

# Indian Institute of Technology Guwahati, Guwahati – 781039

**Dr Samit Bhattacharya**  
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Department of Computer  
Science & Engineering

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## Call letter for Written Test & Interview for admission to the MTech programme under Sponsored/IITG Project Staff/Part Time Category commencing in July 2017.

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Dear Applicant,

With reference to your application for admission to **MTech** Programme in the Department of Computer Science and Engineering (CSE) of this institute for the session commencing in July-2017, you are hereby requested to appear for a written test & interview according to the schedule given below:

**Date & Time of Written Test:** Friday, 19<sup>th</sup> May, 2017, 9:00 am.  
**Date & Time of Interview:** Friday, 19<sup>th</sup> May, 2017, 11:30 am.

**Venue :** Seminar Hall, CSE Dept, Academic Complex, IIT Guwahati

### Please note that:

(1) For results **as well as timely follow-up actions to be taken**, the candidates will have to constantly monitor the instructions to be provided in the Institute's website as provided below:  
<http://www.iitg.ernet.in/acad/AdvtNotificationJuly2017/MTechMDes.htm>

(2) Also, please note the following:

- (a) (1) Firstly, you will be required to bring your downloaded and signed copy of the Online Application Form (*If due to some reasons, you filled-up more than one online application forms, you have to bring the latest and updated one only*),  
**ALONG WITH:**
- your coloured photograph of size 4.5 cm. x 3.5 cm., affixed on it;
  - Original Demand Draft** for Rs.150/- (Rs.75/- for SC/ST/PwD candidates), from any nationalized bank, in favour of INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI, payable at Guwahati;
  - attested copy of your Date of Birth Certificate (if DoB is not mentioned in your Class X/XII Pass Certificate/Mark Sheet);
  - if applicable**, attested copy of your Caste Certificate [*Please note that OBC (Non-creamy Layer) Certificate will have to be as per format prescribed in our Admission Notification for MTech/MDes programme, and issued by the competent authority on or after 01-04-2016, failure to which you will be considered under 'General' category*];

- (v) ***if applicable***, attested copy of your 'PwD' Certificate;
  - (vi) ***if applicable***, the appropriate **Form in original** relating to candidate's Category [Sponsored (Full-Time)/ IITG's Project Staff/ Part-Time] - *as per format prescribed in our Admission Notification for MTech/MDes programme*;
  - (vii) attested copies of Pass Certificates and Mark Sheets [ **Mark Sheets should be complete for all semesters/years** of your educational qualifications (from Class X onwards)];
  - (viii) ***as may be applicable***, copy of your qualifying degree Grade Point Average to Percentage conversion certificate( or proof thereof);
  - (ix) ***as may be applicable***, attested copy of your GATE Score Card (*This is a MUST, unless your qualifying degree is M.E. or M.Tech., Or you are a BTech degree holder from an IIT with a minimum CPI of 8.0*);
  - (x) ***as may be applicable***, attested copy of Certificates relating to your professional experience etc.;
- (2) ***As may be applicable*** , you are also required to bring all **ORIGINAL documents relating to** points (a)(1) (iii), (iv), (v), (vi), (vii), (viii), (ix) and (x), for verification on the day of your **Counseling**.
- (b) If you have appeared in the qualifying degree examination and your results are awaited OR you are going to appear in all the subjects of your qualifying degree examination before 14-07-2017, you may appear in the **written test**. Please note that, for such candidates, selections shall be provisional. And all provisionally selected candidates shall have to produce their original pass certificates and Mark Sheets of the qualifying degree examination latest by **21-08-2017**, for regularization – failure to which their admissions shall stand automatically cancelled.

(c) Selection of candidates shall be done by performance in **Written Test** (Syllabus for the test is in Annexure A) and **Interview**. Subsequent admission process details and instructions will be provided in the Institute's website given below:

<http://www.iitg.ernet.in/acad/AdvtNotificationJuly2017/MTechMDes.htm>

Yours sincerely,

Dr. Samit Bhattacharya  
Convener, Admissions Committee 2017-18  
Department of CSE  
IIT Guwahati

Prof. Diganta Goswami  
Professor & Head  
Department of CSE  
IIT Guwahati

### Tentative Fee for M. Tech./M.Des./MS(R) students for July-Nov 2017 Semester (First Semester)

Sl. No.	Items	Periodicity	Amount (Rs.)
1.	Admission fee	One Time	150
2.	Grade Card Fee	One Time	150
3.	Provisional Certificate Fee	One Time	100
4.	Medical Examination Fee	One Time	100
5.	Student Welfare Fund	One Time	200
6.	Identity Card Fee	One Time	50
7.	<b>Tuition Fee *</b>		
	a) Applicable for regular and QIP students	Per Semester	5,000
	b) Applicable for Self-financed OR Sponsored students (part-time / full-time) <u>who are serving as teachers</u>	Per Semester	5,000
	c) Applicable for Self-financed OR Sponsored students (part-time / full-time) <u>who are NOT serving as teachers</u>	Per Semester	25,000
8.	Examination Fee	Per Semester	350
9.	Registration / Enrolment Fee	Per Semester	200
10.	Gymkhana Fee	Per Semester	200
11.	Medical Fee	Per Semester	100
12.	Institute Caution Money	One Time (Refundable)	1,000
13.	Library Caution Money	One Time (Refundable)	1,000
14.	Hostel Admission Fee **	One Time	400
15.	Hostel Rent **	Per Semester	1,000
16.	Hostel Fund**	Per Semester	400
17.	Fan, Electricity and Water Charges **	Per Semester	2,000
18.	Hall Caution Money **	One Time(Refundable)	1,000
19.	Students' Brotherhood Fund (SBF)	Per Semester	50
20.	Group Medical Insurance Scheme(GMIS) Premium for 2016-17	Per Year	1,500
<b>Total (1 to 20) [Without mess related fee / deposit] – To be commonly applicable for all:</b>			
a) Regular and QIP students		<b>Hosteller</b>	<b>14,950</b>
b) Self-financed OR Sponsored students (part time / full time) <u>who are serving as teachers</u>		<b>Non-hosteller</b>	<b>10,150</b>
<b>Total (1 to 20) [Without mess related fee / deposit] – For all Self-financed OR Sponsored students (part time / full time) <u>who are NOT serving as teachers</u></b>		<b>Hosteller</b>	<b>34,950</b>
		<b>Non-hosteller</b>	<b>30,150</b>
<b>Total (1 to 20) for 'Regular' SC / ST/ PwD students - Without mess related fee / deposit</b>		<b>Hosteller</b>	<b>9,950</b>
		<b>Non-hosteller</b>	<b>5,150</b>
<b>Mess related Collections for all hosteller students:</b>			
Sl. No.	Items	Periodicity	Amount (Rs.)
21.	Mess Deposit	One Time (Refundable)	2,600
22.	Hall Mess Establishment Charges	One Time	1,000
23.	Mess Advance	First Semester	11,495
<b>Total (21 to 23)</b>			<b>15,095</b>
<b>GRAND TOTAL (1 TO 23) [WITH mess related fee / deposit] – To be commonly applicable for all :</b>			
a) Regular and QIP students		<b>Hosteller</b>	<b>30,045</b>
b) Self-financed OR Sponsored students (part time / full time) <u>who are serving as teachers</u>		<b>Non-hosteller</b>	<b>10,150</b>
<b>GRAND TOTAL (1 TO 23) [WITH mess related fee / deposit] – For all Self-financed OR Sponsored students (part time / full time) <u>who are NOT serving as teachers</u></b>		<b>Hosteller</b>	<b>50,045</b>
		<b>Non-hosteller</b>	<b>30,150</b>

<b>GRAND TOTAL (1 TO 23) FOR SC/ST S/PwD TUDENTS ((WITH mess related fee / deposit)</b>	<b>Hosteller</b>	<b>25,045</b>
	<b>Non-hosteller</b>	<b>5,150</b>

"Regular" SC / ST / PwD students are not required to pay Tuition Fees

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These are Hostel related Fees to be paid by Hostellers only.

## Annexure – A

### **Syllabus for the Written Test – M.Tech (non-regular category)**

**Mathematical Logic:** Propositional Logic; First Order Logic.

**Probability:** Conditional Probability; Mean, Median, Mode and Standard Deviation; Random Variables; Distributions; uniform, normal, exponential, Poisson, Binomial.

**Set Theory & Algebra:** Sets; Relations; Functions; Groups; Partial Orders; Lattice; Boolean Algebra.

**Combinatorics:** Permutations; Combinations; Counting; Summation; generating functions; recurrence relations; asymptotics.

**Graph Theory:** Connectivity; spanning trees; Cut vertices & edges; covering; matching; independent sets; Colouring; Planarity; Isomorphism.

**Programming and Data Structures:** Programming in C; Functions, Recursion, Parameter passing, Scope, Binding; Abstract data types, Arrays, Stacks, Queues, Linked Lists, Trees, Binary search trees, Binary heaps.

**Algorithms:** Analysis, Asymptotic notation, Notions of space and time complexity, Worst and average case analysis; Design: Greedy approach, Dynamic programming, Divide-and-conquer; Tree and graph traversals, Connected components, Spanning trees, Shortest paths; Hashing, Sorting, Searching. Asymptotic analysis (best, worst, average cases) of time and space, upper and lower bounds.

**Formal Languages & Automata Theory:** Regular languages and finite automata, Context free languages and Push-down automata.

**Digital Logic:** Logic functions, Minimization, Design and synthesis of combinational and sequential circuits; Number representation and computer arithmetic (fixed and floating point).

**Computer Organization and Architecture:** Machine instructions and addressing modes, ALU and datapath, Memory interface, I/O interface, Interrupt and DMA controllers, Instruction pipelining, Cache and main memory, Secondary storage.

**Operating System:** Processes, Threads, Inter-process communication, Concurrency, Synchronization, Deadlock, CPU scheduling, Memory management and virtual memory, File systems and file management, Disk management and disk scheduling.

**Computer Networks:** ISO/OSI stack, LAN technologies (Ethernet, Token ring), Flow and error control techniques, Routing algorithms, Congestion control, TCP/UDP and sockets, IP(v4), basic concepts of hubs, switches, gateways, and routers.

**Databases:** ER-model, Relational model (relational algebra, tuple calculus), Database design (integrity constraints, normal forms), Query languages (SQL).

## **Annexure – B**

### **How to reach IITG Campus and Accommodation Information**

- (A) In case you intend to stay at the hostel during the counseling day, please bring a bedroll. Note that only the shortlisted candidates called for counseling will be provided accommodation in the hostels. No accompanying persons can be accommodated in the hostels. Details regarding accommodation will be posted at the Department website by May 15<sup>th</sup>, 2017 : <http://www.iitg.ernet.in/cse/>.
- (B) On arrival at Guwahati you may make use of the Institute bus service. This bus service (designated “Green-Valley, ON IIT DUTY”) operates from G.N.B road, Panbazar, near Assam Publication Board, opposite Hotel President, Guwahati (which is about a kilometre away from the Guwahati Railway Station) to the IIT Guwahati campus. Details are available in the following weblink.  
<http://www.iitg.ernet.in/aa/pages/campusmap/index.php?hq>
- (C) Kindly visit our department website for updates. <http://www.iitg.ernet.in/cse/>
- (D) For any queries, contact **cseadmissions@iitg.ernet.in**.  
Mention your application number and name in all correspondences.