

**Admission Application Material for
The 3-Year (6-Semester)
Full-Time MCA Programme 2009-2012**

at
Birla Institute of Technology, Mesra, and
Birla Institute of Technology Extension Centres
at
Allahabad, Jaipur, Kolkata, Lalpur and Noida



BIRLA INSTITUTE OF TECHNOLOGY

Deemed University under section 3 of UGC Act 1956

Mesra, Ranchi – 835215, Jharkhand, India

Website: <http://www.bitmesra.ac.in>

CONTENTS

1. Admission to MCA 2009 - an Introduction	...	3
2. The Online Entrance Test for MCA 2009	...	5
3. Instructions for filling the printed Application Form provided with this booklet**	...	6
4. Eligibility Criteria for the full-time MCA Programme	...	8
5. How to Apply, Expected Dates of Counselling and Selection Procedure	...	9
6. Syllabus for the Online Entrance Test for MCA 2009	...	11
7. The MCA Programme	...	12
8. The MCA Course Structure	...	13
9. Total number of seats, reservations, distribution of seats	...	17
10. Financial information and fees payable for the MCA Programme	...	18
11. Undertaking for candidates appearing for final examinations in 2009	...	19

Instructions for filling the online form are given on our website

Option A: IMPORTANT DATES FOR ONLINE APPLICATIONS

Filling of online form commences from 9 am on	18 March 2009
Filling of online form closes at 4 pm on	27 April 2009
Last date for receipt of printouts of duly completed online forms + Demand Drafts:	30 April 2009

Option B: IMPORTANT DATES FOR APPLICATIONS ON PRINTED FORMS

Sale of Application Material commences from:	18 March 2009
Last date for receipt of postal requests:	22 April 2009
Last date for counter sale:	27 April 2009
Last date for receipt of completed forms:	30 April 2009

Candidates in their own interest should send their completed application forms by appropriate means well in advance of the last dates mentioned.

DATES FOR THE MCA 2009 ONLINE ENTRANCE TEST: 23 & 24 MAY 2009

Enclosures with the MCA 2009 Application Material:

1. Application form which must be completed and submitted, to apply for admission
2. Envelope for sending the completed form and other documents
3. Acknowledgement card
4. Information Brochure 2009

Notes:

1. **Candidates may use the single application form enclosed to apply for the MCA programme of the Institute at any 1 or 2 or 3 or 4 or 5 or all 6 Choices of Place for Study (Centres), by ticking the appropriate circles [✓] against the names of the Centres. However, ALL these Choices must be clearly marked before the form is submitted. No changes will be allowed after submission of the form.**
2. **Send the completed form and filled acknowledgement card with ALL required enclosures in the envelope provided to Dean Admissions, Birla Institute of Technology, Mesra, Ranchi – 835215 by the due date**
3. Photocopies of forms will not be accepted
4. Candidates should keep photocopies of their completed forms for reference
5. **The MCA 2009 Application Material and the Information Brochure 2009 can be obtained in person or by post from Mesra and all our Extension Centres in India at the addresses given on the back cover.**

1. Admission to MCA 2009 - an Introduction

This Information Booklet -MCA 2009 Application Material – giving details of the MCA programme, course structure, eligibility criteria, Online Entrance Test, number of seats, reservations, fee structure, and containing the prescribed application form – covers admissions to the 3-year (6-semester) full-time MCA 2009 programme offered at the Birla Institute of Technology, Mesra, and our Extension Centres at Allahabad, Jaipur, Kolkata, Lalpur and Noida. The programme will commence in July 2009.

Provisional selections for the MCA 2009 programme will be based on:

- The performance of a candidate in the MCA 2009 Online Entrance Test, provided he/she meets the minimum academic requirements
- However, candidates must satisfy the minimum eligibility criteria given on later pages / our advertisement / notification(s) on our website

To apply for the programme, eligible candidates must EITHER

A) Complete the online application form on our website, and send a printout of the completed form with 2 recent colour photographs (one pasted on the form and one attached by clip to the form), along with photocopies of all certificates (see Sec 3), and **a crossed bank draft for Rs. 1,200/- in favour of Birla Institute of Technology, payable at Ranchi**, to the office of **Dean Admissions, Birla Institute of Technology, Mesra, Ranchi – 835215 positively by the due date***

OR

B) Complete the printed application form, provided with the MCA 2009 Application Material, and send the duly completed form with 2 recent colour photographs (one pasted on the form and one attached by clip to the form), along with photocopies of all certificates (see Sec 3), and filled in acknowledgement card, in the envelope provided, **to the above address, positively by the due date.***

❖ **Candidates applying online for the MCA programme of the Institute will have the option to apply for any 1 or 2 or 3 or 4 or 5 or all 6 Choices of Place for Study (Centres) – Allahabad, Jaipur, Kolkata, Lalpur, Mesra and Noida– by clicking a “check-box” against the name of each Centre in the online form. However, they MUST exercise ALL their Choices online before they click the “SUBMIT” button to take a printout of the form.**

❖ **Candidates who use the printed application form to apply for the MCA programme also have the same option to apply for any 1 or 2 or 3 or 4 or 5 or all 6 Choices of Place for Study (Centres) by ticking the appropriate circles [✓] against the names of the Centres. However, ALL these Choices must be clearly marked before the form is submitted. No changes will be allowed after submission of the form.**

***All candidates should send their completed application forms and other enclosures by reliable courier or Speed Post or Registered Post to reach the Office of the Dean Admissions, Birla Institute of Technology, Mesra, Ranchi 835215, by the due date positively. Applications reaching us beyond the deadline may not be processed.**

In the case of online applicants, on receipt of the printout of the completed form and Demand Draft, a copy of the MCA 2009 Application Material and the Information Brochure 2009 will be sent by courier / Speedpost / registered post to the candidates who fulfill the eligibility criteria.

Form Numbers

The Form Numbers on each online / printed application form may be noted and cited in correspondence if required. **All candidates should keep photocopies of their completed forms for their own reference.**

Acknowledgement Cards

An acknowledgement card / postal intimation with a registration number will be sent to all eligible candidates whose properly completed application forms have been received within the stipulated time.

Registration Numbers

All eligible applicants will be allotted 6-digit registration numbers and the same will be intimated to them by post / notified on our website. Thus, candidates who use printed application forms will be allotted 6-digit registration numbers starting with 360001 onwards and the same will be intimated to them by post via their acknowledgement cards / notified on our website. Similarly after receipt of the printout of their duly completed form and crossed bank draft for Rs. 1,200/-, eligible online applicants will be allotted 6-digit registration numbers starting with 460001 onwards, and the same will be notified on our website / intimated to them by post. **Candidates must make a note of their registration numbers carefully, as the same will be used in future notifications for counselling, selections etc.**

Please preserve the acknowledgement card / postal intimation which will be required if you are called for counselling. Please quote the registration number in any correspondence regarding your application. If you do not receive the acknowledgement card / postal intimation with registration number within a reasonable date after dispatch of your completed form, please contact the Admissions Office at Mesra by telephone or fax, with your name, city and form number.

Candidates will be called for counselling as per schedules to be notified in due course.

Candidates who appear for counselling must carry the following to their Counselling Centre:

1. A photocopy of their duly completed online form / printed form
2. Originals of all certificates (see Sec 5), and
3. A recent colour photograph, identical to that enclosed with their form

Candidates may appear for counselling at Allahabad, Jaipur, Kolkata, Mesra or Noida as per their choice given in their application form.

Note:

For queries about the MCA programme please contact the Head, Department of IT & MCA, on 0651-2275444, Extn 599 or by fax on 0651-2275401. For queries about any Centre, please contact the Centre (contact details on back cover). For queries about admission related procedures, please contact the Admissions Office, at Mesra, by telephone or fax (contact details on back cover).



2. The Online Entrance Test for MCA 2009

The Birla Institute of Technology, Mesra, Ranchi, will use an Online Entrance Test for shortlisting candidates for admission to its 3-year (6-semester) full-time MCA 2009 programme, commencing in July 2009 at Mesra, Ranchi, and our Extension Centres at Allahabad, Jaipur, Kolkata, Lalpur, and Noida. Please see section 6 for the details of the Test including syllabus, number of questions, duration of the Test, marking, etc.

The MCA 2009 Online Entrance Test will be held on 23 and 24 May 2009 at various Centres as follows: It is proposed to hold the MCA 2009 Online Entrance Test at the following Test Centres - Allahabad, Bangalore, Hyderabad, Jaipur, Kolkata, Mumbai, Patna, Noida, and Ranchi - provided there are sufficient number of candidates at each of the given Test Centres. Candidates must give two choices for first and second preference of Test Centre from the list of Test Centres above. In case the number of candidates opting for a given Test Centre is less than a certain minimum, the Institute reserves the right to shift candidates to the nearest alternative Test Centre (see Note 1 below). The final list of Test Centres will be notified on our website.

Depending on the number of candidates at a given Test Centre, the Test may be held upto three time slots at the Centre, for example, from 9.00 to 11.00 am, 12.00 to 2.00 pm, and 3.00 to 5.00 pm.

Admit Cards

Admit cards will be sent by e-mail / post to all eligible candidates whose properly completed application forms have been received within the stipulated time at the office of the Dean Admissions, BIT Mesra. Candidates will be allotted a Test Centre, date and time slot for the Test, as above. The Institute will try to allot the Test Centre and date as per candidates' preference as far as possible. However, the Institute reserves the right to shift candidates to an alternative Test Centre / date, based on the number of candidates for a given Test Centre / Test Centre capacity.

The admit cards may also be downloaded from our website after 5 May 2009. If a candidate is unable to download the admit card, and the hard copy of the same is also not received upto a week before the Test, candidates may contact the Admissions Office at BIT Mesra by telephone or fax.

The Institute will not be responsible for any postal delay or irregularity resulting in non-receipt / late receipt of the admit card.

The admit card is not transferable to any other person. Impersonation is a punishable offence under law. No applicant will be allowed to appear for the Test without a valid admit card. The admit card will required to be produced at the time of interviews / counselling also. Therefore, all candidates are required to preserve the admit card until the admission process is complete.

Candidates should occasionally visit our website <http://www.bitmesra.ac.in> for any updates or any other matter related to the Entrance Test.

Notes:

1. The Institute reserves the right not to conduct the Test at a particular Centre if the number of candidates for that Centre is less than a certain minimum.
2. The Institute reserves the right not to conduct the Test on a particular date at a given Centre if the number of candidates is less than a certain minimum.
3. Once a Test Centre is allotted to a candidate, it will not be changed under any circumstances

3. Instructions for filling the printed Application Form **

General Instructions

- 1. Before filling and submitting your application form, you are advised to carefully read the eligibility conditions for admission to the programme (Sec 4) and satisfy yourself that you fulfill all the eligibility conditions.**
2. Use a black ballpoint pen to fill in the form. Clearly fill all items that are relevant to you in capital letters or numbers or put a bold tick mark [✓] on the box / circle as required. Do not fold, tear or mutilate the form in any way.
3. All items are mandatory and must be filled in. Else the form may be rejected when it is processed.
- 4. Please ensure that your Name, State of Eligibility, all Choices of Place for Study, two Choices for Test Centre, both preferences for Dates for Test, Choice of Counselling Centre, address, phone number and e-mail id, are filled neatly and accurately in the appropriate spaces**
5. A recent colour photograph of good quality of size 3.5 x 4.5 cm must be **pasted** firmly in the box provided. If required cut the photograph to fit in the box. Do not get the photograph attested. Do not pin or staple the photograph to the form. Please sign with a black ball pen in the boxed space below your photograph.
- 6. Attach one extra photograph to the form using a clean paper clip. Write your Name and Form No on the reverse of the photograph. Do not get the photograph attested. Do not pin or staple the photograph to the form.**
7. Please ensure that all information provided is correct and accurate. Admission on false information will be ipso facto null and void
8. The completed application form should be sent by reliable courier or Speed Post or Registered Post to reach the Office of the Dean Admissions, Birla Institute of Technology, Mesra, Ranchi 835215, positively by the due date. This deadline is important for candidates to receive their admit cards on time before the test. Applications reaching us beyond the deadline may not be processed.
- 9. Enclose photocopies of pass certificate of Class 10, marksheets of Class 10, Class 12, Graduation (if available), or marksheets upto pre-final year for candidates graduating in 2009, as well as Caste / Special Category certificates.** Write your Name, your Application Form No, your telephone number and "MCA 2009", on the back of each of these papers.
- 10. All candidates belonging to the SC, ST, or OBC categories must obtain caste certificates which should be in proper format, and which should be signed by appropriate authority of rank not less than SDO.** If OBC indicate state. (**Note:** However the final reservation proportion will depend on notification, if any, issued by competent authority and as accepted by the Institute).
11. Candidates belonging to other special categories mentioned in Sec 9 (Physically Handicapped / Ward of defence personnel killed or disabled in service / National level sportsperson / Current student of BIT / Ward of BIT employee) must provide photocopy of certificate in proper format **signed by appropriate authority.**
- 12. Do not enclose any original certificates with your application.**
- 13. The Admissions Office may not undertake detailed scrutiny of applications before counselling, and all shortlisted applicants called for counselling, except those whose applications are summarily rejected, are allowed to appear at counselling on purely provisional basis, subject to their eligibility being verified at the time of counselling. Merely being allowed to appear at the counselling will not be considered as a ground for being eligible for admission.**
14. Please return the completed application form in the envelope provided.

****Instructions for filling the Online Form are provided on the website and may be downloaded or printed for your own convenience and easy reference.**

Specific Instructions

15. **Name:** Write your name as in your Class 10 certificate, as follows: First Name, Middle Name(s) and Surname. Write one letter in one block, and leave one block blank between parts of the name. Do not write MR / MS / SHRI / SMT, etc. If space is insufficient, use initials for middle name(s). Thus Hari Krishna Shiv Prasad Shrivastava may be written as HARI K S P SHRIVASTAVA
16. **Father's Name & Mother's Name:** Write similarly. Do not write MR / SHRI, MRS / SMT, etc.
17. **Date of Birth:** Use dd-mm-yyyy format. Thus if your date of birth is 14 April 1987, you should fill in 14 04 1987
18. **Sex:** Put tick mark against one box
19. **State of Eligibility for Qualifying Examination:** Write the code JH if you are appearing for / have passed the qualifying graduate examination from Jharkhand. Else write code NJ if you are appearing for / have passed the qualifying graduate examination from other States (see Sec 9).
20. **Choices of Place for Study:** Candidates may select any 1 or 2 or 3 or 4 or 5 or all 6 Choices of Place for Study (Centres) by putting a bold tick mark on the circles against the names of the Centres. However, please ensure all Choices are clearly marked at the time when form is submitted. Correct way to tick is [✓]
21. **Choices of Test Centres:** Give first and second choice of Test Centre from the list of Test Centres in section 2 (and please see footnote (1) on page 5)
22. **Preference of dates for Test:** Please write 1,2 in order of preference (and please see footnote (2) on page 5)
23. **Caste:** Tick the box for General / SC / ST / OBC as the case may be. If you belong to the SC, ST or OBC category, enclose photocopy of caste certificate in proper format signed by appropriate authority of rank not less than SDO. If OBC indicate state. (See also Note after instruction 10 above)
24. **Other Category:** Select the appropriate special reservation category if applying under any such category as given later in section 9. Candidates applying under the Physically Handicapped category must provide photocopy of disability certificate in proper format from a Civil Surgeon. Candidates applying under the Defence / Sports person category must provide photocopy of certificate in proper format from appropriate defence authority / sports authority. Current students of BIT and wards of BIT employees must provide proper proof / certificates from appropriate authority.
25. **Educational Record:**
 - a) Percentage Marks in Graduation : Please calculate as mentioned under eligibility criteria (Section 4)
 - b) No. of attempts : If you are in final year of the graduation course / qualifying examination, write "APP" under column for "No. of attempts". Enclose photocopy of certificate from Principal of your Institute stating that by 30 June 2009, you will have appeared for examinations in all subjects required for obtaining your Bachelor's degree. See also serial 5 of Eligibility Criteria
 - c) Subjects : Use abbreviations, - Phys, Math, Stat, Eng, Eco, etc
 - d) Certificates : See also instructions 9, 10, 11, 23 and 24 above.
26. **Complete Postal Address:** Write clearly in capital letters, provide pincode, STD code and telephone number, mobile number and e-mail id
27. **Declaration and Undertakings:** The candidate must sign the declaration, and also the undertaking after reading them. A parent or legal guardian should sign the second undertaking.
28. **Acknowledgement Card:** Write your name and address clearly, with pin code and enclose the card with your completed application.

4. Eligibility Criteria for the full-time MCA Programme

- 1) Candidates must hold a Bachelor's Degree or equivalent qualification of any of the Universities incorporated by an act of the central or state legislatures in India or other educational institutions established by an act of Parliament or declared to be deemed as a University under section 3 of UGC Act, 1956, or possess an equivalent qualification recognized by the Ministry of HRD, Government of India/AIU. This degree must entail a minimum of three years of education (10+2+3 system) after completing higher secondary schooling (Class 12 or equivalent).
- 2) Candidates must have one of following qualifications:
 - a) BCA, or
 - b) B.Sc. in Computer Science / Information Technology / Electronics, or
 - c) B.Sc. / B.A. with Mathematics or Statistics at graduate level
- 3) Candidates of B.Sc. / B.A. Honours must have minimum 60% marks in average (45% for SC/ST) in their Honours subject. Candidates of BCA and other graduate courses must have minimum 60% marks in average (45% for SC/ST) in graduation, marks to be computed as average of marks obtained in ALL subjects in which candidate has appeared (excluding optional subjects).
- 4) **Candidates with qualifications acquired through correspondence or distance-learning programmes are eligible only if they acquired such qualifications as working professionals / while in employment.**
- 5) Candidates appearing for final examinations of their Bachelor's programme in 2009 can also apply, and if selected can join the programme provisionally. At the time of the counselling they must also bring the following:
 - a) A certificate in original from the Principal of their Institute stating that by 30 June 2009, they will have appeared for examination in all subjects required for obtaining their Bachelor's degree.
 - b) A certificate from the Principal certifying that they have obtained requisite marks as per item (3) above, based on latest available grades / marks.

Their admission will be confirmed only when they submit the mark sheet and a certificate of having passed the Bachelor's degree / equivalent qualification with requisite marks as per item no (3) above. They must submit proof of passing their final examinations with requisite marks by 31 October 2009. Non-fulfillment of this condition will automatically result in the cancellation of the provisional admission.

Selection Procedure: Based on scores in Institute's Aptitude Test to be held in May 2009

Notes:

- (1) Candidates with foreign diplomas should see the EdCIL website for equivalence (<http://www.edcil.co.in>), and if required should obtain an equivalence certificate well in advance from the evaluation division of the AIU (website <http://www.aiuweb.org>).
- (2) In case any Board / University awards grades instead of marks, the calculation of equivalent marks would be based on the procedure prescribed by the Board / University. In case a University does not have any scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing obtained CGPA with the maximum possible CGPA and multiplying the resultant with 100.

5. How to Apply, Expected Dates of Counselling, and Selection Procedure

How to Apply:

The MCA 2009 Application Material may be obtained in person from the Accounts Office at Mesra or from any of our Extension Centres during working hours on all working days, **from 18 March 2009 up to 27 April 2009, on payment by crossed Demand Draft for Rs. 1,200/- in favour of Birla Institute of Technology, payable at Ranchi.** See back cover for addresses and contact details.

To obtain the MCA 2009 Application Material by post, send a crossed demand draft for **Rs. 1,250/- in favour of Birla Institute of Technology, payable at Ranchi**, along with a covering letter and two slips of paper of size 10 x 10 cm with your name and address clearly written in block capitals, and telephone number, to Dean Admissions at Mesra or Director of any of our Extension Centres. Write MCA - 2009 on the envelope. **Postal requests must be received by 22 April 2009.**

To apply for the programme, and register for the MCA 2009 Online Entrance Test, eligible candidates must EITHER

- 1) Complete the online application form for MCA 2009 on our website, and send a printout of the completed form with 2 recent colour photographs (one pasted on the form and one attached by clip to the form), along with photocopies of all certificates (see Sec 5), and a **crossed Demand Draft for Rs. 1,200/- in favour of Birla Institute of Technology, payable at Ranchi**, to the office of **Dean Admissions, Birla Institute of Technology, Mesra, Ranchi – 835215 positively by the due date**

OR

- 2) Complete the printed application form, provided with the MCA 2009 Application Material, and send the duly completed form with 2 recent colour photographs (one pasted on the form and one attached by clip to the form), along with photocopies of all certificates (see sec. 5), and filled in acknowledgement card, in the envelope provided, **to the above address, positively by the due date.**

Candidates may use the online form / printed form to apply for admission to the MCA programme of the Institute at any 1 or 2 or 3 or 4 or 5 or all 6 of the following Places for Study - Mesra, Allahabad, Jaipur, Kolkata, Lalpur and Noida (section 1)

Completed applications should be sent by reliable Courier or Speed Post or Registered Post to reach the Office of the Dean Admissions, Birla Institute of Technology, Mesra, Ranchi – 835215, latest by the due date, positively.

Applications reaching us beyond the deadline may not be processed.

Expected Dates of Counselling:

Based on the choices given in their forms, the list of candidates for each Centre will be notified on our website and updated regularly. Each Centre will shortlist candidates for counselling on the basis of their performance in the MCA 2009 Online Entrance Test, provided they have applied for that Centre, and fulfill the eligibility criteria mentioned in the preceding pages and our advertisement / notification(s) on our website. Counselling schedules for each Centre, based on these scores, will be displayed by 7 June 2009 on the Institute website and Notice Boards at Mesra and concerned Extension Centres only. **No separate intimation will be sent to candidates.**

The counselling process will be held tentatively between 13 to 22 June 2009 at Allahabad, Jaipur, Kolkata, Mesra and Noida, at the addresses given on the back cover of this booklet. **Candidates may appear for counselling at Allahabad, Jaipur, Kolkata, Mesra or Noida as per their choice indicated in their application form.**

Selection Procedure:

The Institute will use an Online Entrance Test to shortlist candidates for the three-year full time MCA programme commencing in July 2009. Provisional selections for the MCA 2009 programme will be based on:

- The performance of a candidate in the MCA 2009 Online Entrance Test, provided he/she meets the minimum academic requirements
- However, candidates must satisfy the minimum eligibility criteria mentioned in the preceding pages / our advertisement / notification(s) on our website

Each Centre will make its own lists of provisionally selected candidates and waitlisted candidates after the counselling. Provisional selection lists, along with procedures for admissions, will be notified the day after the counselling, on the Institute website <http://www.bitmesra.ac.in> and Notice Boards of the Institute / concerned Extension Centres only. **No separate intimation will be sent to candidates.** Provisionally selected candidates will be required to take admission by the dates given, failing which vacant seats may be allotted to waitlisted candidates. The list of waitlisted candidates will also be announced on the Institute website and Notice Boards of the Institute / concerned Extension Centres only. **No separate intimation will be sent to candidates.** Candidates must therefore see our website occasionally for updates or any other matters related to the admission procedures.

Documents required at the time of counselling: Candidates must carry the originals of the following documents at the time of counselling, as well as one set of photocopies:

1. Pass Certificate of Class 10
2. Marksheet of Class 10
3. Marksheet of Class 12 / Intermediate or equivalent
4. Marksheets of Graduation for graduates
5. Marksheets upto pre-final year for candidates graduating in 2009. They must also bring the following:
 - c) A certificate in original from the Principal of their Institute stating that by 30 June 2009, they will have appeared for examination in all subjects required for obtaining their Bachelor's degree.
 - d) A certificate from the Principal certifying that they have obtained 60% marks or equivalent (45% marks in case of SC/ST candidates) based on latest available grades / marks.
6. **Candidates with qualifications acquired through correspondence or distance-learning programmes must carry proof that they have acquired such qualifications as working professionals / while in employment.**
7. Admit Card for the MCA 2009 Entrance Test
8. Caste certificate / special category certificate (if applicable)
9. Two passport size photographs, identical to the photograph affixed in the application form

Provisionally selected candidates will be required to submit all the above documents in original at the time of admission.

Provisionally selected candidates appearing for final examinations in 2009 will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper to the effect that if they fail to obtain the requisite marks in their qualifying examination (graduation) their admission will be cancelled. The deadline for submission of the marksheet / degree certificate is 31 October 2009, failing which the provisional admission will be cancelled. (See last page of booklet for format of above undertaking).

Classes will commence from 24 July 2009 at all Centres.

6. Syllabus for the Online Entrance Test for MCA 2009

The MCA 2009 Online Entrance Test shall comprise of 120 questions to be answered in 2 hours. Questions will be of objective type with multiple choices out of which only one is correct. A candidate must select only the correct answer to score full marks. For each correct answer a candidate will earn 4 marks. For every incorrect answer one mark will be deducted. If a question has not been attempted no credit will be given. The questions will be distributed into various areas as follows and the detailed syllabus is given below:

Section	Subject	No of Questions
A	Mathematics	70
B	Analytical ability & Logical Reasoning	30
C	Computer Awareness	20
	Total	120

Section A: Mathematics (70 questions – objective type)

- **Algebra:** Fundamental operations in Algebra, expansion, factorization, quadratic equations, indices, logarithms, arithmetic, geometric and harmonic progressions, binomial theorem, permutations and combinations, surds
- **Set Theory:** Sets and subsets, operations on sets, sequences, properties of integers, relations and functions
- **Matrix Algebra:** Elementary transformations, inverse of a matrix, rank, solution of simultaneous linear equations, eigenvalues and eigenvectors, quadratic forms
- **Co-ordinate Geometry:** Rectangular Cartesian co-ordinates, equations of a line, mid point, intersections etc., equations of a circle, distance formulae, pair of straight lines, parabola, ellipse and hyperbola, simple geometric transformations such as translation, rotation, scaling.
- **Calculus:** Limit of functions, continuous functions, differentiation of functions(s), tangents and normal, simple examples of maxima and minima, integration of function by parts, by substitution and by partial fraction, definite integral application to volumes and surfaces of frustums of a sphere, cone, cylinder, Taylor Series.
- **Differential Equations:** Differential equations of first order and their solutions, linear differential equations with constant coefficients, homogenous linear differential equations.
- **Vectors:** Position vector, additions and subtraction of vectors, scalar and vector products and their applications to simple geometrical problems and mechanics.
- **Trigonometry:** Simple identities, trigonometric equations, properties of triangles, solution of triangles, height and distance, inverse function
- **Probability and Statistics:** Basic concepts of probability theory, averages, dependent and independent events, frequency distributions, and measures of dispersions, skewness and kurtosis, random variable and distribution functions, mathematical expectations, binomial, Poisson, normal distributions, curve fitting, and principle of least squares, correlation and regression
- **Linear Programming:** Formulation of simple linear programming problems, basic concepts of graphical and simplex methods, revised simplex method, transportation and assignment problems, duality and integer programming

Section B: Analytical Ability and Logical Reasoning: (30 questions – objective type)

Questions in this section will test logical reasoning, quantitative reasoning, and visio-spatial reasoning

Section C: Computer Awareness: (20 questions – objective type)

- **Computer Basics** :Organization of a computer, Central Processing Unit (CPU), Structure of instructions in CPU, input / output devices, computer memory, memory organization, back-up devices
- **Data Representation**: Representation of characters, integers, and fractions, binary and hexadecimal representations, Binary Arithmetic: Addition, subtraction, division, multiplication, single arithmetic and two complement arithmetic, floating point representation of numbers, normalized floating point representation, Boolean algebra, truth tables, Venn diagrams
- **Computer Architecture**: Block structure of computers, communication between processor and I / O devices, interrupts
- **Computer Language**: Assembly language and high-level language, Multiprogramming and time-sharing operating systems, Computer Programming in C.
- **Flow chart and Algorithms**
- **Operating Systems**: Evolution of operating systems, types of operating systems, functions of an operating system, modern operating systems



7. The MCA Programme

The 3-year (6-semester) Master of Computer Applications (MCA) programme of the Institute is approved by the All India Council of Technical Education (AICTE).

The curriculum is designed so as to help students develop strong software competencies and analytical and problem solving abilities – the requisite skills to prepare them for successful careers as software professionals. The course structure and contents are regularly updated.

The MCA programme was designed by the Department of Electronics, Government of India in the early 1980's as a training program that would equip graduates to fulfill the increasing demand for software specialists. It was envisaged that the MCA graduates would fill positions of systems analysts, information systems specialists, application programmers and systems engineers. This has worked out to exceed expectations. MCA's are widely accepted today by Indian industry.

The programme objectives as interpreted at this Institute are as follows. The programme should impart:

1. Knowledge and practice covering various aspects of computer usage in business, industry and service sectors
2. Skills to candidates to enable them to perform as application systems designers and systems managers, in major areas of computer applications

Thus the MCA programme here includes:

- a) A comprehensive knowledge of systems including their capabilities and limitations
- b) An appreciation of the application environment
- c) Skills for management of complex software projects, and
- d) A sound foundation of quantitative tools and techniques

There are three broad components of the programme:

- Mathematical background for digital computers
- Computers and systems science courses
- Management and behavioural science courses

A unique feature of the MCA program at this Institute is that the sixth and final semester is devoted to a compulsory 20-week software development project in industry, enabling the students to gain valuable hands-on experience.



8. The MCA Course Structure

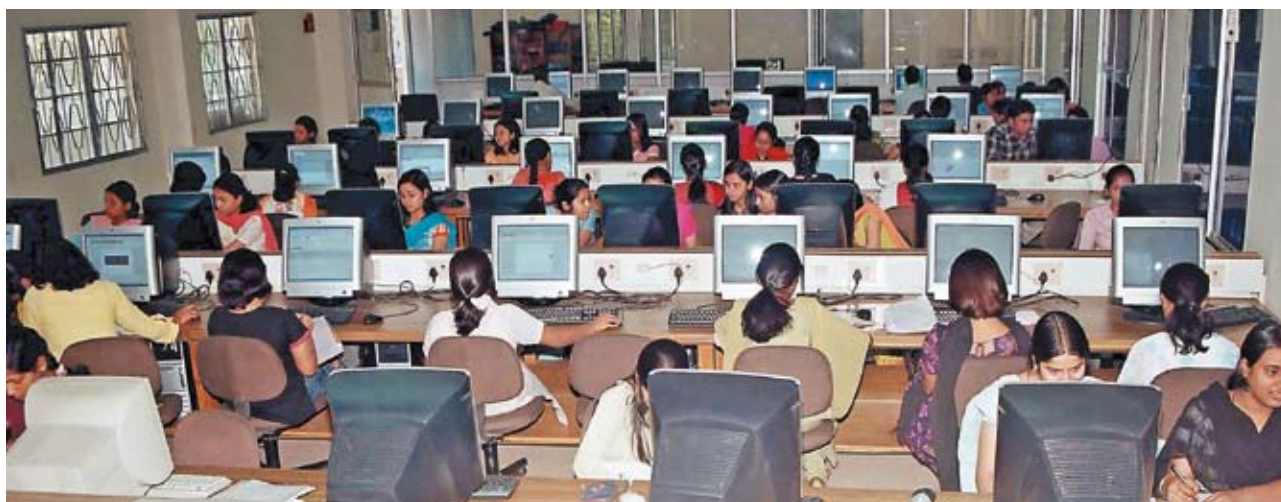
The MCA Course Structure is as given below:

SEMESTER - I	
Theory	Units
Introduction to Computer Science & Applications	1
Problem Solving and Program Design with C	1
Data Structures	1
Discrete Mathematics	1
Numerical & Statistical Methods	1
Sessional	
C Programming Laboratory	0.5
Data Structure Laboratory	0.5
Numerical & Statistical Methods Laboratory	0.5
Total	6.5

SEMESTER - II	
Theory	Units
Object Oriented Design & Programming	1
Computer Organization & Architecture	1
Fundamentals of Computer Algorithms	1
Database Management Systems	1
Operating Systems	1
Sessional	
C++ Programming Laboratory	0.5
RDBMS Laboratory	0.5
Operating System Laboratory	0.5
Total	6.5

SEMESTER - III	
Theory	Units
Java Programming	1
Data Communications	1
Automata Theory	1
Software Engineering	1
Elective - I	1
Sessional	
Java Programming Laboratory	0.5
Software Engineering Laboratory	0.5
Laboratory on Elective	0.5
Total	6.5

SEMESTER - IV	
Theory	Units
Compiler Design	1
Soft Computing	1
Computer Networks	1
Computerized Financial Accounting	1
Elective - II	1
Sessional	
Compiler Design Laboratory	0.5
Computer Networking Laboratory	0.5
Laboratory on Elective	0.5
Total	6.5



SEMESTER – V	
Theory	Units
Principles of Management	1
Computer Graphics	1
System Simulation & Modelling	1
Optimization Theory	1
Elective – III	1
Sessional	
Computer Graphics Laboratory	0.5
Laboratory on Elective	0.5
Total	6.0

SEMESTER – VI	
	Units
Project	4.0
Total Units	36

List of Electives

Notes:

- Students are required to choose at least two electives from the same group.
- Students are advised to do their projects on the areas where major electives are chosen.

Group I: Database Technology	
Theory	
Distributed Databases	
Multimedia Databases	
Decision Support Systems	
Enterprise Resource Planning	
Data Mining and Data Warehousing	
Sessional	
Distributed Database Laboratory	
Multimedia Databases Laboratory	
Decision Support System Laboratory	
Enterprise Resource Planning Laboratory	
Data Mining and Data Warehousing Laboratory	

Group II: Software Technology	
Theory	
Advanced Java Programming	
Web Programming	
Systems Programming	
Software Project Management	
Programming Language Design and Concepts	
Assembly Language Programming	
Sessional	
Advanced Java Programming Laboratory	
Web Programming Laboratory	
Systems Programming Laboratory	
Software Project Management Laboratory	
Programming Language Design and Concepts Laboratory	
Assembly Language Programming Laboratory	

Group III: Cognitive Sciences and Intelligent Systems
Theory
Natural Language Processing
Artificial Intelligence
Fuzzy Logic
Artificial Neural Networks
Genetic Algorithms & Swarm Intelligence
Image Processing
Sessional
Natural Language Processing Laboratory
Artificial Intelligence Laboratory
Fuzzy Logic Laboratory
Artificial Neural Networks Laboratory
Genetic Algorithms & Swarm Intelligence Laboratory
Image Processing Laboratory

Group IV: Networking and Distributed Systems
Theory
Network Security and Cryptography
Parallel & Distributed Computing
Grid Computing
Mobile Computing
Wireless Technology
Sessional
Network Security and Cryptography Laboratory
Parallel & Distributed Computing Laboratory
Grid Computing Laboratory
Mobile Computing Laboratory
Wireless Technology Laboratory

Group V: Applications of Information Technology
Theory
Bioinformatics
Multimedia and Animation
Virtual Reality & Modeling
E-Commerce
Supply Chain Management
Sessional
Bioinformatics Laboratory
Multimedia and Animation Laboratory
Virtual Reality & Modeling Laboratory
E-Commerce Laboratory
Supply Chain Management Laboratory

9. Total Number of Seats, Reservations and Seat Distribution

The number of seats offered in 2009 in the MCA programme at various Centres is as given below:

Centre	Mesra	Allahabad	Jaipur	Kolkata	Lalpur	Noida
Number of seats	60	45	45	40	105	60

Reservations: Currently the Institute follows reservations as given below for its MCA programme.

1. For all programmes at the Institute which are supported by the State Government, the reservation criteria for SC & ST are as per the norms of the State Government
2. For all other programmes the reservation criteria for SC & ST are as per the statutory norms of Central Government (SC -15% & ST - 7.5%)
3. The Institute observes statutory reservation for physically handicapped persons (3%).
4. Upto 1% of the seats may be allotted to sons and daughters of defence personnel who have lost their lives or been disabled in service, who otherwise have qualified for admissions.
5. Upto 1% of the seats may be allotted to candidates who are sportspersons and have represented their states at National level sports competitions, who otherwise have qualified for admissions.
6. Subject to eligibility and availability of candidates, 20% of the seats may be allotted to girl candidates.
7. Subject to eligibility and availability of candidates, 20% of the seats may be offered to candidates obtaining first degree of BIT during the year of admission desired.
8. Some seats at the Extension Centres are reserved for candidates who are sons and daughters of serving employees of BIT, who otherwise have qualified for admissions.
9. For Lalpur and Mesra, 50% of seats are reserved for candidates who have passed their qualifying examination from Jharkhand*.

However the final reservation proportion will depend on notification, if any, issued by competent authority and as accepted by the Institute.

*At Lalpur & Mesra 50% of the total seats are reserved for candidates who have passed / are appearing for their qualifying examination (graduation) from Jharkhand State, taking it as one zone and the remaining 50% for candidates who have passed / are appearing for their qualifying examination (graduation) from other states of the country. (The "State of Eligibility" of a candidate for the purpose will be determined on the basis of location of his/her College where he/she has passed/is appearing for the qualifying examination / graduation).

Codes for State of Eligibility

State of Eligibility	Code
Qualifying examination (graduation) from Jharkhand	JH
Qualifying examination (graduation) from other states	NJ

10. Financial Information and fees payable for the full-time MCA Programme

Fees payable for the full-time MCA programme at various Centres

Fees Payable at a Glance

Particulars	Mesra	Extension Centres
Total fees payable at the time of admission, including the fees for first semester	42,500	41,500
Fees payable for each subsequent semester	35,500	35,500

Details of Fees Payable per semester and at the time of admission

A) Particulars of Fees for each semester		Mesra	Extension Centres
1	Tuition Fee, Registration Fee, Institute Examination, Library, Teaching Aids and other Student Facilities	32,500	32,500
2	Hostel Room Rent, General Maintenance & Electricity	3000	-
3	Off Campus Charges	-	3000
Sub Total		35,500	35,500

B) Additional amount to be paid at the time of Admission		Mesra	Extension Centres
1	University Enrollment Fee	1000	1000
2	Hostel Mess Deposit	1000	-
Sub Total		2000	1000
C) Caution Money (Refundable)		5000	5000
Grand Total to be paid at the time of admission (A + B + C)		42,500	41,500

Notes:

1. Hostel facilities are provided only at the Main Campus at Mesra.
2. Hostel mess charges at Mesra will be approximately Rs 1,700/- per month
3. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.
4. The Institute reserves the right to revise the fees and other charges at any stage.
5. For rules regarding refund of fees on withdrawal before a student attends any classes, please see separate

11. Undertaking for candidates appearing for final examinations in 2009

Format of the Undertaking to be typed and submitted on Non- Judicial Stamp Paper, signed by Public Notary, at the time of admission by those candidates who are provisionally selected for the MCA Programme of the Institute, and who are appearing for their final examinations in 2009.

Please fill in all blanks, select relevant items and delete whatever is not applicable.

1. I, _____ S/o _____
resident of _____ P.S. _____
Dist. _____ hereby declare that I am fully aware that minimum marks for admission to MCA Programme of the Birla Institute of Technology is 60% (45% for SC/ST) in Honours / aggregate of all subjects in all years in graduate level and therefore I shall be disqualified for admission to MCA Programme of Birla Institute of Technology, if I do not secure minimum 60% marks (45 % for SC/ST) in Honours / aggregate of all subjects in all years in graduate level or equivalent eligibility qualification.
2. I belong to SC / ST / OBC / General category (strike out whichever is not applicable)
3. I do hereby undertake that since I have been provisionally allowed to appear in the selection procedure to MCA Programme although my graduation / equivalent eligibility qualifying examination has not yet been published, I shall not insist on extension / conversion of the provisional admission, if
 - i. I fail to secure minimum 60% marks (45% for SC/ST) in Honours / aggregate in all subjects in all the years in such graduation or equivalent eligibility qualifying examination, or
 - ii. I fail to produce the official result by the 31st October 2009.
4. I undertake that all the certificates / documents submitted by me are authentic and are issued by competent authority.
5. I undertake that if at any time during the programme I am found not to be eligible for admission for not having required marks in graduation, my admission shall be cancelled.

Counter Signed

(Guardian)	(Applicant)
Name & Address in Block Capitals	Name & Address in Block Capitals
Name _____	Name _____
Address _____	Address _____
_____	_____
_____	_____

The MCA 2009 Application Material along with the Information Brochure 2009 can be obtained in person or by post from Mesra and all our Extension Centres in India at the addresses given below, as per the schedules in our advertisements / notifications.

The MCA 2009 Application Material covers admission to the 3-year (6-semester) full-time MCA programme offered at the Birla Institute of Technology, Mesra, and our Extension Centres at Allahabad, Jaipur, Kolkata, Lalpur and Noida, which will commence in July 2009, (admission based on marks in MCA Aptitude Test 2009).

Candidates interested in programmes at our International Centres at Bahrain, Muscat and Ras Al Khaimah may contact the concerned Centre at the addresses given below.

Centre	Addresses and contact details
Mesra	Dean Admissions, Birla Institute of Technology, Mesra, Ranchi 835215 Phone: PBX: 0651-2275444 / 896, 2276249 / 267 / 432 - Extn 469, & 2275868 (D) Fax: 0651- 2275401, 2276007, e-mail: admissions@bitmesra.ac.in
Allahabad	Director, Birla Institute of Technology Extension Centre B-7, Industrial Area, P.O. TSL Naini, Allahabad 211010 Phone: 0532- 2686668 / 2687363, Fax: 2687554 City Office: 14 Tagore Town, Allahabad 211002, Phone: 2465518 http://www.bitallahabad.ac.in , e-mail: bitecald@dataone.in / bitecald@bitallahabad.ac.in
Deoghar	Director, Birla Institute of Technology Extension Centre P.O. – Ratanpur, Jasidih, Dist. Deoghar, 814142, Jharkhand Phone: 9334654856 / 9308139037, Telefax: 06432-292565, e-mail: bitdeoghar@bitmesra.ac.in
Jaipur	Director, Birla Institute of Technology Extension Centre 27, Malviya Industrial Area, Jaipur 302017 Phone: 0141- 4019798 / 4019812, Fax: 2751601, e-mail: bitjaipur@bitmesra.ac.in
Kolkata	Director, Birla Institute of Technology Extension Centre Southend Conclave, 1582, Rajdanga Main Road, 4th Floor (On Gariahat - E M bypass Connector, opposite Siemens Building) Kolkata 700107, Phone: 033 – 24414542 / 24414456, Fax: 24414299 e-mail: bitkolkata@bitmesra.ac.in
Lalpur	Director, Birla Institute of Technology Extension Centre Lalpur, Ranchi 834001, Phone: 0651-2531817 / 2531676, Fax: 2531658 / 2531676 http://www.bitelalpur.ac.in , e-mail: bitlalpur@bitmesra.ac.in
Noida	Director, Birla Institute of Technology Extension Centre A-7 Sector-1, Noida 201301, Phone: 0120 – 2543484 / 2553661 / 3662, Fax: 2554146 http://www.bitnoida.in , e-mail: webmaster@bitnoida.in
Patna	Director, Birla Institute of Technology Extension Centre Near Patna Airport, P.O. Bihar Veterinary College, Patna 800014 Phone: 0612- 2223545, 3200853, Fax: 2223545, e-mail: bitpatna@bitmesra.ac.in

For admission to academic programmes at our International Centres, please contact the concerned Centre directly at the Addresses and Contact Details given below

BITIC Bahrain http://www.bitic.edu.bh	Director, BITIC, P.O. Box 31320, Budaiya, Kingdom of Bahrain Phone: +973- 17690025, Fax: +973- 17692879, e-mail biticadm@batelco.com.bh
BITEC Muscat http://waljatcolleges.edu.om	Director, BITEC, P.O. Box 197: Rusayl, Muscat, Postal Code: 124, Sultanate of Oman Phone: +968- 24446660, 24449194, 24449155, 24446899, 24446337 Fax: +968- 24449196/97, e-mail waljatcm@omantel.net.om info@waljatcolleges.edu.om , dean@waljatcolleges.edu.om
BITIC RAK UAE http://www.biticrak.ae http://rcast.org/bitcentre.htm	Director, BITIC, Knowledge Centre, RAK Free Trade Zone, P.O. Box 10141, Ras Al Khaimah, United Arab Emirates Phone: +971-7- 2274406, 2272203, 2274403; Fax: +971-7- 2284003, e-mail director@royalbit.ae