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AMRITA ENTRANCE EXAMINATION - ENGINEERING 2010

(FOR ADMISSION TO B.TECH. PROGRAMMES)

HANDBOOK

1. INTRODUCTION

Amrita Vishwa Vidyapeetham is a University established under section 3 of the UGC Act 1956. The University focuses on higher education and research in the areas of Engineering, Medicine, Management, Science, Education, Mass Communication and Social Work. The University has five campuses at Amritapuri (Kollam), Bengaluru, Coimbatore, Kochi and Mysore.

Amrita Vishwa Vidyapeetham is conducting its Engineering Entrance Examination every year on an all India basis for admission to the 4 year B.Tech Degree programmes offered in the three campuses at Amritapuri (Kollam), Bengaluru and Ettimadai (Coimbatore). Candidates who satisfy the eligibility criteria will be admitted to the first year of B.Tech programmes through counselling, based on their ranks in the Entrance Examination.

This handbook contains general information and rules relating to the Amrita Entrance Examination – Engineering 2010 and other relevant details about B.Tech programmes, fee structure, examination centres, syllabus, sale of application forms etc. Candidates are required to go through the handbook thoroughly and acquaint themselves with the details relating to the entrance examination and subsequent admission. The contents of the handbook are subject to modification as may be deemed necessary by the University.

2. CAMPUSES & B.Tech PROGRAMMES

The various B.Tech programmes offered in the three Schools of Engineering are listed below:

Amritapuri Campus	
Amrita School of Engineering, Amritapuri, Clappana (P.O), Kollam - 690 525, Kerala, India Tel: 0476 - 280 9400 / 9402 Fax: 0476 - 2896178 Email: admissions@amritapuri.amrita.edu Website: amritapuri.amrita.edu	Computer Science & Engineering Electrical & Electronics Engineering Electronics & Communication Engineering Mechanical Engineering
Bengaluru Campus	
Amrita School of Engineering, Kasavanahalli, Carmelaram (P.O), Bengaluru – 560 035, Karnataka, India. Tel: 080 - 28439565 / 66 Fax: 080 - 28440092 Email: admissions@blr.amrita.edu Website: blr.amrita.edu	Computer Science & Engineering Electrical & Electronics Engineering Electronics & Communication Engineering Electronics & Instrumentation Engineering Mechanical Engineering
Coimbatore Campus	
Amrita School of Engineering, Ettimadai (P.O). Coimbatore – 641 105, Tamilnadu, India. Tel: 0422 - 2656422, Fax: 0422 - 2656274 Email: admissions@amrita.edu Website: amrita.edu	Aerospace Engineering Chemical Engineering Civil Engineering Computer Science & Engineering Electrical & Electronics Engineering Electronics & Communication Engineering Electronics & Instrumentation Engineering Mechanical Engineering

Note : Applications are processed at Coimbatore campus.

For all admission enquiries : 0422-2685 169 / 170

3. ELIGIBILITY

- 3.1 **Age** – Candidates shall be born on or after **1st July 1989**.
- 3.2 **Educational Qualification** – A pass in the final examination of 10+2 (class XII) or its equivalent with a minimum of 60% marks separately in Mathematics, Physics and Chemistry.

OR

A three year Diploma in Engineering with minimum 60% marks, awarded by any State Board of Technical Education.

Note: **Those who appear for the above examinations in April / May 2010 and expect to secure minimum marks as above, may also apply.**

4. APPLICATION FORM

- ◆ Application form will be in a format that can be processed by Optical Mark Reader(OMR).
- 4.1 **Application fee is Rs. 850/-, which covers the cost of Application form, University Brochure, Information Handbook and Examination fee. Application fee once paid will not be refunded.**
- 4.2 Application forms of Amrita Entrance Examination – Engineering 2010 can be obtained as below:-
 - ◆ By post, from the Admission Co-ordinators of Amrita Schools of Engineering at Amritapuri, Bengaluru and Coimbatore (section 2), on a written request indicating their full communication address together with a Demand Draft for Rs. 850/- drawn in favour of **Amrita School of Engineering payable at Coimbatore.** **(On the back of the Demand Draft, candidate should write his / her Name and “For B.Tech Application”). Please keep a photocopy of the Demand Draft with you for future reference.**

OR

- ◆ From the University counter of Amrita Schools of Engineering at Amritapuri, Bengaluru and Coimbatore on producing a demand draft for Rs 850/- as above.

OR

- ◆ From the designated branches of AXIS Bank / Dhanalakshmi Bank Ltd / State Bank of Hyderabad on payment of Rs.850/- (**Refer to Annexure II**)

OR

- ◆ Apply online through the website **amrita.edu** and submit the application form printout in an A4 sheet along with the demand draft for Rs 850/-.

5. ONLINE FORMAT

Refer website, amrita.edu, for application format and instructions for submitting the same.

6. GENERAL GUIDELINES for filling the OMR (CODED) Application Form

Please read carefully the guidelines in sections 6 & 7 before filling the **printed Application Form**.

- 6.1 The application form will be processed by Computer based OMR. Hence use HB Pencil and Black Ball Point Pen wherever applicable as per the instructions in section 6 and 7.
- 6.2 Mark your response only within the space provided for the purpose. Response marked outside the space will not be read by the machine.
- 6.3 Application form should be filled in English only. Using black ball point pen write in capital letters the required information in the boxes (wherever provided) above the bubbles (ovals). Then completely darken the bubbles under each letter / number using HB Pencil.

- 6.4 Do not make any stray mark on the coded Application Form.
- 6.5 Do not enclose any certificate along with filled-in application.
- 6.6 Candidates must use only the original coded form; photocopy of the coded form will not be accepted.
- 6.7 Handle the coded sheet very carefully. **Do not staple, pin, wrinkle, tear or wet the coded sheet. Tampered application is liable to be rejected.**
- 6.8 Coded Application form is to be folded in the same manner as it is supplied. No new fold should be made.
- 6.9 Incomplete application forms will be summarily rejected.
- 6.10 Coded Application Form is enclosed in a pre-addressed special envelope. The applicants should despatch the filled-in form in the same pre-addressed envelope to **the Admission Co-ordinator (see section 8.2).**
- 6.11 **Request for change or correction of any information given in the application form will not be entertained under any circumstance.**

7. GUIDELINES FOR FILLING EACH ITEM IN THE CODED APPLICATION FORM

The coded Application Form contains 20 items. Please fill up all the items carefully as per the guidelines below.

- ◆ Please note that the relevant bubbles (ovals) shall be completely darkened using **HB Pencil** and all writings shall be with **Black Ball Point Pen**.
 - Use **black ball point pen** for writing inside the **rectangle boxes** in items **1, 4, 5, 6, 7, 11 & 16** and items **8, 10, 19 & 20**.
 - Use **HB pencil** for filling up the bubbles in items **1 to 7** and from **11 to 17**.
- ◆ If you desire to correct any entry made with HB pencil, you have to completely erase the wrong entry without damaging the paper and leaving any smudge, since a partially erased mark leads to wrong reading by the Optical Mark Reading machine.
- ◆ Candidates should take extreme care while writing inside the boxes using black ball point pen. In case any letter is entered wrongly, strike out the letter and write above it correctly. **Correction fluid should not be used.**

7.1 Name of the Candidate (Item 1)

7.1.1 Within the rectangular boxes, write your name in CAPITAL letters **as in the 12th class certificate using Black Ball Point Pen**

7.1.2 Leave one box vacant between the names and the initials, as,

A	N	I	L		K	U	M	A	R		M	V
---	---	---	---	--	---	---	---	---	---	--	---	---

7.1.3 Darken the corresponding bubbles with HB pencil.

7.2 Social Status (Item 2)

7.2.1 Four categories are indicated namely Scheduled Caste (SC), Scheduled Tribe (ST) OBC and others. Darken the appropriate bubble.

7.2.2 Community certificate **shall not be enclosed** with the application form, but shall be produced during counselling.

7.3 Nationality (Item 3)

- ◆ Darken the appropriate bubble.

7.4 Date of Birth (Item 4)

- ◆ Fill in the date of birth in Christian era in the boxes as below and darken the appropriate bubbles.

1st August 1989

D	D	M	M	Y	Y
0	1	0	8	8	9

7.5 **State/Union Territory from where you have completed 12th class/ diploma** (Item 5)

- ◆ The code numbers for the States / Union Territories are given in **Annexure III**. Write the appropriate code number in the rectangular box provided. Darken the corresponding bubbles. Application will not be processed if the state code is not correctly entered.

7.6 **City code of Examination centre opted** (Item 6) (See Section 11)

- ◆ List of cities where the examination will be conducted is given in **ANNEXURE IV**. Candidates are required to opt a centre convenient to them and enter the city code number in the rectangular box and darken the corresponding bubbles. If due to any reason, the exam centre opted by the candidate cannot be allotted, the University reserves its discretion to allot the candidate to a nearby centre.
- ◆ **Centre once allotted will not be changed on request under any circumstance.**

7.7 **Pin Code for Communication Address** (Item 7)

- ◆ Write the pin code of the post office of your mailing address in the boxes and darken the corresponding bubbles. Please ensure that the same number is written in item 8.

7.8 **Full name and complete postal address of the candidate** (Item 8)

- ◆ The address written in this box will be scanned as such and used for sending hall ticket and subsequent correspondence. In order to ensure prompt delivery of letter, **the full name and address of the candidate should be written legibly in CAPITAL letters using black ball point pen**. It should not touch or cross the border. State clearly your contact telephone number with STD code. Write the mobile number, if any. Write the Email address, if any, **in CAPITAL letters for clarity**. If your hand writing is not clear, or the address is incomplete, the letters are liable to be returned.

7.9 **Photograph** (Item 9)

7.9.1 Affix a good quality passport size colour photograph (size 3.5 X 4.5 cm) taken within the last three months. **Do not make any attestation in the photograph**. Do not staple or pin the photograph. The photograph shall not be larger than the space (box) provided for affixing it.

7.9.2 On the back of an extra copy of the same photograph, write your name and application number and enclose this photo in the pre-addressed application cover, along with the application. ie; Insert it freely in the cover; Don't staple it or paste it with the application.

7.9.3 The candidates are advised to keep six copies of the photograph for subsequent use during counselling / admission.

7.10 **Signature of the Candidate** (Item 10)

- ◆ Your signature establishes your identity. Put your usual signature using **black ball point pen** within the box provided. The signature should not touch or cross the border of the box. The signatures in item number **10** and item number **19** shall be identical.

7.11 **Name of the Parent / Guardian** (Item 11)

- ◆ Write the name of parent in CAPITAL letters in the rectangular box provided. If both the parents are not alive, write the name of the guardian.
- ◆ Leave one box vacant between the names and the initials, as,

V	A	S	U	D	E	V		R	E	D	D	Y		C	K
---	---	---	---	---	---	---	--	---	---	---	---	---	--	---	---

- ◆ Write the name using black ball point pen and darken the corresponding bubbles with HB pencil.

7.12 **Relationship of the person in item number 11 with the candidate.** (Item 12)

- ◆ Darken the bubble against the relationship to indicate whether Father, Mother or Guardian.

7.13 **Gender** (Item 13)

- ◆ Darken the appropriate bubble against Male or Female.

7.14 **Your Qualifying Examination** (Item 14)

7.14.1 In case of 10+2 (class XII) or equivalent , darken the first bubble.

7.14.2 In case of Diploma (of minimum 3 years), darken the second bubble.

7.15 **Board conducting your qualifying examination** (Item 15)

- ◆ Mention the Board conducting the examination, viz. , CBSE / ICSE / State Board / Any other scheme equivalent to 10+2 (class XII) / TECH.EDN. by darkening the appropriate bubble.

7.16 **Land phone** (Item 16)

- ◆ Indicate your land phone number (with STD code) by writing in the rectangular box and darkening the bubbles. Leave one space between the STD code and the telephone number.

0	4	2	2		2	6	5	6	4	2	2
---	---	---	---	--	---	---	---	---	---	---	---

7.17 **Parents' Annual Income** (Item 17)

- ◆ Parents' annual income is to be computed as the total income of both the parents.
- ◆ Five ranges of income are shown, darken the appropriate bubble.

7.18 **Declaration** (Item 18)

- ◆ Candidate and the parent should read and understand the declaration carefully.

7.19 **Signature of the Candidate** (Item 19)

- ◆ Use black ball point pen.

7.20 **Signature of the Parent / Guardian** (Item 20)

By signing the declaration, the candidate and the parent / guardian undertake the responsibility for the correctness of all the statements in the application. So they shall ascertain the truth / correctness of the statements. Signature shall be with black ball point pen only. Application without the signature of the candidate and Parent / Guardian will be rejected. Write the place and date in the space marked for the purpose.

8. SUBMISSION OF THE FILLED-IN APPLICATION

8.1 **Please note down the Application number in your personal record and keep a photocopy of the filled-in application for future reference and correspondence.**

8.2 Duly filled-in application form shall be sent in the pre-addressed cover to the **following address only:**

The Admission Co-ordinator,

Amrita School of Engineering, Amrita Vishwa Vidyapeetham,

Ettimadai (P.O), Coimbatore 641105, Tamil Nadu. Phone: 0422 – 2656422.

(Applications are processed only at the above office)

8.3 **Candidates are advised to send the filled-in applications by INDIA SPEED POST / COURIER.**

8.4 **Please send the filled-in application form at the earliest, so that the hall ticket will be reaching you sufficiently early, thus avoiding anxiety and confusion at the last moment.**

9. HALL TICKET & IDENTIFICATION

- 9.1 No candidate will be allowed to appear for the Entrance Examination without valid hall ticket. In the Examination hall, candidate should produce the hall ticket when demanded by the invigilator.
- 9.2 The University will start issuing the hall tickets 30 days before the examination, mentioning the candidate's registration number and examination centre allotted and the details will be available in the University website. If you do not receive the hall ticket 10 days before the date of examination, please call 0422 – 2685 169 / 170, on working days between 9 AM and 5 PM, quoting the application number and examination centre opted. Hall tickets of all Candidates will be uploaded to the university website three days prior to the exam. If needed, Candidates can download their hall ticket, entering their application number and Date of Birth.
- 9.3 In case you require a duplicate hall ticket, you should contact the University Representative at the Examination centre on the previous day of the examination and produce Xerox copies of the demand draft and the filled-in application to establish your candidature.
- 9.4 In the examination hall each candidate shall sign the attendance sheet. This signature shall be identical with the signatures on the Application form and the Hall Ticket. During the examination, **the candidate's left hand thumb impression also will be taken in the attendance sheet for identification.**
- 9.5 Candidates shall retain their hall tickets and produce at the time of counselling.

10. ADMISSION ENQUIRIES

- ◆ **For all enquiries related to the Entrance Examination and Admission, please call 0422 – 2685 169 / 170.**

11. EXAMINATION CENTRES

- ◆ Entrance examination will be conducted in schools / colleges situated in major cities / towns throughout India. The names of those cities / towns are listed in **Annexure IV** along with the city code. Examination will be conducted in a centre only if there are sufficient candidates. When candidates opting a centre are very few, they will be allocated to a nearby centre.

12. AT THE EXAMINATION CENTRE

- 12.1 Candidates shall be present at the examination hall 30 minutes before the commencement of the examination. Candidates will not be allowed to appear for the examination without producing the Hall ticket.
- 12.2 **Any malpractice or attempt to commit malpractice in the examination hall or any violation of the rules will lead to disqualification of the candidate.**
- 12.3 Candidates must bring black ball point pen, HB pencils, pencil Sharpener and Eraser.
- 12.4 Candidates shall occupy their respective allotted seats at 9.35 am.
- 12.5 Candidates will not be admitted to the examination hall 15 minutes after the commencement of examination.
- 12.6 Candidates will not be allowed to carry any textual material, printed or written bits of paper, Mathematical and Physical tables, electronic gadgets like calculator, cell phone etc. into the examination hall.
- 12.7 Read carefully the instructions on the question booklet and the coded answer sheet before answering the questions and fill up the required details on the question booklet and answer sheet.
- 12.8 Handle the answer sheet carefully; no spare answer sheet will be given.
- 12.9 Candidates will not be allowed to leave the examination hall before the end of the examination.
- 12.10 Candidates should hand over the answer sheet and the question booklet to the invigilator at the stroke of the long bell at 1.00 PM.

- 12.11 After handing over the answer sheet and question booklet to the invigilator, each candidate shall remain in his / her seat and affix his / her left hand thumb impression in the attendance sheet. The answer sheet of a candidate will not be valued if he / she has not affixed his / her thumb Impression on the attendance sheet.

13. ABOUT THE ENTRANCE EXAMINATION

- 13.1 **Entrance Examination Pattern:** The duration of the Examination is 3 hours (10 AM to 1 PM). There will be only one question paper containing objective type questions in Mathematics, Physics and Chemistry. Each question will be followed by four answers of which only one is correct / most appropriate. The question booklet will be in English. Each question carries 3 marks. **Negative mark (-1) will be awarded for any wrong answer.**

- 13.2 **Subject Combination:**

Subject	Weightage	Total No. of Questions	Total Marks
Mathematics	60questions	120	360 (120 x 3)
Physics	30questions		
Chemistry	30questions		

14. QUESTION BOOKLET & ANSWER SHEET

- 14.1 Sealed question booklet will be in 4 versions A, B, C & D. The version code of the question booklet, the number of pages and question booklet number will be printed on the front page of the question booklet.

- 14.2 Front page layout of the question booklet

PHYSICS , CHEMISTRY & MATHEMATICS					
Question booklet Version Code		Question Booklet No.		Time 3 Hrs	
Number of Pages		Number of Questions	120	Max: Marks	360
Registration Number					
Name of the Candidate					
Signature of the Candidate					

- ◆ **Using black ball point pen, candidate shall write his / her name, registration number and signature in the spaces provided in the question booklet.**

- 14.3 **Answer sheet**

- ◆ An OMR answer sheet is used for marking the answers. Specimen of the OMR answer sheet is given in **Annexure I.**

- 14.4 **Distribution of Question Booklet and Answer Sheet**

- ◆ Question booklet and coded answer sheet will be distributed in the examination hall 15 minutes before the actual time of commencement of examination, so that the candidates shall have sufficient time to read the instructions and fill up the required information on question booklet and answer sheet.

14.5 Important Points to note

- ◆ The candidate should not do any rough work on the answer sheet. All rough work should be done in the space provided for the purpose in the question booklet.
- ◆ Extra care is needed while handling the coded answer sheet in the following respects.
- ◆ **DO NOT: (i) pin or staple (ii) punch or tag (iii) make hole anywhere (iv) wet or soil (v) tear or mutilate (vi) wrinkle or fold the coded answer sheet.**

15. ENTRIES ON THE OMR (CODED) ANSWER SHEET

DATA PART of the coded sheet

- ◆ **The coded answer sheet has provision for entering the following data:**
 - Registration Number
 - Question booklet number
 - Question booklet version code
 - Signature of the Candidate
 - Name of the Candidate
 - Signature of the Invigilator
 - Name of the Invigilator
- ◆ **Before you start answering, write the details using black ball point pen and darken the bubbles using HB pencil as per the instructions below. Answer sheets without these details will not be valued.**

15.1 **Registration Number:** On the answer sheet, write the registration number within the rectangular box provided as given in the hall ticket and darken the corresponding bubbles. The registration number should be written without any correction or overwriting.

15.2 **Question booklet number:** This number is printed on the front page of the question booklet. Copy this number in the rectangular box on the answer sheet and darken the appropriate bubbles.

15.3 **Question booklet version code:** The question booklet given to you has a version code A, B, C or D. Write this code in the rectangular box and darken the appropriate bubble.

15.4 **Signature of the candidate:** The candidate has to sign in the space indicated and it should match with the signature in the application form and Hall Ticket.

15.5 **Name of the candidate:** Write the name as given in the hall ticket in CAPITAL letters correctly and legibly.

15.6 **Signature and name of the invigilator:** The invigilator will make these entries.

15.7 **Correcting entries in the answer sheet:** If any entry in INK happens to be wrong, strike off the same and write correctly in the nearby space. **Please 'DO NOT' use correction fluid on the answer sheet.** If any entry made using pencil happens to be incorrect, erase the same carefully without leaving any smudge and darken the correct bubble.

ANSWER PART of the coded sheet (Use HB Pencil only)

- ◆ This portion is intended for marking the answers to the questions.
- ◆ For each question, four alternative answers and corresponding four bubbles are given.
- ◆ Select the correct or most appropriate answer, and shade the corresponding bubble using **HB**

pencil. eg., If the answer to the question 2 is C, the bubble C has to be darkened as shown below.

Question No.	Answers			
1.	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
2.	<input type="radio"/> A	<input type="radio"/> B	<input checked="" type="radio"/> C	<input type="radio"/> D
3.	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D

- ◆ Mark / shade only one bubble against each question in the answer sheet. The bubble should be darkened completely.
- ◆ In case a candidate, after a second thought, wishes to change the choice already darkened, he may erase the marking completely with a good eraser and thereafter darken the alternative bubble afresh. **While erasing, extreme care should be taken to see that there is no damage to the sheet or no smudge left, as it will affect the evaluation.**

16. OPENING THE QUESTION BOOKLET.

- 16.1 Two minutes before the commencement of the examination, the invigilator will announce to open the question booklet. Do not open / break the seal before the announcement.
- 16.2 Immediately after opening the question booklet, the candidate should check the following.
- a. Whether the question booklet and all the pages are in good condition.
 - b. Whether it has the exact number of pages mentioned on the front page.
 - c. Whether it contains 120 questions numbered in serial order.

17. TIME SCHEDULE

Duration of the Examination	10 AM – 1.00 PM
Entry to the Examination hall	9.35 AM (Long Bell)
Distribution of Question booklet and OMR answer sheet	9.45 AM (Short Bell)
Filling-up the entries in the Question booklet and answer sheet	9.45 – 9.58 AM
Opening the question booklet	9.58 AM (Short Bell)
Examining of the question booklet	9.58 – 10.00 AM
Commencement of the Examination	10.00 AM (Short Bell)
Late entry of candidates to the hall permitted till	10.15 AM
Warning Bell	12.50 PM (Short Bell)
End of the Examination	1.00 PM (Long Bell)
Submission of answer sheet & question booklet	1.00 PM
Affixing the left hand thumb impression	1.00 PM – 1.10 PM

18. EVALUATION AND NEGATIVE MARKS

- 18.1 Three marks will be awarded for every correct answer. For every incorrect answer, one mark will be deducted from the total score. If no response is indicated in the answer sheet against a question, no marks, positive or negative will be awarded. If more than one answer is indicated against a question, it will be treated as “incorrect answer” and negative mark will be awarded. You are advised to mark an answer only if you are sure that it is the most appropriate .

18.2 The answer sheets are machine graded and scrutinized with precision. Hence request for revaluation, rechecking or retotalling will not be entertained.

19. PUBLICATION OF RANK LIST

- ◆ Rank list will be published in the University website (amrita.edu) within four weeks from the date of examination.

20. COUNSELLING AND ADMISSION

- 20.1 Counselling for admission will start in May / June 2010. Counselling intimation letter will be sent to the eligible candidates after the publication of the rank list of the Amrita Entrance Examination. The counselling schedule will be available in the university website (amrita.edu).
- 20.2 Counselling will be arranged simultaneously in the three campuses using satellite connectivity. Candidate can appear for counselling in any one of the three campuses and opt a branch in any campus according to his/her preference and availability of seat.
- 20.3 A certain percentage of seats in each campus will be earmarked for the candidates from the State in which the campus is situated.
- 20.4 At the time of Counselling, candidates shall submit originals of the following:
- Mark sheets of class X and XII,
 - Hall tickets of class XII Examination & Amrita Entrance Examination – Engg. 2010,
 - Transfer Certificate,
 - Other testimonials as specified in the call letter.
 - A detailed application form (Form No.4) sent to the candidates along with the counselling call letter shall be filled in and submitted along with the certificates.
- 20.5 If the original certificates are not submitted by a candidate, he / she will not be permitted to attend the counselling.
- 20.6 **When a candidate accepts the seat allotment, his / her original certificates will be retained by the University.**
- 20.7 Before seat allotment, each candidate has to pay Rs.30,000/- by Demand Draft as part of tuition fees. Candidates are required to pay the balance fees (Tuition and Hostel) and complete all other formalities within the time limit prescribed in the seat allotment order. The time allowed will be approximately ten days from the date of counselling. Request for extension of time for payment of fees will not be entertained.
- 20.8 The first year B.Tech classes are expected to start by the second/third week of July 2010.

21. WITHDRAWAL FROM THE PROGRAMME AND REFUND OF FEES

Refund of fees will be made as per the regulations of the Govt.of India. If a student admitted to the B.Tech. programme withdraws from the programme before the starting of the classes, the fees collected from the student will be refunded after deducting a processing fee of Rs, 1000/-.

If a student leaves after starting the classes, but before closing the admission, and if the seat consequently falling vacant is filled by another candidate before the last date of admission, the University will return the fees collected with proportionate deductions of monthly fees. If the vacancy is not filled up as above, the fee will not be refunded.

No refund will be given to a student leaving after the closing of admissions.

The date of closing of admissions will be announced by the University.

FEE STRUCTURE FOR B.TECH DEGREE PROGRAMMES – 2010

@ AMRITA CAMPUSES

SL.NO.	HEAD	TERM	FEES (in Rupees)		
			ETTIMADAI	BANGALORE	AMRITAPURI
01	Tuition Fee	Annual	65,000	60,000	60,000
02	Development Fee	"	10,000	5,000	5,000
03	University Fee	"	6,000	6,000	6,000
04	Establishment Fee	"	7,500	7,000	6,000
05	Special Fee (Including Matruvani, Magazine, Association, Convocation, Career Skill Development etc.)	"	12,000	9,000	9,000
06	Insurance	One Time	1,100	1,100	1,100
07	Uniform	"	2,500	2,500	2,500
08	Admission Fee	"	500	500	500
09	Caution Deposit	"	5,000	5,000	5,000
	TOTAL	Annual	1,00,500	87,000	86,000
	TOTAL	One Time	9,100	9,100	9,100
	GRAND TOTAL		1,09,600	96,100	95,100

HOSTEL FEES

SL.NO.	HEAD	TERM	FEES (in Rupees)		
			ETTIMADAI	BANGALORE	AMRITAPURI
01	Room Rent	Annual	14,000	15,000	Girls 6,000
					Boys 10,000
02	Establishment Charges	"	7,500	7,000	6,000
03	Medical Fee	"	1,000	1,000	--
04	Mess Charges	"	25,000	24,000	21,000
05	Caution Deposit	One Time	5,000	3,000	3,000
	TOTAL	Annual	47,500	47,000	Girls 33,000
					Boys 37,000
	TOTAL	One Time	5,000	3,000	3,000
	GRAND TOTAL		52,500	50,000	Girls 36,000
					Boys 40,000

ANNEXURE II

AXIS BANK & DHANALAKSHMI BANK BRANCHES

(WHERE APPLICATION FORMS ARE AVAILABLE)

S.No	State	Bank Location	AXIS Bank	Dhanalakshmi Bank
01	ANDHRA PRADESH	Anantapur	✓	
02		Chittoor	✓	
03		Cuddapah (Rajampet)		✓
04		Eluru	✓	✓
05		Guntur	✓	✓
06		Gudivada (Eluru Road)	✓	
07		Hyderabad (Abids Road)		✓
08		Hyderabad (Banjara Hills)	✓	✓
09		Hyderabad (Begumpet Road)	✓	
10		Hyderabad (Dilsukh Nagar)	✓	
11		Hyderabad (Himayat Nagar)	✓	
12		Hyderabad (Jubilee Hills)	✓	
13		Hyderabad (Kompally)	✓	
14		Hyderabad (Kukatpally)	✓	✓
15		Hyderabad (Medhipatnam Ring Road)	✓	
16		Hyderabad (S.R. Nagar)	✓	✓
17		Kakinada	✓	✓
18		Karimnagar	✓	
19		Khammam	✓	✓
20		Kurnool	✓	
21		Machilipatnam	✓	
22		Narasaraopet	✓	
23		Nellore	✓	✓
24		Nizamabad	✓	✓
25		Ongole	✓	
26		Rajamundry	✓	
27		Secunderabad	✓	
28		Srikakulam	✓	
29		Tirupati		✓
30		Vijayawada	✓	✓
31		Vishakhapatnam (VIP Road)		✓
32		Vishakhapatnam (Dwaraka Nagar)	✓	
33		Vizianagaram	✓	
34		Warangal	✓	
01	ASSAM	Guwahati	✓	
01	BIHAR	Bhagalpur	✓	
02		Gaya	✓	
03		Patna	✓	
01	CHATTISGARH	Bhilai	✓	
02		Bilaspur	✓	
03		Raipur	✓	
01	CHANDIGARH	Chandigarh	✓	
01	DELHI	Chandni Chowk	✓	
02		Connaught Place		✓

S.No	State	Bank Location	AXIS	DLB	
03	DELHI	Dwarka	✓		
04		Greater Kailash	✓		
05		Karol Bagh	✓	✓	
06		Lajpat Nagar	✓	✓	
07		Nehru Place		✓	
08		Punjabi Bagh	✓		
09		Rajouri Garden	✓		
10		Saket	✓		
11		Vasant Vihar	✓		
01		GOA	Margao	✓	
02			Panaji	✓	
03	Vasco		✓		
01	GUJARAT	Ahmedabad	✓	✓	
02		Anand	✓		
03		Gandhi Nagar	✓		
04		Rajkot	✓		
05		Surat	✓	✓	
06		Vadodara	✓	✓	
01	HARYANA	Bhiwani	✓		
02		Faridabad	✓	✓	
03		Gurgaon		✓	
04		Rohtak	✓		
01	HIMACHAL PRADESH	Shimla	✓		
01	JHARKAND	Dhanbad	✓		
02		Jamshedpur	✓		
03		Ranchi	✓		
01	KARNATAKA	Bengaluru (Banashankari)	✓		
02		Bengaluru (Dickenson Road)		✓	
03		Bengaluru (Electronic City)	✓		
04		Bengaluru (Indira Nagar)	✓		
05		Bengaluru (Jaya Nagar)		✓	
06		Bengaluru (J.C.Road)		✓	
07		Bengaluru (J.P.Nagar)	✓		
08		Bengaluru (Koramangala)	✓	✓	
09		Bengaluru (Majestic)	✓		
10		Bengaluru (Malleswaram)		✓	
11		Bengaluru (M.G.Road)	✓	✓	
12		Bengaluru (Peenya)	✓	✓	
13		Bengaluru (Rajaji Nagar)	✓		
14		Bengaluru (R.T.Nagar)	✓		
15		Bengaluru (Sanjay Nagar)	✓		
16		Bengaluru (Vijaya Nagar)	✓		
17		Belgaum		✓	
18		Bellary	✓		
19		Bijapur	✓		
20		Davangere	✓		
21		Dharwad	✓		
22		Gulbarga	✓		
23		Hassan	✓		
24		Hubli	✓		

S.No	State	Bank Location	AXIS	DLB
25	KARNATAKA	Karwar	✓	
26		Mangalore	✓	✓
27		Mysore (Kuvenpu Nagar)	✓	
28		Raichur	✓	
29		Shimoga		✓
30		Tumkur (Batawadi)		✓
31		Tumkur (B.H.Road)	✓	
32		Udupi	✓	
01	KERALA	Adoor	✓	
02		Alappuzha	✓	✓
03		Aluva	✓	
04		Changanacherry	✓	
05		Chenganoor	✓	
06		Ernakulam (Kaloor)		✓
07		Ernakulam (Shanmugam Road)		✓
08		Guruvayoor		✓
09		Haripad		✓
10		Kalpetta		✓
11		Kollam	✓	✓
12		Kannur	✓	✓
13		Kasargod	✓	✓
14		Kochi (Willingdon Island)	✓	
15		Kottayam	✓	✓
16		Kozhikode	✓	✓
17		Palai	✓	✓
18		Palakkad City	✓	✓
19		Palarivattom	✓	
20		Pathanamthitta	✓	✓
21		Perinthalmanna		✓
22		Malappuram	✓	✓
23		Thalassery		✓
24		Thiruvalla	✓	✓
25		Thodupuzha	✓	✓
26		Thripunithura		✓
27		Thrissur	✓	✓
28		Trivandrum Fort		✓
29		Trivandrum (Karamana)	✓	
30		Trivandrum (Pattam, p.o)	✓	
31		Vazhuthacaud	✓	
01	MADHYAPRADESH	Bhopal	✓	
02		Gwalior	✓	
03		Jabalpur		✓
04		Indore	✓	
05		Sehore	✓	
01	MAHARASHTRA	Amravati	✓	
02		Kolhapur	✓	
03		Matunga		✓
04		Mumbai (Chembur)	✓	✓
05		Mumbai (Dadar)	✓	
06		Mumbai (Fort)	✓	✓

S.No	State	Bank Location	AXIS	DLB
07	MAHARASHTRA	Mumbai (Sion)		✓
08		Mumbai (Thane)	✓	
09		Mumbai (Vashi)	✓	✓
10		Nagpur	✓	
11		Nasik	✓	
12		Pune	✓	
01	MANIPUR	Imphal	✓	
01	MIZORAM	Aizwal	✓	
01	NAGALAND	Kohima	✓	
01	ORISSA	Bhubaneshwar	✓	
02		Cuttack	✓	
01	PONDICHERRY	Pondicherry	✓	
01	PUNJAB	Amristar	✓	
02		Jalandar	✓	
03		Ludhiana	✓	
04		Mohali	✓	
05		Patiala	✓	
01	RAJASTHAN	Ajmer	✓	
02		Bikaner	✓	
03		Jaipur	✓	✓
04		Jodhpur	✓	
05		Kota	✓	
06		Udaipur	✓	
01	TAMILNADU	Arani	✓	
02		Attur	✓	
03		Chennai (Adayar)	✓	
04		Chennai (Anna Nagar)	✓	✓
05		Chennai (Anna Salai)	✓	
06		Chennai (Ashok Nagar)	✓	✓
07		Chennai (George Town)	✓	✓
08		Chennai (Kilpauk)	✓	
09		Chennai (Mandaveli)		✓
10		Chennai (Mylapore)	✓	
11		Chennai (Mount Road)		✓
12		Chennai (Nanganallur)	✓	
13		Chennai (Purasawalkam)		✓
14		Chennai (Tambaram)	✓	
15		Chennai (Tiruvanmayur)	✓	
16		Chennai (T.Nagar)	✓	✓
17		Coimbatore (Avanashi Road)	✓	✓
18		Coimbatore (Cross Cut Road)		✓
19		Coimbatore (Ettimadai)		✓
20		Coimbatore (R.S.Puram)	✓	
21		Coimbatore (Trichy Road)	✓	
22		Cuddalore	✓	
23		Cumbum	✓	
24		Dharmapuri	✓	
25		Dindugul		✓
26		Erode (Netaji Road)		✓

S.No	State	Bank Location	AXIS	DLB
27	TAMILNADU	Erode (Perunthurai Road)	✓	
28		Erode (Veerapanchatram)		✓
29		Hosur	✓	
30		Ilanji	✓	
31		Kancheepuram	✓	✓
32		Karaikudi	✓	
33		Karur	✓	✓
34		Kumbakonam	✓	
35		Madurai	✓	✓
36		Mayiladuthurai	✓	
37		Nagercoil	✓	✓
38		Namakkal		✓
39		Ooty	✓	
40		Perambalur	✓	
41		Pollachi	✓	✓
42		Pudukottai	✓	
43		Rajapalayam	✓	
44		Rasipuram	✓	
45		Salem	✓	✓
46		Salem (Omalur)	✓	
47		Sathyamangalam	✓	
48		Sivakasi	✓	
49		Thanjavur	✓	
50		Theni	✓	
51		Thiruvallur	✓	
52		Tiruchengode	✓	
53		Tirunelveli	✓	
54		Tirupur	✓	✓
55		Tiruvannamalai	✓	
56		Trichy	✓	✓
57		Tuticorin	✓	
58		Udumalpet		✓
59		Vellore	✓	✓
60		Villupuram	✓	
01	UTTARPRADESH	Agra	✓	
02		Allahabad	✓	
03		Ghaziabad	✓	✓
04		Kanpur	✓	
05		Lucknow	✓	✓
06		Noida	✓	
07		Varanasi	✓	
01	UTTRANCHAL	Dehradun	✓	
02		Haridwar	✓	
01	WEST BENGAL	Asansol	✓	
02		Darjeeling	✓	
03		Durgapur	✓	
04		Howrah	✓	✓
05		Kolkatta	✓	✓

ANNEXURE III
LIST OF STATES / UNION TERRITORIES
(See item 5 in the application form)

Sl. No	State	Code
1	Andhra Pradesh	01
2	Arunachal Pradesh	02
3	Assam	03
4	Bihar	04
5	Chhattisgarh	05
6	Goa	06
7	Gujarat	07
8	Haryana	08
9	Himachal Pradesh	09
10	Jammu and Kashmir	10
11	Jharkhand	11
12	Karnataka	12
13	Kerala	13
14	Madhya Pradesh	14
15	Maharashtra	15
16	Manipur	16
17	Meghalaya	17
18	Mizoram	18
19	Nagaland	19
20	Orissa	20
21	Punjab	21
22	Rajasthan	22
23	Sikkim	23
24	Tamil Nadu	24
25	Tripura	25
26	Uttar Pradesh	26
27	Uttaranchal	27
28	West Bengal	28
29	Andaman and Nicobar Islands	29
30	Chandigarh	30
31	Dadra and Nagar Haveli	31
32	Daman and Diu	32
33	Lakshadweep	33
34	Delhi	34
35	Pondicherry	35
36	Countries other than India	40

ANNEXURE IV

EXAMINATION CITIES WITH CODE NUMBER

(See item 6 in the application form)

S.No	State	No	City / Town	City Code	No	City / Town	City Code
1	Tamilnadu	1	Chennai	101	11	Ooty	111
		2	Coimbatore	102	12	Pudukottai	112
		3	Cuddalore	103	13	Salem	113
		4	Dindigul	104	14	Thanjavur	114
		5	Erode	105	15	Tirunelveli	115
		6	Hosur	106	16	Tirupur	116
		7	Karur	107	17	Trichy	117
		8	Madurai	108	18	Tuticorin	118
		9	Nagercoil	109	19	Vellore	119
		10	Namakkal	110			
2	Kerala	1	Alappuzha	201	9	Kozhikode	209
		2	Amritapuri	202	10	Malappuram	210
		3	Ernakulam	203	11	Palakkad	211
		4	Kalpetta	204	12	Pathanamthitta	212
		5	Kannur	205	13	Thiruvananthapuram	213
		6	Kasaragod	206	14	Thrissur	214
		7	Kollam	207	15	Thodhupuzha	215
		8	Kottayam	208			
3	Karnataka	1	Belgaum	301	7	Karwar	307
		2	Bengaluru	302	8	Mangalore	308
		3	Bijapur	303	9	Mysore	309
		4	Davangere	304	10	Raichur	310
		5	Gulbarga	305	11	Shimoga	311
		6	Hubli	306	12	Udupi	312

S.No	State	No	City / Town	City Code	No	City / Town	City Code
4	Andhra Pradesh	1	Anantapur	401	5	Tirupati	405
		2	Hyderabad	402	6	Vijayawada	406
		3	Kakinada	403	7	Vishakhapatnam	407
		4	Nellore	404			
5	Assam	1	Guwahati	411			
6	Bihar	1	Patna	416			
7	Chandigarh	1	Chandigarh	421			
8	Chhattisgarh	1	Raipur	426			
9	Delhi	1	New Delhi	431			
10	Goa	1	Panaji	436			
11	Gujarat	1	Ahmedabad	441			
		2	Vadodara	442			
12	Jharkand	1	Jamshedpur	446			
		2	Ranchi	447			
13	Madhya Pradesh	1	Bhopal	451			
		2	Indore	452			
14	Maharashtra	1	Mumbai	456			
		2	Nagpur	457			
		3	Pune	458			
15	Orissa	1	Bhubaneshwar	461			
16	Pondicherry	1	Pondicherry	466			
17	Rajasthan	1	Jaipur	471			
		2	Kota	472			
18	Uttaranchal	1	Dehra Dun	476			
19	Uttarpradesh	1	Lucknow	481			
		2	Varanasi	482			
20	West Bengal	1	Durgapur	486			
		2	Kolkatta	487			
21	Andaman	1	Port Blair	491			

ANNEXURE V
SYLLABUS FOR ENTRANCE EXAMINATION
MATHEMATICS

a. **COMPLEX NUMBERS**

Algebra of complex numbers, modulus and argument (or amplitude) of a complex number, square root of a complex number. cube roots of unity, triangle inequality.

b. **MATRICES AND DETERMINANTS**

Determinants and matrices of order two and three- properties of determinants, evaluation of determinants, addition and multiplication of matrices, adjoint and inverse of a matrix. Solution of simultaneous linear equations using determinants.

c. **QUADRATIC EQUATIONS**

Quadratic equations and their solutions, relation between roots and coefficients, nature of roots, formation of quadratic equations with given roots.

d. **PERMUTATIONS AND COMBINATIONS**

Fundamental principle of counting; permutation as an arrangement and combination as a selection, meaning of $P(n, r)$ and $C(n, r)$, simple applications.

e. **SEQUENCES AND SERIES**

Arithmetic, Geometric and Harmonic progressions. Relation between A.M., G.M. and H.M.. Special series' n , n^2 , n^3 , Arithmetic-Geometric series, exponential and logarithmic series.

f. **VECTOR ALGEBRA**

Vectors and scalars, addition of two vectors, components of a vector in two and three dimensional space, scalar and vector products, scalar and vector triple products. Application of vectors to plane geometry.

g. **TRIGONOMETRY**

Trigonometrical identities and equations. Inverse trigonometric functions and their properties. Properties of triangles including centroid, incentre, circumcentre and orthocentre. Solution of triangles. Heights and distances.

h. **MEASURES OF CENTRAL TENDENCY AND DISPERSION**

Calculation of mean, median and mode, standard deviation, variance and mean deviation for grouped and ungrouped data.

i. **PROBABILITY**

Probability of an event, addition and multiplication theorems of probability and their applications. Conditional probability; Bayes' theorem. Probability distribution of a random variate- Binomial and Poisson distributions and their properties.

j. **DIFFERENTIAL CALCULUS**

Polynomial, rational, trigonometric, logarithmic and exponential functions. Graphs of simple functions. Limits, continuity and differentiation of the sum, difference, product and quotient of two functions. Differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite and implicit functions; derivatives of order up to two. Applications of derivatives-maxima and minima of functions of one variable, tangents and

normals, Rolle's and Lagrange's mean value theorems.

k. **INTEGRAL CALCULUS**

Integral as an anti derivative, fundamental integrals involving algebraic, trigonometric, exponential and logarithmic functions. Integration by substitution, by parts and by partial fractions. Integration using trigonometric identities. Integral as a limit of sum. Properties of definite integrals. Evaluation of definite integral, determining areas of the regions bounded by simple curves.

l. **DIFFERENTIAL EQUATIONS**

Formation of differential equations. Solutions of first order differential equations- the method of separation of variables, homogeneous and linear differential equations.

m. **TWO DIMENSIONAL GEOMETRY**

Review of cartesian system of rectangular co-ordinates in a plane, distance formula, area of a triangle, condition for the collinearity of three points, slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axes.

n. **THE STRAIGHT LINE AND PAIR OF STRAIGHT LINES**

Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, distance of a point from a line. Equations of internal and external bisectors of angles between two lines, equation of a family of lines passing through the point of intersection of two lines, point of intersections and angles between two lines. Pair of straight lines- condition for the general second degree equation to represent a pair of lines, point of intersection and angle between pair of lines through the origin, combined equation of the bisectors of the angles between a pair of lines,

o. **CIRCLES AND FAMILY OF CIRCLES**

Equation of a circle- standard form, general form, parametric form, equation of a circle when the end points of a diameter are given. Radius and centre of a circle, points of intersection of a line and a circle. Condition for a line to be tangent, equation of a family of circles through the intersection of two circles, condition for two intersecting circles to be orthogonal.

p. **CONIC SECTIONS**

Sections of cones, equations of conic sections (parabola, ellipse and hyperbola) in standard forms, conditions for a line to be a tangent and point(s) of tangency.

PHYSICS

a. **UNITS AND DIMENSIONS**

Units for measurement, system of units, SI, fundamental and derived units, dimensions and their applications.

b. **MECHANICS**

Motion in straight line, uniform and non-uniform motion, uniformly accelerated motion and its applications Scalars and Vectors, and their properties; resolution of vectors, scalar and vector products; uniform circular motion and its applications, projectile motion Newton's Laws of motion; conservation of linear momentum and its applications, laws of friction, Concept of work, energy and power; energy-kinetic and potential; conservation of energy; different forms of energy. Elastic collisions in one and two dimensions.

Center of mass of a many particle system; center of mass of a rigid body, rotational motion and torque. Angular momentum and its conservation. Moments of inertia, parallel and perpendicular axes theorem, moment of

inertia for a thin rod, ring, disc and sphere.

Gravitation: Acceleration due to gravity and its properties. One and two dimensional motion under gravity. Universal law of gravitation, planetary motion, Kepler's laws, artificial satellite-geostationary satellite, gravitational potential energy near the surface of earth, gravitational potential and escape velocity.

h. SOLIDS AND FLUIDS

Solids: Elastic properties, Hooke's law, Young's modulus, bulk modulus, modulus of rigidity. Liquids: Cohesion and adhesion; surface energy and surface tension; flow of fluids, Bernoulli's theorem and its applications; viscosity, Stoke's Law, terminal velocity.

(i) OSCILLATIONS AND WAVES

Periodic motion, simple harmonic motion and its equation, oscillations of a spring and simple pendulum.

Wave motion, properties of waves, longitudinal and transverse waves, superposition of waves, Progressive and standing waves. Free and forced oscillations, resonance, vibration of strings and air columns, beats, Doppler effect.

(ii) HEAT AND THERMODYNAMICS

Thermal expansion of solids, liquids and gases and their specific heats, relationship between C_p and C_v for gases, first and second laws of thermodynamics, Carnot cycle, efficiency of heat engines. Transference of heat; thermal conductivity; black body radiations, Kirchoff's law, Wein's Law, Stefan's law of radiation and Newton's law of cooling.

(iii) ELECTROSTATIC, CURRENT ELECTRICITY AND MAGNETOSTATICS

Coulomb's law, dielectric constant, electric field, lines of force, field due to dipole, electric flux, Gauss's theorem and its applications; electric potential, potential due to a point charge; conductors and insulators, distribution of charge on conductors; capacitance, parallel plate capacitor, combination of capacitors, energy stored in a capacitor.

Electric current: Cells-primary and secondary, grouping of cells; resistance and specific resistivity and its temperature dependence. Ohm's law, Kirchoff's Law. Series and parallel circuits; Wheatstone's Bridge and potentiometer with their applications.

Heating effects of current, electric power, concept of thermoelectricity-Seebeck effect and thermocouple; chemical effect of current- Faraday's laws of electrolysis.

Magnetic effects: Oersted's experiment, Biot Savart's law, magnetic field due to straight wire, circular loop and solenoid, force on a moving charge in a uniform magnetic field (Lorentz force), forces and torques on a current carrying conductor in a magnetic field, force between current carrying wires, moving coil galvanometer and conversion to ammeter and voltmeter.

Magnetostatics: Bar magnet, magnetic field, lines of force, torque on a bar magnet in a magnetic field, earth's magnetic field; para, dia and ferro magnetism, magnetic induction, magnetic susceptibility.

d. ELECTROMAGNETIC INDUCTION AND ELECTROMAGNETIC WAVES

Induced e.m.f., Faraday's law, Lenz's law, self and mutual inductance; alternating currents, impedance and reactance, power in ac; circuits with L C and R series combination, resonant circuits, transformer and AC generator.

Electromagnetic waves and their characteristics; electromagnetic spectrum from gamma to radio waves.

e. RAY AND WAVE OPTICS

Reflection and refraction of light at plane and curved surfaces, total internal reflection; optical fiber; deviation

and dispersion of light by a prism; lens formula, magnification and resolving power; microscope and telescope, Wave nature of light, interference, Young's double experiment; thin films, Newton's rings. Diffraction: diffraction due to a single slit; diffraction grating, polarization and applications.

f. MODERN PHYSICS

Charge on an electron, photoelectric effect, Alpha particle scattering experiment, atomic masses, size of the nucleus; radioactivity, alpha, beta and gamma particles/rays. Radioactive decay law, half life and mean life of radio active nuclei; Nuclear binding energy, mass energy relationship, nuclear fission and nuclear fusion.

Energy bands in solids, conductors, insulators and semiconductors, pn junction, diode, diode as a rectifier, transistor action, transistor as an amplifier.

CHEMISTRY

a. BASIC CONCEPTS:

Atomic and molecular masses; Chemical Equation and stoichiometry.

b. STATES OF MATTER:

Gaseous State: Gas laws, Avogadro's hypothesis and gas equations; Kinetic Theory of Gases; Liquefaction, Critical Phenomena; Liquid State and Solid state.

c. ATOMIC STRUCTURE

Bohr's Model; de Broglie equation; Quantum Mechanical Model; Aufbau's Principle, Pauli's Exclusion Principles, Hund's Rule, Electronic Configuration; Bonding: Lewis structure, SEPR theory, hybridization, ionic, covalent and coordinate covalent bonds, bonding in solid state, MO theory, bond order and magnetic properties of H₂, O₂, N₂, F₂.

d. SOLUTIONS:

Types, Units of concentration, Raoult's Law, colligative properties, abnormal molecular weights.

e. CHEMICAL ENERGETICS AND THERMODYNAMICS:

Internal Energy, Enthalpy, Hess's Law, First & Second Laws of thermodynamics & applications; entropy, free energy; spontaneity of a chemical reaction.

f. CHEMICAL KINETICS & CHEMICAL EQUILIBRIUM:

Rate and orders of a reaction; activation energy; catalyst; Rate law; physical & chemical equilibria; Le Chatelier's principle; acid base equilibrium; acids and bases; pH; buffers; solubility product.

g. REDOX REACTIONS, ELECTROCHEMISTRY & SURFACE CHEMISTRY:

Electron Transfer Concepts of Oxidation and reduction; Electrochemical cells; emf; Nernst Equation; Molar conductivity; Kohlrausch's Law; Fuel Cells; Corrosion. Physical & Chemical adsorption isotherms; Colloids: Preparation & properties; Homogenous and Heterogenous Catalysis; Enzymes.

h. PERIODIC PROPERTIES, CHEMICAL FAMILIES, CHEMISTRY OF NON METALS & METALS:

Modern Periodic Law; Ionization Energy, Electron Affinity, Atomic Radii, Valency, Trends in Groups and periods. Chemistry of s and p block elements; Alkali metals, Alkaline Earth metals, Boron, Carbon, Nitrogen, Oxygen Halogen and Noble gases families; Hydrogen: Position, Ortho para, Isotopes, hybrids; Oxygen, Water, Hydrogen peroxide, Hard & Soft water; Ammonia, Nitrogen oxides, Nitric acid; Boron, Boric Acid, Borax; Carbides, Allotropy of Carbon; Sodium, Magnesium, Copper, Silver, Zinc, Transition Metals, and Lanthanides:

Extraction, properties and uses.

i. **CO-ORDINATION CHEMISTRY:**

Nomenclature, isomerism and bonding in coordination compounds; Werner's Theory.

j. **NUCLEAR CHEMISTRY:**

Radioactivity, Nuclear reactions, Radiocarbon dating, Radioactive series, Artificial Transmutation.

k. **ORGANIC CHEMISTRY FUNDAMENTALS:**

Purification; detection and estimation of elements; Empirical and Molecular formulae, Classification, Functional Groups, IUPAC Nomenclature, Homolytic and Heterolytic Bond Fissions, Structural and Stereoisomerisms, Free radicals, Carbocations and carbanions; Substitution, addition, elimination and rearrangement reactions.

l. **HYDROCARBONS & HALO ALKANES & HALO ALKENES:**

Alkanes, Alkenes and Alkynes, Halo alkanes & Halo alkenes: Preparation, properties and uses; Aromatic Hydrocarbons: Benzene, Structure, Resonance, Substitution in Benzene. Petroleum: Cracking, reforming, Octane number.

m. **ORGANIC COMPOUNDS CONTAINING OXYGEN, NITROGEN:**

Preparation properties and uses of Aromatic and aliphatic alcohols, Polyhydric alcohols, ethers, aldehydes, ketones, carboxylic acids and their derivatives; Cyanides, isocyanides, nitro compounds and amines.

n. **SYNTHETIC AND NATURAL POLYMERS & BIOMOLECULES:**

Natural and Synthetic polymers; Teflon, PVC, Polystyrene, Nylon 66 Terylene, and Bakelite; carbohydrates, amino acids and peptides, Nucleic Acids, lipids etc.

o. **CHEMISTRY IN ACTION & ENVIRONMENTAL CHEMISTRY:**

Dyes, Medicines (Antipyretics, Analgesics and Antibiotics), Rocket Propellants; Acid Rain, Ozone Hole, Green House Effect, Global Warming Industrial Pollution.

ANNEXURE VI

MODEL QUESTIONS

MATHEMATICS

1. The value of $\cot(2 \cos^{-1}(4/5))$ is

- (a) $\frac{16}{25}$ (b) $\frac{7}{24}$ (c) $\frac{21}{24}$ (d) $\frac{9}{25}$.

2. If $(xe)^y = e^x$, then $\frac{dy}{dx}$ at $x = e$ is

- (a) $1/4$ (b) 0 (c) 1 (d) $1/2$.

3. The lines $x - 2y + 4 = 0$ and $2x - 3y + 7 = 0$ are the diameters of the circle whose area is 132 sq. units. The equation of this circle is ($\pi = 22/7$)

- (a) $x^2 + y^2 - 4x - 2y - 37 = 0$ (c) $x^2 + y^2 - 4x - 2y - 37 = 0$
(b) $x^2 + y^2 - 4x - 2y - 37 = 0$ (d) $x^2 - y^2 - 4x - 2y - 37 = 0$

4. The value of $\int_1^{e^{37}} \frac{\pi \sin(\pi \log x)}{x} dx$ is

- (a) e (b) 2 (c) $\log e^{37}$ (d) 1 .

5. If the mean and standard deviation of a binomial distribution are '20' and '2', then the number of trials is

- (a) 40 (b) 80 (c) 25 (d) 50.

PHYSICS

1. The magnitude of acceleration of a mass sliding along an incline making 30° angle with vertical is
(a) $g/2$ (b) $\sqrt{3}g/2$ (c) $g/\sqrt{2}$ (d) $g/\sqrt{3}$
2. The magnitudes of electric field generated by a charge Q at origin is measured at point A with coordinates $(3,4,5)$ and at point B with coordinates $(-5,3,-4)$, Then,
(a) the magnitude of the field is higher at A
(b) the magnitude of the field is higher at B
(c) the magnitudes of the field is same at A and B
(d) no definite statement can be made regarding the relative magnitudes
3. The work done in forming a bubble of radius r from a liquid of surface tension σ is W . What will be the work done to form a bubble of radius $3r$ from a liquid of surface tension 2σ ?
(a) $6W$ (b) $12W$ (c) $18W$ (d) $36W$
4. What is the magnetic flux crossing unit area of xy plane generated by magnetic induction $\mathbf{B}=10(\mathbf{i}+2\mathbf{j}+4\mathbf{k})$? All quantities are in SI units.
(a) 10 Wb (b) 20 Wb (c) 40 Wb (d) $\sqrt{21} \text{ Tesla}$
5. Which photon carries the highest momentum?
(a) X-ray photon (b) Ultra violet photon
(c) Infra red photon (d) Microwave photon

CHEMISTRY

- The relative stabilities of the following species are
 - $O_2^- > O_2 > O_2^- > O_2^{2-}$
 - $O_2^- < O_2 < O_2^- < O_2^{2-}$
 - $O_2^+ < O_2 = O_2^- < O_2^{2-}$
 - $O_2^+ > O_2 = O_2^- > O_2^{2-}$
- An aqueous solution freezes at -0.186°C . Given $K_f = 1.86$ and $K_b = 0.512$, what will be the elevation in boiling point of the solution?
 - 0.186°C
 - -0.186°C
 - 0.0512°C
 - 0.512°C
- In group 13 elements, the decreasing stability of higher oxidation state with increasing atomic number is because of
 - the decrease in bond energy with decrease in size
 - the increase in bond energy with decrease in size
 - the increase in bond energy with increase in size
 - the decrease in bond energy with increase in size
- From potential energy considerations, the conformations of n-butane follow the order:
 - staggered < gauche < eclipsed < fully eclipsed
 - staggered < gauche < eclipsed = fully eclipsed
 - staggered < gauche = eclipsed < fully eclipsed
 - staggered = gauche < eclipsed < fully eclipsed
- The acidic character of carboxylic acids is due to resonance stabilization of carboxylate ion. Electron releasing groups such as alkyl groups will
 - increase the negative charge on the carboxylate ion and hence destabilizes it
 - increase the negative charge on the carboxylate ion and hence stabilizes it
 - decrease the negative charge on the carboxylate ion and hence destabilizes it
 - decreases the negative charge on the carboxylate ion and hence stabilizes it

FAQ on B.Tech Admission 2010

Qn.- 1. What is the procedure to get admission for B.Tech. in Amrita University.?

Ans: A student who passed class XII examination scoring minimum 60% marks separately in Physics, Chemistry and Maths and who appeared for Amrita Entrance Exam is eligible to get admission based on his rank in the entrance exam. Diploma holders with minimum 60% are also eligible to appear for the entrance exam.

Qn.- 2. Can a candidate who has scored high rank in any other state or national entrance exam get direct admission in Amrita?

Ans : No. Only candidates who appeared for Amrita Entrance exam 2010 are eligible for admission.

Qn.- 3. Is Amrita Vishwa Vidyapeetham affiliated to any University for purpose of recognition of degrees?

Ans : No. Amrita Vishwa Vidyapeetham is a University established under sec 3 of UGC Act 1956. Being a University, the question of affiliation to another university does not arise. Since the university is recognized by UGC and Ministry of HRD, Govt. of India, the courses offered by Amrita University are recognized.

The University is accredited by National Assessment and Accreditation Council (NAAC) with 'A' Grade in 2009.

Qn.- 4. How is Amrita B.Tech.Programme designed?

Ans : Choice Based credit system with continuous evaluation is followed in semester pattern.

Qn.- 5. Is campus transfer possible after joining the B.Tech. programme in anyone of the Amrita campuses?

Ans : No. There is no provision for campus transfer.

Qn.- 6. How many students are presently studying in the University?

Ans: At present around 14,000 students are studying in the five campuses of the University.

Qn.- 7. What is faculty student ratio for the engineering programmes?

Ans : 1 : 12

Qn.- 8. Where should I attend the counselling for B.Tech. admission?

Ans : You can attend the counselling in any one of the three campuses at your convenience and opt any branch in any one of the three campuses according to the availability of seat at the time of your counselling.

Qn.- 9. At the time of counselling, is the presence of candidate compulsory?

Ans : Yes, the candidate along with his parent or guardian shall be present at the counselling desk.

Qn.- 10. At the time of counselling, is it enough if I submit Photostat copies of my certificates?

Ans : Sorry. Original certificates are to be submitted (see section 20 in this Handbook.)

Qn.- 11. If I do not receive call letter in time to attend the counselling, what can I do?

Ans : The counselling schedule will be published in the university website. Candidates who do not get the intimation letter shall check the website and if their rank is included for counselling, they may attend the counselling with all their original certificates as specified. Moreover they may contact the university office in this regard before the date of counselling.

Qn.- 12. In XII class exam my average marks for Physics, Chemistry and Mathematics is above 60% but in one subject the score is less than 60%. Can I attend the counselling?

Ans : No. One should have passed XII class exam scoring 60% minimum in each of Physics, Chemistry and Mathematics to attend the counselling.

Qn.- 13. After admission, if one wants to withdraw from the programme, what about the refund of fees?

Ans : Refer to section 21 in this handbook.

CHECK LIST

Before mailing the application, please ensure that

- your name is written as per the 12th class records.
- full & correct mailing address is written. (NRI's shall give their address in India)
- your contact phone number & Email Id are written correctly.
- you have used black ball point pen to write and HB pencil to darken the bubbles.
- you have mentioned correctly the city code of the examination centre.
- you have mentioned correctly the State code from where you have completed your 12th class.
- you have affixed a recent passport size colour photograph of good quality in the space provided.
- you have enclosed an extra copy of the same photograph with your name and application number written on the back, without stapling, pinning or pasting.
- your photograph is not attested.
- you have signed in the space provided on the first page and second page of the Application Form.
- your parent / guardian has signed the declaration.
- you have not used any pin or staple on the application.
- you have retained a photocopy of the filled-in application form and DD for future reference.
- your application is to be despatched in the pre-addressed cover intended for sending the same and is addressed to;

The Admission Co-ordinator
Amrita School of Engineering
Amrita Vishwa Vidyapeetham University
Ettimadai (P.O), Coimbatore – 641 105.
Tamilnadu. Phone: 0422 – 2656422 / 2685000

Dates to Remember

Issue of Application forms begins on	-	21/12/2009 (Monday)
Last date for applying online	-	01/04/2010 (Thursday)
Last date of issue of Application forms	-	03/04/2010 (Saturday)
Last date for receiving completed applications	-	06/04/2010 (Tuesday)
Date of Entrance Examination	-	02/05/2010 (Sunday)

HOW TO REACH THE CAMPUSES

AMRITA SCHOOL OF ENGINEERING – AMRITAPURI, KERALA

By Train :

The nearest railway stations are Kayamkulam (12 km) on the north side and Karunagapally (10 km) on the south. Take bus to vallikkavu junction and walk for 5 minutes, or from railway station engage auto rickshaw to the Institute.

Bus Route:

On NH 47, bus stop at Ochira (06 km) for those from North and Karunagapally (10 km) for those from south. By auto rickshaw reach the institute.

AMRITA SCHOOL OF ENGINEERING – BENGALURU, KARNATAKA

The campus is located in Bengaluru south on the road connecting Sarjapur Road and Hosur Road, about 17 km from city Railway station and Majestic bus terminus. It is about 2 km from Kaikondranahalli bus stop on Sarjapur Road.

Bus Route:

1. 342 F (from Majestic) and 342 A, 342 B, 342 C & 342 D (from City Market) through Kaikondranahalli.
2. 340 L (from Majestic) and 341 B (from City Market) pass through the college campus.

AMRITA SCHOOL OF ENGINEERING – COIMBATORE, TAMILNADU

The campus is located in Ettimadai Village. By bus one can reach Ettimadai Pirivu (junction) which is on Palakkad Road, 17 km west of Coimbatore. From junction, the distance to the Institute is 2 km. Auto rickshaws available.

Bus Route :

1. From Coimbatore to Ettimadai Junction - 96 (Gandhipuram to Walayar)
2. From Ukkadam to Ettimadai Junction – S 2, 3 G (Ukkadam to Chavadi) & 48 (Ukkadam to Velanthavalam)

By Train :

Travel by passenger train on the route Coimbatore to Palakkad / Shoranur and get down at Ettimadai Railway station. Then 300m only.

UPDATES

Latest Update : See section 15 - Answer part of the coded sheet :
Third clause.

Exists as : “ Select the correct or most appropriate answer,
and shade the corresponding bubble using HB
Pencil”.

Amended as : Shade the corresponding bubble using HB Pencil
or Ball point pen (blue / black).