counselling programs along with the details of the resource persons during the academic year 2020-2021.

**PRINCIPAL**

**PRINCIPAL**

The Oxford College of Engineering  
Bommanahalli, Hosur Road  
Bengaluru-560 068



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04/08/2020

## **Committee Formation Rules**

Every committee will enjoy functional autonomy required for attainment of its objectives, but will remain accountable to the Principal.

Ordinarily no recommendation of a Committee should be ignored. However, in situations posing a serious challenge to the college mission, the Principal may ask the committee to review its recommendation.

All recommendations are to be implemented either through the Principal or by developing suitable procedures of implementation.

All committees are to monitor their own performance through periodic review of the progress of work.

If there be a gap between the targets set and actual performance, the committee should initiate corrective action to bridge the gap.

If this gap cannot be bridged due to reasons beyond the control of the committee, then the targets must be revised or reset so as make them meaningful.

## **PLACEMENT CUM CAREER COUNSELLING COMMITTEE**

**Tenure:** 1 year

**Objective:** To guide students in the matter of career options, and also to promote entrepreneurship.

**Function:** The committee will

- help learners explore career options
- make assessment of students efficiency & groom them for job they are fit for
- provide career guidance to students on the basis of their aptitudes & groom them for the jobs they are capable
- invite commercial/ industrial organizations to the campus for conducting campus interviews and recruitment



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- promote self-reliance among students
- select students for participation in recruitment drive organized by other institutions

The Following Team Constitute the Placement Committee for the  
year 2020-21

**PLACEMENT COMMITTEE 2020-21**

*Co-ordinators*

Dr. A.S.Aravind -Principal

Prof. Nancy Johnson– Head Training and Placement

Mr. Gopal– Placement Executive

*Committee Members*

Dr. R. Ch. A. Naidu (HOD- Dept. of Computer Science & Engg.)

Dr. R Kanagavalli (HOD- Dept. of Information Science & Engg.)

Dr. Manju Devi (HOD- Dept. of Electronics and Communication Engg.)

Dr. V S Bharat (HOD- Dept. of Electrical and Electronics Engg.)

Dr. G Madhusudan Reddy (HOD- Dept. of Mechanical Engg)

Dr. B K Manjunatha (HOD- Dept. of Biotechnology)

Dr. Malleshaiah. T. S. (HOD- Dept. of Civil Engineering)

Dr. Raju B. R(HOD- Dept. of Automobile Engineering)

Dr. Yashoda. B. S (HOD- Dept. of Mechatronics Engineering)

Dr. M. S. Shashidhara –( HOD –Dept of MCA)

Dr. Dhanlakshmi R. V (HOD- Dept. of MBA)

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## **Standard Operating Procedures**

1. Training will be Organized to all the Pre-Final Year students on Aptitude and Softskills to make students interview ready.
2. Pre-training Assessment Test will be conducted to all the students to assess the skills of the student before training starts. On completion of training, students will be reassessed to check their improvement and progress in the aptitude skills through Post-training Assessment Test.
3. Placement Interested Students should register themselves for placements with Department Placement Coordinator in the beginning of the 6<sup>th</sup> Semester.
4. Department Placement Coordinator will collate the data collected and submit to the Placement Officer.
5. Periodic Monitoring will make students to be more confident to attend interviews. In-house training on Group Discussion and Interview skills will be provided to students till their interviews start.
6. Sending campus placement invite to all companies for on-campus recruitment and follow-up there on with them.
7. Based on the company request, student's database after obtaining willingness from students will be shared with the company.
8. Campus recruitment dates will be confirmed on the mutual convenient days of College and Company.
9. Students will be informed about the company visit three days in advance.



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10. Execution of the on-campus recruitment process with the help of the Departmental Placement Coordinators and Placement Cell students' coordinators.

11. Results will be announced to the students after receiving the confirmation mail from Company officials.

12. Once the students receive the offer letter by mail, they have been asked to submit the same to the Department Placement Coordinator and Placement Cell. (Both Hardcopy and Softcopy).

13. Those students who have been selected in the companies will be asked to submit the willingness form to the placement officer within a day after declaration of result.

14. Those students selected for the internship will submit the internship request form to the Department along with the Internship offer letter received from the company.

15. Career Guidance programs will be organized for the Higher studies interested students on higher studies opportunities after Engineering and preparation for the competitive examinations in their Pre-Final and Final year.





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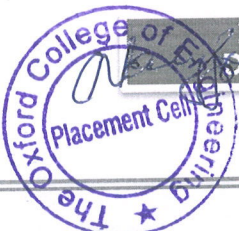
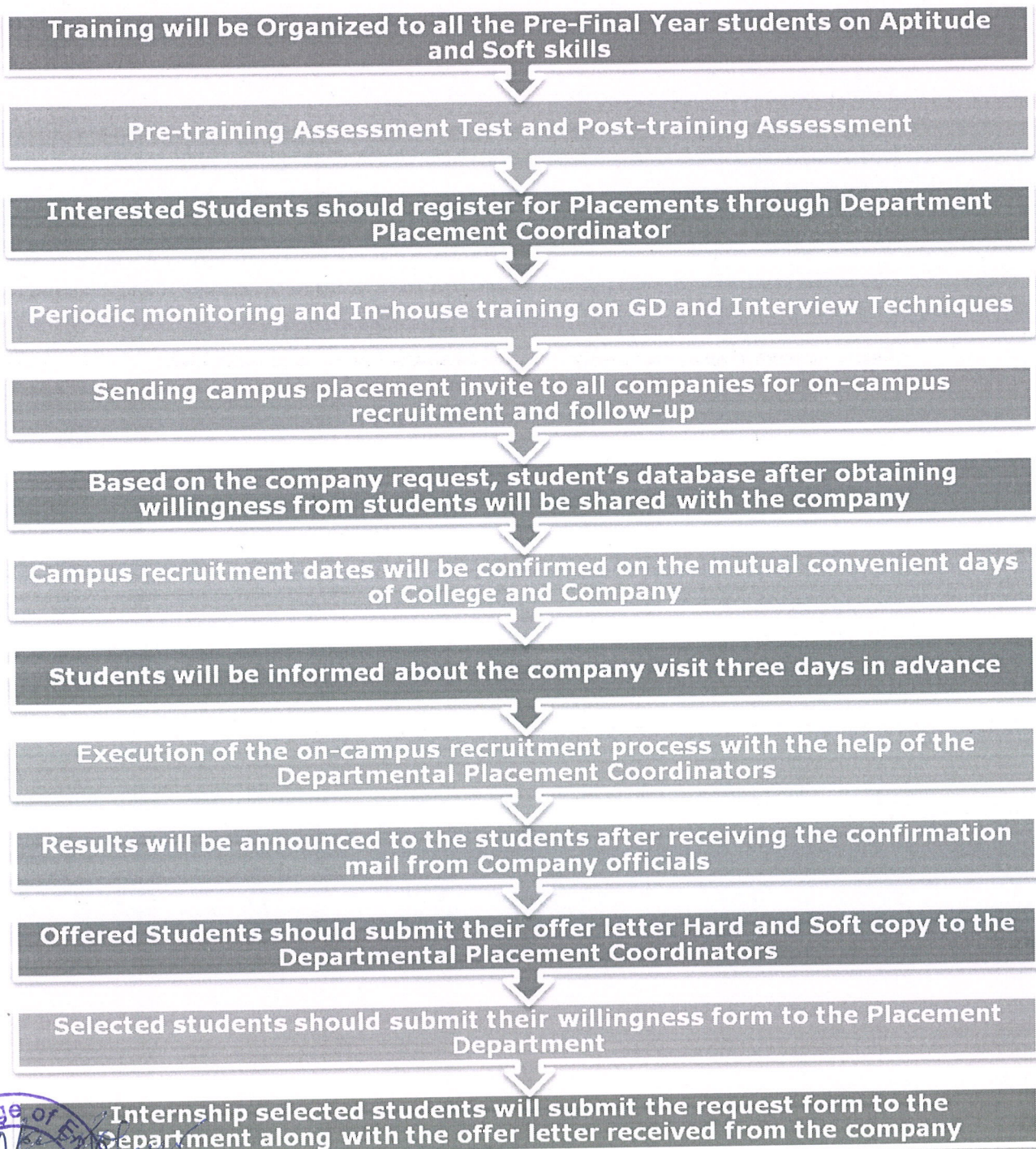
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**Flow Chart of SOPs Training and Placement**







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Date: 14/10/2020

**CIRCULAR**

It is hereby informed to all the committee members of placement training cell to attend a **MEETING** regarding **PLACEMENT TRAINING/COMPETITIVE EXAMS/OPTING HIGHER EDUCATION & SKILL ENHANCEMENT TRAINING** in **BOARD ROOM** on **15/10/2020** at **9.45 AM**

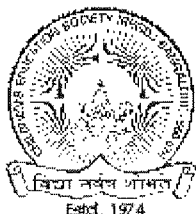
**Principal**

**PRINCIPAL**

The Oxford College of Engineering  
Bommanahalli, Hosur Road  
Bengaluru-560 068

To,

1. All HODs



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**MINUTES OF MEETING**  
**Placement Training - FACE**

- Director
- Principal
- Dr Raju BR (Automobile)
- Dr Manjunath BK (Biotechnology)
- Dr Malleshaiah.T.S (Civil)
- Dr R.Ch.A.Naidu (Computer Science)
- Dr Manju Devi (Electronics and Communication)
- Dr Bharath (Electrical and Electronics)
- Dr Kanagavalli (Information Science)
- Dr Madhusudhan Reddy (Mechanical)
- Dr Yashoda BS (Mechatronics)
- Dr Dhanalakshmi (MBA)
- Dr M.S.Shashidhara (MCA)
- Mr.Gopal, Placement Executive

Serial Number	Details discussed / Improvements / Decisions finalised
a)	Feedback have taken from Faculty coordinator about FACE Training for Final Year students of 2021 graduating batch
b)	Discussed about the feedback received from Faculty on the date of Demo Training
c)	Discussed the points need to be focused on future for betterment and date of commencement of Training.
b)	<p>Topics Discussed</p> <p>Effective Participation of students</p> <p>Avoid Absentees</p> <p>Students need to take prior approval from the Head of the Department in case of absenteeism</p>



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Need of Faculty coordinators and Mentors monitoring the Training to maintain decorum of the forum.

Attendance of students to be submitted to Principal daily 30 minutes after the commencement of Training.

Students Carry Off from the Training session was also discussed.

for 14/12/2019  
Regards

Prof Nancy Johnson

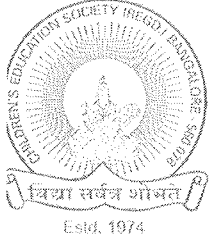
Head - The Corporate Relations || Learning and Development

The Oxford College of Engineering

Bangalore

  
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Administrative Office:

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☎: 080-61754501 – 502 Fax: 080-2654 8658

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**Ref. No. TOCE/APPT/912/2020-21**

**Date: 09.06.2020**

### **APPOINTMENT ORDER**

Ms. Nancy Johnson, a candidate selected to the post of Manager (Placement) is appointed as Manager (Placement) in The Oxford College of Engineering, Bengaluru with immediate effect on a consolidated gross salary of 50,000/- (Rupees Fifty Thousand only) per month against the existing vacancy until further orders.

She is required to join the above post immediately and produce all the original academic testimonials and experience certificates etc.

She shall execute an Undertaking and Agreement to abide by the terms and conditions of service immediately.

To,

1) The Principal,

The Oxford College of Engineering,

(S. NARASARAJU)  
**CHAIRMAN**  
The Oxford Institutions  
1 Phase, J.P. Nagar  
BANGALORE - 560 078

2) Ms. Nancy Johnson,  
# 49, 1<sup>st</sup> Floor, 4<sup>th</sup> Main Road,  
J P Nagar 6<sup>th</sup> Phase,  
Bangalore – 560 078.





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DATE: 31/08/2020

PLACE: Bangalore

From,

Committee Chairperson

The Oxford College of Engineering

Bangalore - 560078

Through IQAC

To,

The Chairman

The Oxford Educational Institutions

Bangalore - 560078

Respected Sir,

Subject: Requisition letter to accord permission to conduct training programs and budget requirement for 2020 graduating students

With reference to the above subject and in continuation to our discussion with committee members, I request you to accord permission to conduct training programs for the students of 2020 graduating batch.

Thanking you

Best Regards

(Committee Chairperson)

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The Oxford College of Engineering,  
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DATE: 8<sup>TH</sup> SEP 2020

PLACE: Bangalore

From

Prof. Nancy Johnson

The Department of Corporate Relations

The Oxford Educational Institutions

Bangalore

To

FACE.

No. 12, Lakshmi nagar, Thottipalayam Piruvu

Coimbatore, Tamilnadu 641014

SUB : Invitation to conduct Training for 2020 graduating students


With reference to the subject and in continuation to our discussion, I feel glad in inviting you and your team to our campus to conduct Placement Training for the students of 2020 graduating batch of The Oxford College of Engineering.

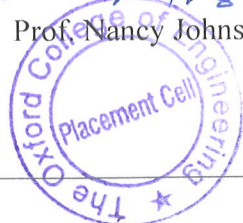
I request you to kindly share the complete Timeline for the Program for the execution of the plan.

Looking forward to hearing from you.

Thanking you

Best Regards

  
Prof. Nancy Johnson





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DATE: 24<sup>TH</sup> NOV 2020

PLACE: Bangalore

From,

Prof. Nancy Johnson

The Department of Corporate Relations

The Oxford Educational Institutions

Bangalore

To,

FACE.

No. 12, Lakshmi nagar, Thottipalayam Piruvu

Coimbatore, Tamilnadu 641014

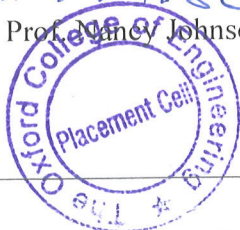
SUB: Gratitude of Thanks for the wonderful Training Program Conducted

We from The Oxford College of Engineering share our immense gratitude to you and your team for rendering Placement Training for our 2020 graduating students. Looking forward to a long-term association with you.

Thanking you

Best Regards

for   
Prof. Nancy Johnson





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Date: 17/10/2020

**NOTICE**

It is hereby informed to all the students to attend a **placement training program/ competitive exam/opting higher education** conducted by **FACE** in **new building 6<sup>th</sup> floor seminar hall** on **20<sup>th</sup> October 2020 to 23<sup>rd</sup> November 2020.**

The time table will be displayed on the respective department notice boards.

  
Principal

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Date: 17/10/2020

**NOTICE**

It is hereby informed to all the students to follow the time table for skill enhancement training/competitive exam/opting higher education is displayed on the respective department notice boards.

Principal

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Date: 23/11/2020

**NOTICE**

It is hereby informed to all the students to attend a test on **training program/ competitive exam/opting higher education** conducted by **FACE** in **new building 6<sup>th</sup> floor seminar hall** on **25<sup>th</sup> November 2020 at 2.00 PM to 3.00 PM.**

  
**Principal**

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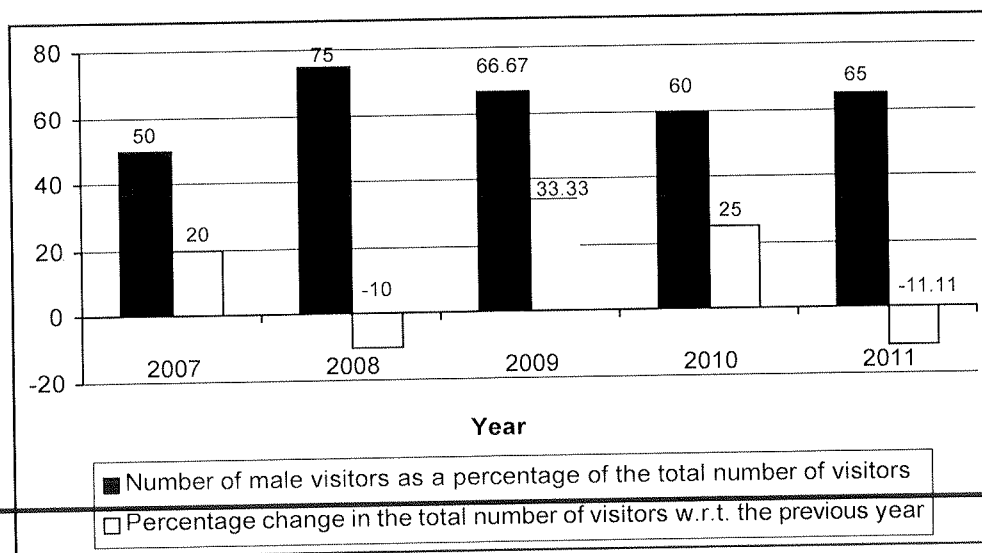
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5. If 'a' and 'b' are the roots of the equation  $x^2 + 7x + 4 = 0$ , where  $a > b$ , then find the value of  $\sqrt{\left(\frac{3}{2a+7}\right)^2 + \left(\frac{4}{2b+7}\right)^2}$ .
- (a)  $\frac{25}{33}$  (b)  $\frac{25}{49}$  (c)  $\frac{49}{25}$  (d)  $\frac{169}{225}$
6. A contractor agreed to finish a piece of work in 150 days. He employed 75 men and made them work for 8 hours per day. However, after 90 days, he realized that only  $\frac{2}{7}$ th of the work was completed. How many more men would he need to employ to complete the work on time if he intended to make everybody work for 10 hours per day henceforth?
- (a) 75 (b) 100 (c) 150 (d) 225
7. A cube is painted with red colour and then cut into 64 small identical cubes. If two cubes are picked randomly from the heap of 64 cubes, what is the probability that both of them have exactly two faces painted red?
- (a)  $\frac{23}{168}$  (b)  $\frac{47}{84}$  (c)  $\frac{1}{4}$  (d)  $\frac{31}{63}$

**Directions for questions 8 to 10:** Answer the questions on the basis of the information given below.

The bar graph given below shows the data related to the number of people visiting the famous 'Ancient Wax Museum' in Putlabad from the year 2007 to the year 2011.





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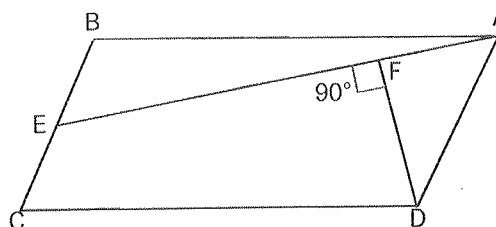
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8. If the total number of visitors in the year 2006 was 46850, what was the number of female visitors in the year 2011?  
(a) 28110 (b) 26236 (c) 37480 (d) None of these
9. Which of the following statements is true?  
(a) The only year in the given period when the number of female visitors decreased as compared to the previous year was 2008.  
(b) There was a growth of 40% in the number of male visitors from 2008 to 2009.  
(c) There was a growth of 50% in the number of female visitors from 2009 to 2010.  
(d) The year 2008 onwards, there was an increase each year in the number of male visitors as compared to the previous year.
10. The difference between the number of male visitors and the number of female visitors in a year is called "Gender Gap". For which of the following pairs of years is Gender Gap equal?  
(a) 2008 and 2011 (b) 2009 and 2010 (c) 2008 and 2010 (d) 2009 and 2011
11. What is the highest possible value of 'n' for which  $3^{1024} - 1$  is divisible by  $2^n$ ?  
(a) 13 (b) 10 (c) 11 (d) 12
12. Two friends – Prakash and Arpit – started running simultaneously from a point P in the same direction along a straight running track. The ratio of the speeds of Prakash and Arpit was 2 : 5 respectively. Two hours later, Arpit turned back and started running backwards at one-fifth of his original speed. He met Prakash at a distance of 10 km from the point P. What was Prakash's running speed?  
(a) 1.25 km/hr (b) 2.5 km/hr (c) 3.75 km/hr (d) 6.25 km/hr
13. A quadrilateral is formed by the lines  $x = 0$ ,  $y = 0$ ,  $x + y = 1$  and  $6x + y = 3$ . What is the equation of the diagonal of the quadrilateral that passes through the origin?  
(a)  $3x + 2y = 0$  (b)  $2x - 3y = 0$  (c)  $3x - 2y = 0$  (d)  $2x + 3y = 0$
14. In the figure given below, ABCD is a parallelogram. E is the midpoint of the side BC. DF is drawn perpendicular to AE. If AB = 5.6 cm and BC = 2.8 cm, find the length of CF.



- (a) 4.2 cm (b) 5.6 cm (c) 4.8 cm (d) 5.4 cm



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15. A function  $f(x)$  is defined as  $(x + 1) \times f(x + 1) + x \times f(x) + (x - 1) \times f(x - 1) = 0$  for  $x \geq 2$ . If  $f(1) = 40$  and  $f(6) = 180$ , find the value of  $f(14)$ .  
 (a) -80 (b) -160 (c) -1120 (d) Cannot be determined
16. A 100 ml flask contains 30% acid solution. What quantity of the solution should be replaced with 12% acid solution so that the resultant solution contains 21% acid?  
 (a) 50 ml (b) 44.44 ml (c) 33.33 ml (d) 64 ml
17. A school having 270 students provides facilities for playing four games – Cricket, Football, Tennis and Badminton. There are a few students in the school who do not play any of the four games. It is known that for every student in the school who plays at least  $N$  games, there are two students who play at least  $(N - 1)$  games, for  $N = 2, 3$  and 4. If the number of students who play all the four games is equal to the number of students who play none, then how many students in the school play exactly two of the four games?  
 (a) 30 (b) 60 (c) 90 (d) 120

**Directions for questions 18 to 20:** Answer the questions on the basis of the information given below.

The table given below shows the values (in lakh units) of Production, Exports, Total Sales and Inventory, and the Average Selling Price in domestic market of different products manufactured by ABC Tech. Pvt. Ltd. in the year 2010.

Product	Production	Exports	Total Sales	Inventory (at the beginning of 2010)	Average Selling Price (in ₹/unit)
LCD	16232	1340	7650	2296	19,500
Desktop	12556	4282	11922	5484	16,400
Laptop	21004	3998	9798	4212	21,300
Tablet	10536	5001	8833	3668	23,500
Netbook	11472	3126	7356	6620	18,750
Smartphone	12488	2420	10540	6846	15,000
Digital Diary	19996	4953	9960	3244	16,500
MP3 Player	18564	10345	14245	2342	12,200

- Note:** (i) Inventory (at the end of a year) = Inventory (at the beginning of the year) + Production during the year – Total Sales during the year  
 (ii) Total Sales = Exports + Domestic Sales

18. For how many of the given products is the Inventory at the end of the year 2010 less than half the Production in the year 2010?  
 (a) 4 (b) 5 (c) 2 (d) 3



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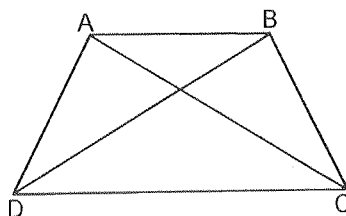
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19. For which of the following products is the Revenue generated by Domestic Sales in the year 2010 the highest?  
 (a) Laptop (b) LCD (c) Smartphone (d) Desktop
20. ABC Tech. Pvt. Ltd. reduces the Production by 75% for each of the given products in the year 2011 as compared to the year 2010. The Total Sales for which of the following products in the year 2011 can register a growth of more than 100% over the year 2010?  
 (a) Netbook (b) Laptop (c) Digital Diary (d) None of these
21. Some numbers can be expressed as the sum of three of their factors. E.g. 12 can be expressed as the sum of 2, 4 and 6. How many other such numbers are there which are less than 100?  
 (a) 16 (b) 15 (c) 7 (d) 2
22. There are three watches – W1, W2 and W3. Once an alarm goes off in W1, it rings continuously for 20 seconds, then pauses, then starts ringing again after 2 minutes, and so on. The respective values for W2 are 50 seconds and 5 minutes, and for W3 are 1 minute and 6 minutes. An alarm is set in each of the three watches for 06:00 am. At what time after 06:00 am will the three alarms go off simultaneously for the first time?  
 (a) 06:35 am (b) 06:42 am (c) 06:30 am (d) None of these
23. If  $\log_c a = \frac{1}{2}$ ,  $\log_d b = \frac{1}{3}$ , where a, b, c and d are distinct natural numbers and  $a < b < c < d$ , what is the minimum possible value of  $a + b + c + d$ ?  
 (a) 10 (b) 22 (c) 34 (d) 36
24. In the figure given below, AD = BC and BD = AC. Which of the following is not true?



- (a)  $\angle ADB = \angle ACB$  (b)  $\angle ABD = \angle ACD$  (c)  $\angle ACD = \angle BAC$  (d)  $\angle ADB = \angle CAD$
25. Anu and Prem started running simultaneously from diametrically opposite points on a circular track. They ran in opposite directions and met after 12 minutes for the first time. If the distance between them exactly 't' minutes after they start is equal to a quarter of the length of the track, which of the following is not a possible value of 't'?  
 (a) 42 (b) 78 (c) 90 (d) 144



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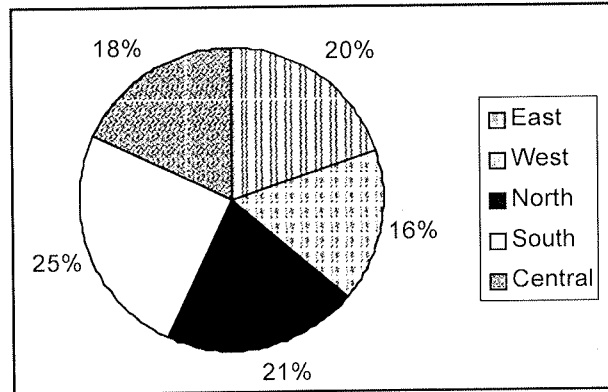
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**Directions for questions 26 and 27:** Answer the questions on the basis of the information given below.

The pie chart given below shows the percentage break-up of students who participated from five different regions in the Sports Week organized by Dharma Public Association in the year 2011.



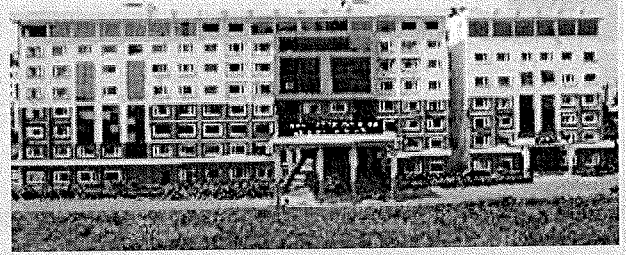
The partially filled-in table given below shows the number of students who participated from the five regions in the six events conducted during the Sports Week.

Activity	East	West	North	South	Central
Swimming	23		42	64	19
Lawn Tennis	45	27		46	31
Cycling	39		41	18	45
Badminton	52	49	23	38	
Hockey	21	24	37		25
Football		16	32	34	30

**Note:**

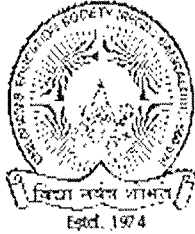
- Each student who came to the Sports Week participated in exactly one of the six events.
- At least one student from each region participated in each of the six events.
- Six cells in the table are left blank. The sum of the six missing values is 279.





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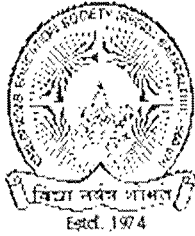
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**GATE**  
**GRADUATE APTITUDE TEST IN**  
**ENGINEERING**

**Information Brochure**





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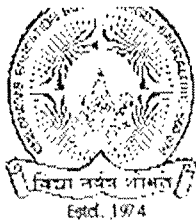
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### 1. Introduction

Graduate Aptitude Test in Engineering (GATE) is an examination conducted jointly by the Indian Institute of Science (IISc), Bangalore and the seven Indian Institutes of Technology (at Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) on behalf of the National Coordination Board (NCB) GATE, Department of Higher Education, Ministry of Human Resource Development (MHRD), Government of India.

Qualifying in GATE is a mandatory requirement for seeking admission and/or financial assistance to: (i) Master's programs and direct Doctoral programs in Engineering/Technology/Architecture and (ii) Doctoral programs in relevant branches of Science, in the institutions supported by the MHRD and other Government agencies. Even in some colleges and institutions, which admit students without MHRD scholarship/assistantship, the GATE qualification is mandatory. Further, many Public Sector Undertakings (PSUs) have been using the GATE score in their recruitment process.

The information in this brochure is mainly categorized into **Pre-Examination** (Eligibility, Application Submission, Examination Centres, etc.), **Examination** (Pattern, Marks/Score, etc.) and **Post-Examination** (Answers, Contests, Results, Scorecard etc.) sections.

### 2. About GATE

Graduate Aptitude Test in Engineering (GATE) is basically an examination on the comprehensive understanding of the candidates in various undergraduate subjects in Engineering/Technology/Architecture and post-graduate level subjects in Science. The GATE examination centres are spread in different cities across India, as well as, in six cities outside India. The examination would be purely a Computer Based Test (CBT).

The GATE score would reflect the relative performance level of the candidate in a particular subject, which is quantified based on the several years of examination data. Note that the GATE score is valid for **THREE YEARS** from the date of announcement of the results.

#### Administration

GATE is administered jointly by the Indian Institute of Science (IISc), Bangalore and seven Indian Institutes of Technology (namely, IITs at Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee). The GATE Committee, which comprises representatives from the administering institutes, is the sole authority for regulating the examination and for declaring the results. For administrative purposes, the examination cities in India are segregated into eight zones. The operations related to GATE, in each of the eight zones, are managed by a Zonal GATE Office at the administering institute (**IIT or IISc**).

Table 2.1 gives details of the zones and the corresponding administering institutes.

One of the administering institutes is designated as the **Organizing Institute (OI)**, and it would be responsible for the end-to-end process, as well as, the overall coordination among the administering institutes for conducting the **GATE Examination**.



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**Table 2.1 Zones and the corresponding administrative institutes for GATE**

Zone	Administering Institute	Zonal Websites
Zone-1	Indian Institute of Science Bangalore	<a href="http://gate.iisc.ac.in">http://gate.iisc.ac.in</a>
Zone-2	Indian Institute of Technology Bombay	<a href="http://gate.iitb.ac.in">http://gate.iitb.ac.in</a>
Zone-3	Indian Institute of Technology Delhi	<a href="http://gate.iitd.ac.in">http://gate.iitd.ac.in</a>
Zone-4	Indian Institute of Technology Guwahati	<a href="http://iitg.ac.in/gate-jam">http://iitg.ac.in/gate-jam</a>
Zone-5	Indian Institute of Technology Kanpur	<a href="http://gate.iitk.ac.in">http://gate.iitk.ac.in</a>
Zone-6	Indian Institute of Technology Kharagpur	<a href="http://gate.iitkgp.ac.in">http://gate.iitkgp.ac.in</a>
Zone-7	Indian Institute of Technology Madras	<a href="http://gate.iitm.ac.in">http://gate.iitm.ac.in</a>
Zone-8	Indian Institute of Technology Roorkee	<a href="http://gate.iitr.ac.in">http://gate.iitr.ac.in</a>

### Scholarship/Assistantship for Postgraduate Programs

To avail the financial assistance (scholarship/assistantship), the candidate must first secure the admission to a program in one of the central government supported institutes, by a procedure that could vary from institute to institute. Depending upon the norms adopted by a specific institute or department of the institute, a candidate may be admitted directly into a course based on: his/her performance in GATE only; **or** based on his/her performance in GATE **and** an admission test/interview conducted by the department to which he/she has applied **and/or** the candidate's academic record. In the test/interview based selection procedure, as per the MHRD guidelines, a minimum of 70% weightage will be given to the performance in GATE and the remaining will be given to the candidate's performance in test/interview and/or academic record. However, the admitting institutes could prescribe a minimum passing marks in the test/interview.

Candidates are advised to seek the complete details of the admission procedures and the availability of MHRD scholarship/assistantship from the corresponding admitting institutions. The criteria for postgraduate admission with scholarship/assistantship could be different for different institutions. The management of the post-graduate scholarship/assistantship is also the responsibility of the admitting institution. Similarly, reservation of the seats for different categories will be as per the policies and norms of the admitting institution and the Government of India rules.

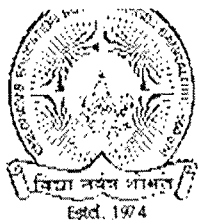
The admitting institution may also specify the number of candidates who will be provided financial assistance (scholarship), if admission is secured. Qualification in GATE is also a minimum requirement to apply for various fellowships awarded by many Government organizations.

**Note: 1. Call for admission to M.Tech./Ph.D. will be advertised separately by the respective institutions and GATE committee is not responsible for the admission process.**

**2.**

**GATE zonal offices will not entertain any enquiry about admission, reservation of seats and/or award of scholarship/assistantship.**

### Use of GATE score for Employment



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In the past, several Public Sector Undertakings (PSUs) have used GATE scores to shortlist the candidates for employment. A few such organizations are: Bharat Heavy Electricals Limited (BHEL), Gas Authority of India Limited (GAIL), Hindustan Aeronautics Limited (HAL), Indian Oil Corporation Limited (IOCL), National Thermal Power Corporation (NTPC), Nuclear Power Corporation of India Limited (NPCIL), Oil and Natural Gas Corporation (ONGC) and Power Grid Corporation of India (PGCI).

Direct recruitment to Group A level posts in Central government, i.e., Senior Field Officer (Tele), Senior Research Officer (Crypto) and Senior Research Officer (S&T) in Cabinet Secretariat, Government of India, is now being carried out on the basis of GATE score. The details of the scheme of recruitment are normally published in National Newspapers/Employment News/Rozgar Samachar by the concerned authority.

Some other Government of India Organizations have also expressed their interest to utilize GATE score for their recruitment purpose.

**Note: GATE administration is not responsible for employment opportunities. The qualified candidates must check newspapers and other reliable sources for any such information.**

## 2. About GATE

- Information website for GATE is <http://gate.iitm.ac.in>
- GATE will be conducted on 24 subjects (also referred to as "papers").
- Examination for all the **24 subjects** (papers) will be conducted as ONLINE Computer Based Test (CBT).
  - The online examination paper will contain some questions for which numerical answers must be keyed in by the candidate using a virtual keypad. Rest of the questions will be of Multiple Choice Question (MCQ) type. The Candidates will use ONLY an on-screen virtual calculator provided for the examination.
- A candidate can appear **only** in **ANYONE** paper of the GATE examination.
- GATE examinations will be held during the forenoon and afternoon sessions.
  - Examination for some of the papers in GATE may be held in multiple sessions. However, a candidate can appear for the examination in **one session ONLY**.
  - Exact details of the complete examination schedule will be notified later on the GATE 2019 website.
- Candidates have to register and fill the application via **ONLINE mode ONLY** at GATE Online Application Processing System (GOAPS). The link will be made available on GATE website <http://gate.iitm.ac.in>.



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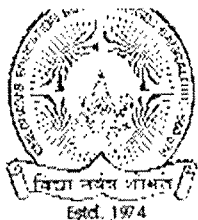
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- The entire process of filling up of the application form and uploading of certificates/documents, etc. is in online mode only. The candidates should not send any hard copy of his/her application form/documents etc. to IIT Madras or any of the zonal GATE offices.



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- The payment of application fees is through electronic mode.
- The Admit Cards for GATE would be available only on GOAPS website. Candidates can download their Admit Card from GOAPS website. No printed copy of the Admit Cards will be posted to the candidates.
- The candidate has to appear at the GATE Examination Centre on the date and time specified in the Admit Card.
  - No request for any changes in the Centre or Date/Times specified in the Admit Card will be entertained. Similarly, this being an examination body with certain constraints, candidates needing very special or specific facility for the examination may not be entertained. Hence, candidates are requested to adhere to the facilities that are possible within the ambit and resources of GATE Examination Body.
- Physical calculators, mobile phones and wrist watches are strictly prohibited and candidates possessing these in the examination hall (even if not using) will be disqualified.
- Biometric information (Photograph and Fingerprints) for randomly selected candidates may be captured before the start of the examination.
- In all matters concerning GATE, the decision of the **GATE Committee** will be final and binding on all the applicants.
- Although GATE will be held at different test centres across the country, the Indian Institute of Technology Madras, being the Organizing Institute, bears the overall responsibility of conducting GATE. In case of any claims or disputes arising with respect to GATE, it is hereby made absolutely clear that the Madras High Court in Chennai alone will have the exclusive jurisdiction to entertain and settle them.

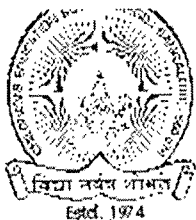
### 3. Pre-Examination Related Information

#### Eligibility for GATE

Before starting the application process, the candidate must ensure that he/she meets the educational eligibility criteria of GATE, which are enumerated in Table 4.1.

**Table 4.1 Eligibility Criteria for GATE**

Qualifying Degree	Qualifying Degree/Examination	Description of Eligible Candidates
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<b>B.E./ B.Tech./ B.Pharm.</b>	<b>Bachelor's degree holders in Engineering/Technology (4 years after 10+2 or 3 years after B.Sc./Diploma in Engineering/Technology)</b>	<b>Currently in the final year or already completed</b>
<b>B.Arch.</b>	<b>Bachelor's degree holders of Architecture (5 years course)</b>	<b>Currently in the final year or already completed</b>
<b>B.Sc. (Research)/B.S.</b>	<b>Bachelor's degree in Science (Post-Diploma/4 years after 10+2)</b>	<b>Currently in the 4<sup>th</sup> year or already completed</b>
<b>M. Sc./M.A./MC A or equivalent</b>	<b>Master's degree in any branch of Science/Mathematics/Statistics/ Computer Applications or equivalent</b>	<b>Currently in the final year or already completed</b>
<b>Int. M.E./M.Tech. (Post-B.Sc.)</b>	<b>Post-BSc Integrated Master's degree programs in Engineering/Technology (4 years program)</b>	<b>Currently in the 2<sup>nd</sup>/ 3<sup>rd</sup>/4<sup>th</sup> year or already completed</b>
<b>Int. M.E./ M.Tech or Dual Degree (after Diploma or 10+2)</b>	<b>Integrated Master's degree program or Dual Degree program in Engineering/Technology (5 years program)</b>	<b>Currently in the 4<sup>th</sup>/5<sup>th</sup> year or already completed</b>
<b>Int. M.Sc./ Int. B.S.-M.S.</b>	<b>Integrated M.Sc. or 5 years integrated B.S.- M.S. program</b>	<b>Currently in the Final year or already completed</b>
<b>Professional Society Examinations *(equivalent to B.E./B.Tech./B. .Arch.)</b>	<b>B.E./B.Tech./B.Arch. equivalent examinations of Professional Societies, recognized by MHRD/UPSC/AICTE (e.g., AMIE by Institution of Engineers- India, AMICE by the Institute of Civil Engineers-India and soon)</b>	<b>Completed Section A or equivalent of such professional courses</b>

\* Some of these Professional Societies/Institutions, which conduct examination in various fields of engineering, are as follows:

- The Institution of Engineers (India) (IE)
- The Institution of Civil Engineers (ICE)
- The Institution of Electronics and Telecommunication Engineers (IETE)
- The Aeronautical Society of India (AeSI)
- The Indian Institute of Chemical Engineers, including Polymer and Environmental Group (IICHEmE)





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- The Indian Institute of Metals (IIM)
- The Indian Institute of Industrial Engineers (IIE)

However, the candidates who possess certification from any of the professional societies must ensure that those examinations conducted by the societies are approved by MHRD/AICTE as equivalent to B.E./B.Tech./B.Arch.

### Candidates who have obtained/are pursuing their qualifying degree from countries other than India:

- i) Must have completed or are in the final year of their Bachelor's degree (duration: at least 4 years) in Engineering/Technology or;
- ii) Must have completed or are in the final year of their Post Graduate (Master's) degree (duration: at least 2 years) in any relevant subjects in science.

**Note:** If a candidate is pursuing any higher degree or has already obtained a degree higher than that mentioned in the Table 4.1, the candidate should select the minimum required qualifying degree while filling the application form.

### Documents Required in Support of Eligibility (Eligibility Documents)

- In case, the candidate has already passed (earlier) one of the qualifying examinations listed in Table 4.1, he/she has to submit (i.e. upload) the **degree certificate/provisional certificate/course completion certificate/professional certificate/membership certificate** issued by the institute or society.
- In case, the candidate is expected to complete one of the qualifying criteria specified in Table 4.1, he/she has to upload a **Certificate from the Head of the Department/Institute** (in the format given in Appendix A) or a copy of marksheet for Section A of AMIE. This certificate must mandatorily have the signature and seal of the Head of Institute/Department with current date.

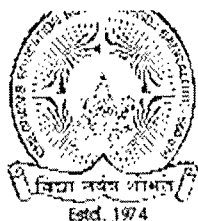
**Note:** Eligibility Document, as applicable, has to be uploaded only while filling the online application and **NOT** to be sent by post.

### Qualifying Disciplines

Appendix B gives a list of the qualifying disciplines. This list is only indicative and it is not necessary that the name of the candidate's degree has to be as per the table.

### GATE Papers

**GATE will be conducted on 24 subjects (papers).** Table 4.2 shows the list of papers and paper codes for GATE 2019. A candidate is allowed to appear in **ONLY ONE** paper in **any ONE SESSION**.



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**Table 4.2 List of GATE Papers and Corresponding Codes**

GATE Paper	Code	GATE Paper	Code
Aerospace Engineering	AE	Instrumentation Engineering	IN
Agricultural Engineering	AG	Mathematics	MA
Architecture and Planning	AR	Mechanical Engineering	ME
Biotechnology	BT	Mining Engineering	MN
Civil Engineering	CE	Metallurgical Engineering	MT
Chemical Engineering	CH	Petroleum Engineering	PE
Computer Science and Information Technology	CS	Physics	PH
Chemistry	CY	Production and Industrial Engineering	PI
Electronics and Communication Engineering	EC	Statistics	ST
Electrical Engineering	EE	Textile Engineering and Fibre Science	TF
Ecology and Evolution	EY	Engineering Sciences	XE*
Geology and Geophysics	GG	Life Sciences	XL**

*XE Paper Sections	Code	**XL Paper Sections	Code
Engineering	A	Chemistry (Compulsory)	P
Mathematics (Compulsory)		Any two optional sections	
Any two optional sections		Biochemistry	Q
Fluid Mechanics	B	Botany	R
Materials Science	C	Microbiology	S
Solid Mechanics	D	Zoology	T
Thermodynamics	E	Food Technology	U
Polymer Science and Engineering	F		
Food Technology	G		
Atmospheric and Oceanic Sciences	H		

\*XE (Engineering Sciences) and \*\*XL (Life Sciences) papers are of general nature and will be comprised of sections listed in the above table.

**Note:** CE, CS, EC, EE and ME papers: Examination may be conducted in multiple sessions. However, a candidate is allowed to appear in only **ONE** specified session.



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The syllabus for each of the papers is given on GATE website <http://gate.iitm.ac.in>. Making a choice of the appropriate paper in the GATE application is the responsibility of the candidate. Some guidelines in this respect are suggested below.

Candidates are expected to appear in a paper appropriate to the discipline of their qualifying degree. However, candidates are free to choose any one of the GATE papers as per their admission or employment plan, while keeping in mind the eligibility criteria for the institutions in which they wish to seek admission/employment. For more details regarding the admission criteria in any particular institute, the candidate is advised to refer to the website of that institute.

Candidates must learn about the paper code of their choice, as this information is essential during making the application, as well as, during the examination. As the candidates are permitted to appear in **ONLY ONE** of the 24 papers of the GATE, they should make their choice of the paper, with due care.

**After submission of application, any change of paper is NOT permitted.**

**If a candidate makes more than one application for the same paper, he/she will be allowed to appear in any one session ONLY. One of the duplicate/triplicate applications will be considered and the remaining applications will be rejected without any refund of application fee.**

### 4. GATE Examination Related Information

GATE 2019 examination will be conducted for 24 papers (subjects) as listed in Table 4.2. A candidate can appear for only one of the 24 GATE papers. The examination for all the papers will be conducted in an **ONLINE** Computer Based Test (CBT) mode where the candidates will be shown the questions on a computer screen.

A Virtual Scientific Calculator will be available on the computer screen during the examination. Candidates have to use the same during the examination. Personal calculators, wristwatches, mobile phones or any other electronic devices are **NOT** allowed inside the examination hall. Candidates should not bring any charts/tables/papers into the examination hall. GATE officials will not be responsible for the safe-keep of the candidates' personal belongings.

Scribble pads will be provided to the candidates for any rough work. The candidate has to write his/her name and registration number on the scribble pad before he/she starts using it. The scribble pad must be returned to the invigilator at the end of the examination.

***Syllabus for each of the papers, previous years GATE (model) question papers, and mock examination links along with virtual scientific calculator will be available on GATE website: <http://gate.iitm.ac.in>***

### Examination Duration



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All the papers of the GATE examination will be for **3 hours** duration and they consist of **65** questions for a total of **100 marks**. Since the examination is an ONLINE computer based test, at the end of the stipulated time (3-hours), computer will automatically close the screen inhibiting any further action.

Candidates will be permitted to occupy their allotted seats **40 minutes** before the scheduled start of the examination. Candidates can login and start reading the instructions 20 minutes before the start of examination. **Candidates will NOT be permitted to enter the examination hall after 09:30 hours in the forenoon session and after 14:30 hours in the afternoon session. Candidates will NOT be permitted to leave the examination hall before the end of the examination.**

### GATE Question Papers

#### Pattern of Questions

GATE would contain questions of two different types in all the papers:

(i) **Multiple Choice Questions (MCQ)** carrying 1 or 2 marks each in all the papers and sections. These questions are objective in nature, and each will have a choice of four answers, out of which the candidate has to select (mark) the correct answer.

**Negative Marking for Wrong Answers:** For a wrong answer chosen in a MCQ, there will be negative marking. For **1-mark MCQ**, **1/3 mark** will be deducted for a wrong answer. Likewise, for **2-mark MCQ**, **2/3 mark** will be deducted for a wrong answer.

(ii) **Numerical Answer Type (NAT)** Questions carrying 1 or 2 marks each in all the papers and sections. For these questions, the answer is a signed real number, which needs to be entered by the candidate using the virtual numeric keypad on the monitor (keyboard of the computer will be disabled). No choices will be shown for these type of questions. The answer can be numbers such as **10** or **-10** (an integer only). The answer may be in decimals as well, for example, **10.1** (one decimal) or **10.01** (two decimals) or **-10.001** (three decimals). These questions will be mentioned with, up to which decimal places, the candidates need to present the answer. Also, for some NAT type problems an appropriate range will be considered while evaluating the numerical answer type questions so that the candidate is not unduly penalized due to the usual round-off errors. Wherever required and possible, it is better to give NAT answer up to a maximum of three decimal places.

***There is NO negative marking for a wrong answer in NAT questions.***

#### Marks

In all the papers, there will be a total of **65** questions carrying **100 marks**, out of which **10** questions carrying a total of **15 marks** will be on General Aptitude (GA), which is intended to test the Language and Analytical Skills.

In the papers bearing the codes AE, AG, BT, CE, CH, CS, EC, EE, IN, ME, MN, MT, PE, PI, TF and XE, the Engineering Mathematics will carry around **15%** of the total marks, the General Aptitude section will carry **15%** of the total marks and the remaining **70%** of the total marks is devoted to the subject of the paper.



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In the papers bearing the codes AR, CY, EY, GG, MA, PH, ST and XL, the General Aptitude section will carry **15%** of the total marks and the remaining **85%** of the total marks is devoted to the subject of the paper.

### Design of Questions

The questions in a paper may be designed to test the following abilities:

(i) **Recall:** These are based on facts, principles, formulae or laws in the discipline of the paper. The candidate is expected to be able to obtain the answers either from his/her memory of the subject or at most from a one-line computation.

Example:

Q. During machining, maximum heat is produced

- |                   |   |
|-------------------|---|
| (A) in flank face | (B) in rake face                          |
| (C) in shear zone | (D) due to friction between chip and tool |

(ii) **Comprehension:** These questions will test the candidate's understanding of the basics of his/her field, by requiring him/her to draw simple conclusions from fundamental ideas.

Example

Q. A DC motor requires a starter in order to

- |  |   |
|--|---|
| (A) develop starting torque            | (B) compensate for auxiliary field damper returns |
| (C) limit armature current at starting | (D) provide regenerative braking                  |

(iii) **Application:** In these questions, the candidate is expected to apply his/her knowledge either through computation or by logical reasoning.

Example

Q. The sequent depth ratio of a hydraulic jump in a rectangular channel is 16.48. The Froude number at the beginning of the jump is:

- |         |         |          |          |
|---------|---------|----------|----------|
| (A) 5.0 | (B) 8.0 | (C) 10.0 | (D) 12.0 |
|---------|---------|----------|----------|

The questions based on the above logics may be a mix of single stand-alone statement/phrase/data type questions, combination of option code type questions or match item type questions.

(iv) **Analysis and Synthesis:** In these questions, the candidate is presented with data, diagrams, images, etc. that require analysis before a question can be answered. A Synthesis question

might require the candidate to compare two or more pieces of information. Questions in this category could, for example, involve candidates in recognizing unstated assumptions, or separating useful information from irrelevant information.

### Marking Scheme—Distribution of Marks and Questions

#### General Aptitude (GA) Questions

In all papers, GA questions carry a total of **15 marks**. The GA section includes **5 questions** carrying **1-mark** each (sub-total **15 marks**) and **5 questions** carrying **2-mark** each (sub-total **10 marks**).



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### Question Papers other than GG, XE and XL

These papers would contain **25** questions carrying **1-mark** each (sub-total **25 marks**) and **30** questions carrying **2-marks** each (sub-total **60 marks**) consisting of both the MCQ and NAT Questions.

### GG (Geology and Geophysics) Paper

Apart from the General Aptitude (GA) section, the GG question paper consists of two parts: **Part A** and **Part B**. **Part A** is compulsory for all the candidates. **Part B** contains two sections: Section 1 (Geology) and Section 2 (Geophysics). Candidates will have to attempt questions in **Part A** and questions in either Section 1 or Section 2 of **Part B**.

**Part A** consists of **25** questions carrying **1-mark** each (sub-total **25 marks** and some of these may be numerical answer type questions). Either section of **Part B** (Section 1 and Section 2) consists of **30** questions carrying **2-marks** each (sub-total **60 marks** and some of these may be numerical answer type questions).

### XE Paper (Engineering Sciences)

A candidate appearing in the XE paper has to answer the following:

- **GA – General Aptitude** carrying a total of **15 marks**.
- **Section A – Engineering Mathematics (Compulsory)**: This section contains **11** questions carrying a total of **15 marks**: **7** questions carrying **1-mark** each (sub-total **7 marks**), and **4** questions carrying **2-mark** each (sub-total **8 marks**). Some questions may be of numerical answer type.
- **Any two of XE Sections B to H**: The choice of two sections from B to H can be made during the examination after viewing the questions. Only **TWO** optional sections can be answered at a time. A candidate wishing to change midway of the examination to another optional section must first choose to deselect one of the previously chosen optional sections (B to H). Each of the optional sections of the XE paper (Sections B through H) contains **22** questions carrying a total of **35 marks**: **9** questions carrying **1-mark** each (sub-total **9 marks**) and **13** questions carrying **2-marks** each (sub-total **26 marks**). Some questions may be of numerical answer type.

### XL Paper (Life Sciences)

A candidate appearing in the XL paper has to answer the following:

- **GA – General Aptitude** carrying a total of **15 marks**.
- **Section P – Chemistry (Compulsory)**: This section contains **15** questions carrying a total of **25 marks**: **5** questions carrying **1-mark** each (sub-total **5 marks**) and **10** questions carrying **2-mark** each (sub-total **20 marks**). Some questions may be of numerical answer type.





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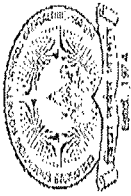
**Any two of XL Sections Q to U:** The choice of two sections from Q to U can be made during the examination after viewing the questions. Only TWO optional sections can be answered at a time. A candidate wishing to change midway of the examination to another optional section must first choose to deselect one of the previously chosen optional sections (Q to U). Each of the optional sections of the XL paper (Sections Q through U) contains 20 questions carrying a total of 30 marks: 10 questions carrying 1-mark each (sub-total 10 marks) and 10 questions carrying 2-marks each (sub-total 20 marks). Some questions may be of numerical answer type.



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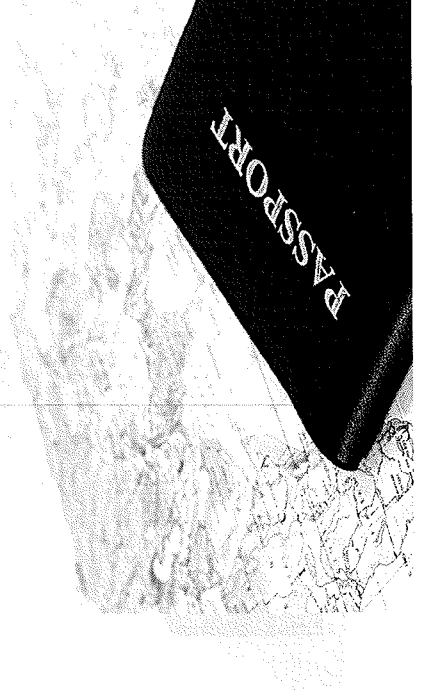
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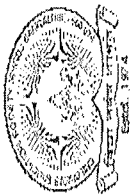
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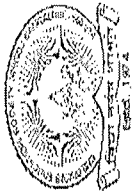
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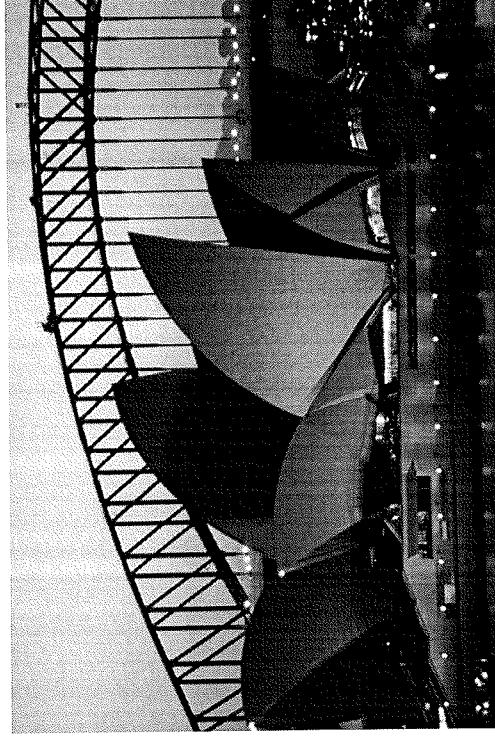
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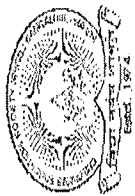
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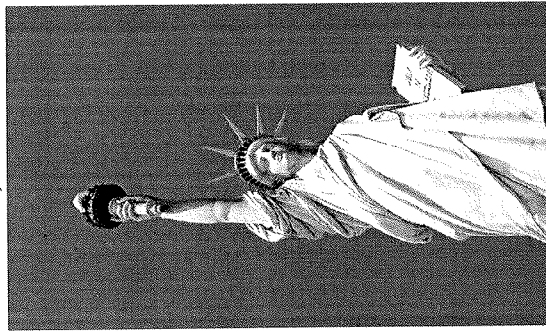


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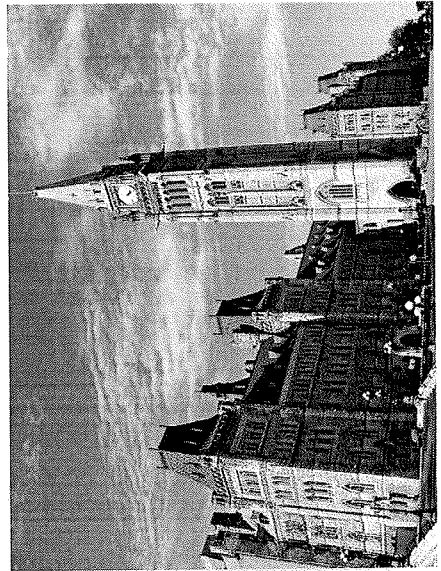
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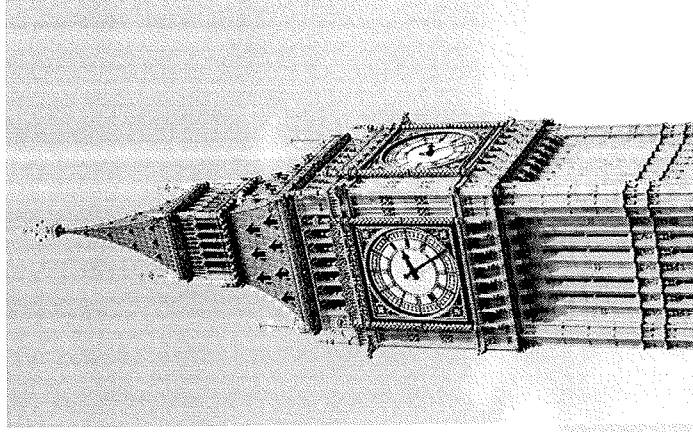


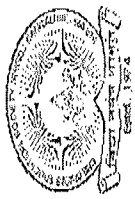
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

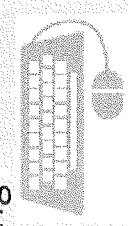
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 Break	-	10 min.	-
Speaking	2 tasks to express an opinion; 4 tasks to speak based on reading and listening passages	20 min.	0–30
 Writing	1 integrated task (write based on what is read and listened to); 1 independent task (support an opinion on a topic)	50 min.	0–30
Total	-	-	0–120

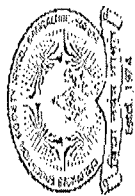


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E-mail: engprincipal@theoxford.edu Web: www.theoxfordengg.org

# TOEFL® Resources





**CHILDREN'S EDUCATION SOCIETY (Regd.)**  
**THE OXFORD COLLEGE OF ENGINEERING**

(Recognised by the Govt. of Karnataka, Affiliated to Visvesvaraya Technological University, Belagavi.

Approved by A.I.C.T.E. New Delhi.

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Ref. No: TOCE / Comp. Exam / 2020-21

Date: 18/10/2020

**REPORT:**

In order to make the academia interactions more effective and to provide quality training for engineering students, the following courses are being offered by Seventh Sense to enhance the employability of the students. With this skill set, the students can be more competitive in the corporate world.

The list of courses offered in TOCE campus as follows:

SNO	COURSE
1	CAT
2	IELTS
3	TOEFL
4	GRE
5	GATE/PGCET

The interested students can select any desired area of training.

Copy to,

All Departments

  
**Principal**  
**PRINCIPAL**  
The Oxford College of Engineering  
Bommanahalli, Hosur Road  
Bengaluru-560 068





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**TIME TABLE FOR THE ACADEMIC YEAR 2020-21 (ODD SEMESTER)**

**Course: Competitive Examination Training**

**Duration: 20 OCT -23 NOV 2020**

TIME DAY	16:30-17:30	VENUE
MON	CAT	601 OLD BUILDING
TUE	IELTS	N405 SEMINAR HALL
WED	TOEFL	N303 SEMINAR HALL
THU	GRE	N204 SEMINAR HALL
FRI	GATE/PGCET	Dept classroom
COURSE		COURSE INSTRUCTOR
CAT		Seventh Sense
IELTS		
TOEFL		
GRE		
GATE/PGCET		

**COMPETATIVE EXAMINATION CO-ORDINATOR**



*A.S. Anand*  
**PRINCIPAL**

The Oxford College of Engineering  
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Bengaluru-560 068



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**SUMMARY**

In the year 2020-21 various competitive examination courses has been organized in the college. The students have actively participated and benefitted from the courses. The number of students participated in the various competitive examination are listed below.

COURSE	NUMBER OF STUDENTS
CAT	0
IELTS	3
GATE	2
GRE	0
TOEFL	0
PGCET	3

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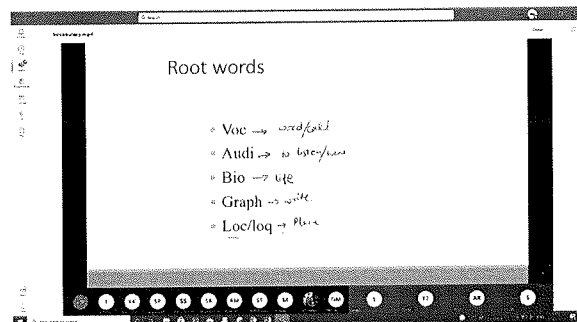
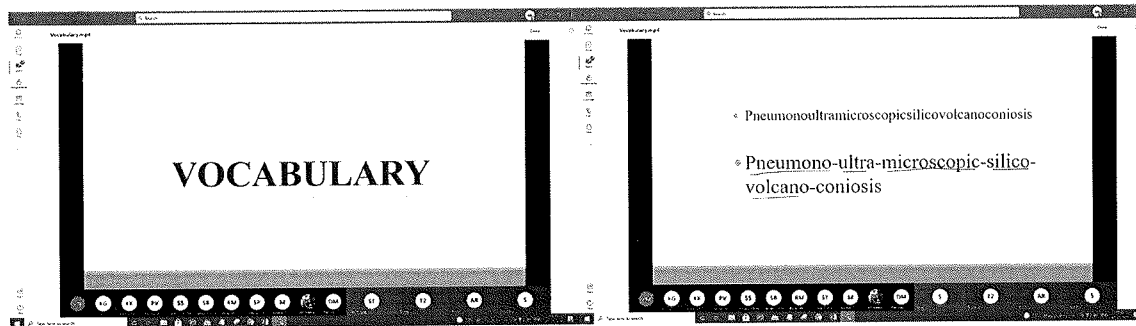
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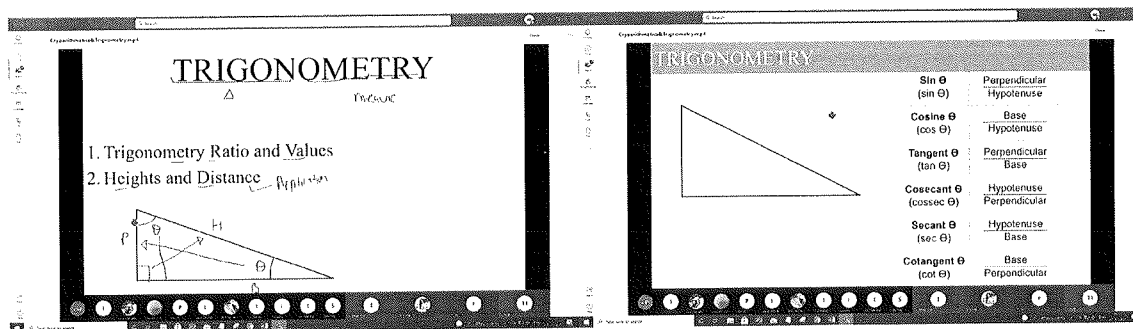
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# Attendance Report and Training Photo

## Vocabulary



## Cryptarithmic and Trigonometry





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**TRIGONOMETRY**

$\theta$	$0^\circ$	$30^\circ$	$45^\circ$	$60^\circ$	$90^\circ$
$\sin \theta$	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
$\cos \theta$	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
$\tan \theta$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	N.D.
$\csc \theta$	N.D.	2	$\sqrt{2}$	$\frac{2}{\sqrt{3}}$	1
$\sec \theta$	1	$\frac{2}{\sqrt{3}}$	$\sqrt{2}$	$\frac{2}{1}$	N.D.
$\cot \theta$	N.D.	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0

**Question**

The angle of elevation of the top of the light house from a boat moving away from the port is  $60^\circ$ . After travelling a distance of 60 m in the same direction, the angle of elevation is found to be  $45^\circ$ . What is the height of the light house?

A)  $30 + 30\sqrt{3}$  m  
 B)  $60 + 30\sqrt{3}$  m  
 C)  $90 + 30\sqrt{3}$  m  
 D) 120 m

---

Handwritten notes:

$H_1 + H_2$  (Sum)  
 $\frac{H_1}{3} \times \frac{H_2}{2} = 6 \text{ m}$  (Sum)  
 $H_1 + H_2 = 6 \text{ m}$  (Sum)

The angle of elevation of the top of the light house from a boat moving away from the port is  $60^\circ$ . After travelling a distance of 60 m in the same direction, the angle of elevation is found to be  $45^\circ$ . What is the height of the light house?

$\frac{h}{60 + n} = \tan 60^\circ$   
 $\frac{h}{60 + n} = \sqrt{3}$   
 $h = \sqrt{3}(60 + n)$

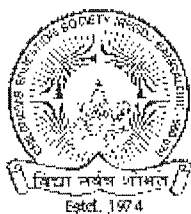
$\frac{h}{120 + n} = \tan 45^\circ$   
 $\frac{h}{120 + n} = 1$   
 $h = 120 + n$

Equating the two expressions for h:

$\sqrt{3}(60 + n) = 120 + n$   
 $60\sqrt{3} + \sqrt{3}n = 120 + n$   
 $n(\sqrt{3} - 1) = 120 - 60\sqrt{3}$   
 $n = \frac{120(1 - \sqrt{3})}{\sqrt{3} - 1}$   
 $n = 60(\sqrt{3} + 1)$

Substituting n back into the equation for h:

$h = 120 + 60(\sqrt{3} + 1)$   
 $h = 120 + 60\sqrt{3} + 60$   
 $h = 180 + 60\sqrt{3}$   
 $h = 60(3 + \sqrt{3})$



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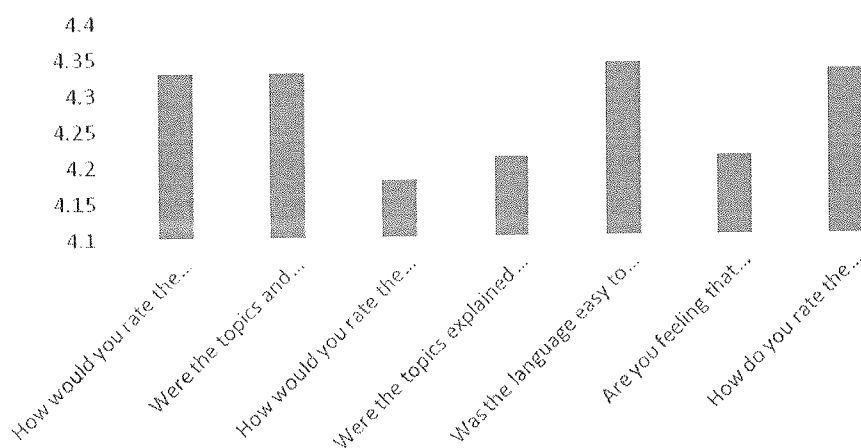
**Department of Corporate Relations**

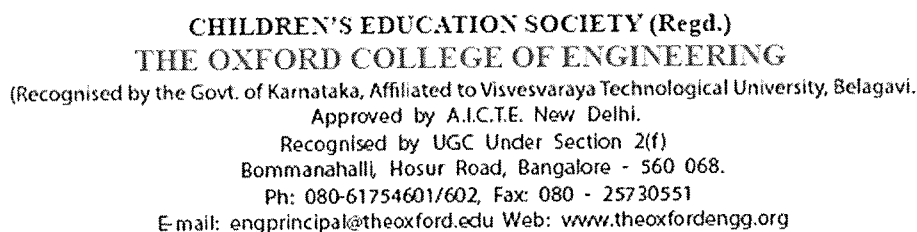
**Feedback Analysis**

**Training feedback Analysis 2020-2021**

How would you rate the Placement Training offered to you?	4.33
Were the topics and description planned well by the Trainer?	4.33
How would you rate the course's sequence and flow?	4.18
Were the topics explained clearly and in a concrete manner?	4.21
Was the language easy to understand?	4.34
Are you feeling that knowledge is gained from this training?	4.21
How do you rate the overall course delivery?	4.33

Chart Title





Training by FACB  
Training Feedback : 1/20-21





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**Expenditure Details of 2020-21**

Focus 4D Career Education Pvt Ltd  
FOCUS 4D CAREER EDUCATION PVT LTD  
Coimbatore, Tamilnadu - 641014

Invoice@focusacademy.in  
GSTIN: 33AABCF3266F122  
PAN No. AABCF3266F

**TAX INVOICE**

**BILL TO**

Oxford College of Engineering  
10th Milestone, Bommanahalli,  
Hosur Road,  
Bangalore, Karnataka - 560068  
State Code: 29

TAX INVOICE NO. FACE/2022/0391  
DATE 08/10/2021

**PLACE OF SUPPLY**

29 Karnataka

**DEAL NO :**

N21536

NO	HSN/SAC	DESCRIPTION	TOTAL AMOUNT
1	999293	Aptitude - Campworks	67,796.61
		No. of hours per batch = 50 No. of batches = 4 Price per batch per hour = 677.9661	
		50% of the contact value = $50 \times 4 \times 677.9661 = 135593.22 \times 0.50 = 67796.61$	

Account Type: Current  
Bank Name: CITY UNION BANK LIMITED  
Branch Name: VILANKURICHI BRANCH COIMBATORE  
A/C NO: 053109000142765  
IFSC Code: CIUB0000053  
For cheque payments: Cheque to be made in favour of M/s.  
Focus 4-D Career Education Pvt. Ltd

SUBTOTAL	67,796.61
IGST @ 18% on 67796.61	12,203.39
TOTAL	80,000.00
BALANCE DUE	₹80,000.00

**Terms:**

- Amount payable is inclusive of all levies and charges
- All disputes are subject to Coimbatore Jurisdiction Only.
- Delay in payment beyond the agreed terms will attract an Interest of 23% per annum on the Outstanding Amount

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FOCUS 4-D CAREER EDUCATION PVT. LTD.

No. 12, Lakshmi nagar, Thottipalayam Piruvu  
Coimbatore, Tamilnadu 641014

IN

invoice@focusacademy.in

GSTIN: 33AABCF3266F1ZZ

PAN No. AABCF3266F

**FACE**

A Unit of Focus 4D Career Education Pvt. Ltd.

12, Lakshmi Nagar, Thottipalayam Piruvu,

Avinashi Road, Coimbatore - 641 014.

**PROFORMA INVOICE**

**ADDRESS**

Oxford College of Engineering  
10th Milestone, Bommanahalli,  
Hosur Road,  
Bengaluru, Karnataka 560068  
State Code: 29

PROFORMA INVOICE 2021/R00/P0346

NO.

DATE 23/03/2021

**PLACE OF SUPPLY**

29 - Karnataka

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N21536

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Accepted By

Accepted Date

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