<u>MINUTES OF BOARD OF STUDIES MEETING</u>

A Board of Studies meeting was held in the Mathematics department on Saturday 18th March, 2017 at 1.30 p.m. The following expert and faculty members of the department were present: Professor Sudhir Ghorpade (IITB), Professor M.S. Dhande, Dr. K.V. Dalvi, Dr.(Mrs.) C. M. Deshpande, Ms. R.P. More, Dr.(Mrs.) S.P.Kavishwar, Mrs. A.B. Dhere, Mrs. N. V. Shinde, Mrs. Y.M. Mahatekar, Mr. J.T. Majithia, Dr. Meena More, Mr. H.A. Rawade and Ms. A.V. Shinde.

The agenda was as under:

1. Review of question papers of all Mathematics courses for autumn semester of the academic year 2016-17.
2. Approval for Gap analysis (with IITB) that we have already prepared.
3. Approval for titles and syllabi of Mathematics courses for Minor Certification in Mathematics as well as fifth semester B. Tech. Mathematics course. Minor Certification will be in the specialization of 'Applied Statistics' and 'Financial Engineering'.
4. Any other item with permission of chair.

HOD started the meeting by welcoming the expert faculty and with a round of introduction of newly joined faculty.

Following Suggestions / Comments / Approvals were given by expert faculty :

1. Review of three question papers, common and compulsory courses, namely 'Linear Algebra' (F.Y. B. Tech. common course), 'Ordinary Differential Equations and Multivariate Calculus' (S.Y. B. Tech. common course), and 'Linear Algebra & Univariate Calculus' (For S.Y. B. Tech. Diploma students) for the autumn semester of 2016-17 was carried out by the expert in the given format. Apart from filling up the review form, expert gave few suggestions regarding precise language to be used for the questions to be asked in the exam papers of T1,T2, & ESE of all above three courses. It was a good learning experience for all faculty present.

Review of the remaining question papers, being related with Statistics, will be done later by an expert from Statistics department.

2. Since expert is a Chair Professor at IIT Bombay and has been associated with that institute for over 30 years, he could give real inputs on the Gap analysis that we have performed with IIT Bombay. He approved the Gap analysis subject to few corrections that Fourier series, Laplace, Wave and Heat equations as well as Vibration of a circular membrane are covered in MA 207 Differential Equations-II of IITB (we had said that these are not covered in any course of IITB). The topics which are not covered in any course of COEP namely Least square approximation, Spectral theorem, Diagonalization by similarity transformations, Dimensionality of space of solutions, Abel-Liouville formula can be added in future to first year and second year B.Tech. common course.

3. Expert had the following to say regarding agenda item number 3:

When the expert looked at the titles of Minor program being offered by Mathematics Department at COEP, namely, Minor in 'Applied Statistics' and Minor in 'Financial Engineering', he raised an objection as to why Mathematics Department should offer a minor program in "Financial Engineering" and why not some other Engineering Department when there are so many engineering departments in COEP. When informed that in any case experts are to be called from outside, then he suggested that Mathematics department should not offer this program.

He further commented that minor in Mathematics at IITB is a highly sought after option and there is a stiff competition among students since there are only 20 seats for the program. This is despite the fact that in this program a student has to undergo four courses in pure mathematics out of six or seven which include Real Analysis, Complex Analysis, Topology, Algebra among others from the list of M.Sc. Mathematics courses offered by Mathematics department to their M.Sc. students. Agreed that IITB has a fully developed Mathematics Dept offering M.Sc. and Ph.D. degrees, still if COEP wants to become a Deemed University it should move towards making its Mathematics Department stronger and as a step towards that should have experts in core Mathematics.

Coming to minor program from students' perspective, he commented that having a degree in Engineering and minor in Pure Mathematics might prove to be much more beneficial for students aspiring to go abroad for higher studies or go for M.B.A. Also many times students come for engineering due to societal pressures (especially parents) when they themselves are actually interested in learning pure mathematics. This program might give them a chance to do what is dear to their heart. They will have more freedom to make a choice of their liking, having fulfilled others' wish by taking up a career in engineering. Hence expert opined that we give a time limit based chance to students to learn pure mathematics. We can always take a review after 3 or 4 years to decide if we want to continue or not.

All faculty members of Mathematics Department very strongly agreed with the above.

The meeting adjourned at 4.00 p.m. with HOD proposing a vote of thanks to the expert for sparing his valuable time and giving his invaluable suggestions.