PROGRAMME GUIDE FOR

BACHELOR OF COMPUTER APPLICATION (BCA)

BAOU
Education
for All

Dr. Babasaheb Ambedkar Open University
Jyotirmay Parisar, Opp. Shri Balaji Temple,
Sarkhej-Gandhinagar Highway,
Chharodi, Ahmedabad, Gujarat 382481

Electronic version of the
prospectus is also available
for download at:
http://www.baou.edu.in

1. BAOU is a State Open University established by an Act No. 14 of 1994 passed by Gujarat State legislature. BAOU Degrees/Diplomas/ Certificates are recognised by all the member institutions of the Association of Indian Universities (AIU) and are at par with Degrees/ Diplomas/ Certificates of all Indian Universities/Deemed Universities/ Institutions.
2. Recognised by AIU– letter no. & date. EV/II(499)/94/176915-177115,dt. 14/1/1994
3. Recognised by UGC – letter no. & date. - F.No. 1-18/2018(DEB-1), dt. 31.12.2018

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Message from the Vice Chancellor

Dear Students,
Greetings from Dr. Babasaheb Ambdkar Open University, Ahmedabad!

It gives me immense pleasure to welcome you all to Dr. Babasaheb Ambedkar Open University (BAOU). I appreciate your urge to attain knowledge, grow and contribute in the growth of the society. John Dewey rightly says, *"Education is not preparation for life; education is life itself"*. We, at BAOU have inculcated this philosophy in our system. I firmly believe a good society is always committed to provide a quality education to every student to serve the public common good resulting in Great Nation Building. As we look to the future, one thing is certain that knowledge will be a key resource and even ours is the society that strongly affirms '**विद्वान् सर्वत्र पूज्यते**'. BAOU is committed to provide qualitative education with the objective to create a welfare nation.

BAOU is unique, being the only state Distance Mode-Open University of Gujarat, established by the Government of Gujarat. The prime objective of the university is to equip its learners with knowledge, skills and competencies associated with employability through flexible, learner-centered and technology enhanced way following the basic principles of open and distance education. BAOU has contributed substantially to meet the educational needs of such aspiring students who hail from all strata of the society and wish to gain degrees in distance mode. Due to the nature of the teaching methodology adopted by the university, the infrastructure it possesses and the system it has developed, BAOU serves a large student population spread throughout Gujarat through the network of Regional Study Centers located in every district of the state satisfying strong urge of learning of every learner.

Moreover, BAOU, in very near future, is planning to introduce a set of unique Online Programmes for the students across Gujarat seeking for variety of new, opportunity opener and challenging courses. The university is also going to set a Study Centre at the campus for the students who would like to have an experience of Contact teaching along with Distance Learning and get maximum benefit by consulting the respective teachers.

John F. Kennedy says, "Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream, which, fulfilled, can be translated into benefit for everyone and greater strength for our nation." Let's all dream big and strive hard to realize it.

I would wholeheartedly attend to the comments and suggestions from academicians, employers and students to enhance the quality and process of imparting education. I invite all stakeholders to join in the Journey of Knowledge, the eternal journey.

Best Wishes.

Prof. (Dr.)Ami Upadhyay
Vice Chancellor (I/C)

1. Basic Information

1.1 BCA Programme Objectives

To provide a future path to higher education in advanced levels of Information Technologies. It offers graduates accelerated diploma programme in IT, multimedia & graphics and a life-changing move. This programme helps learners acquire required skills in Information Technology. The curriculum of this programme ensures that learners gain thorough understanding about critical concepts like database, networking, programming, etc. The main goals of BCA programme are:

➢ To provide theoritical skills as well as practical skills and knowledge in computer application.

➢ To provide sound knowledge in computer application.

➢ To introduce logical architecture of computer in general.

➢ To understand the basic concept of data base management.

➢ To provide the practical knowledge in programming and application.

Objectives:

✓ To develop the understanding of conceptual as well as a theoretical concept of Computers & Information Technology

✓ To understand the operating system and how to install software.

✓ To know the importance of operating system and theoretical foundations to install software.

✓ To be familiar with various operating system.

✓ To develop the understanding of conceptual as well as a theoretical concept and functions of Programming and functions of C language.

✓ To enhance the knowledge of Internet Technologies and HTML and importance of HTML and Internet Technologies.

✓ To enrich the skills and understand the functions and theoretical, practical foundations of Data Structure Using 'C'.

✓ To understand the concept, functions and technical knowledge of Database Management System.

✓ To get trained and equipped with the knowledge of Object oriented concept and programming II(Advance Java).

1.2 Duration of the Programme

The Bachelor of Computer Application (BCA) programme is a three years degree programme. However, the maximum duration of the programme is eight years as stated below:

Minimum Duration: 3 years

Maximum Duration: 8 years.

In case, a learner is not able to qualify a course in the first attempt, he/ she shall have to qualify in the particular course within the next four attempts, subject to the maximum duration of the study.

1.3 Programme Fee

- For Three Years Degree Course Bachelor of Computer Application (BCA) Programme, learners will have to pay Rs 7000/- per semester, it has six semester and one year it cost Rs. 14000. Total would be Rs. 42000/- for three year programme.

- Charges for issue of certificates (TC, Migration & Degree) will be according to university rules

- Examination fees will be as per university norms

1.4 Medium of Instruction

English

1.5 Credit Hours

The University follows the system of assigning 30 hours of study per credit of a course. Therefore, following this norm, a 4-credit course constitutes a total of 120 hours of study.

Out of the total credit hours, a minimum of 10%, i.e., minimum 12 hours of counselling per course is offered to the learners at their respective study centres/ Learner Support Centre.

1.6 Recognition

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1.7 Learner Support Services

The learner support services available in the Bachelor of Business Administration programme include the following:

I. Self-Learning Materials covering the entire syllabi,

II. Counselling sessions at study centers/ learner support centres,

III. Access to library services at study centers

IV. Access to University's Library "Vivekananda"

V. Official Website: We have developed official website www.baou.edu.in for our learners and general public. It provides all the relevant information to the learners.

VI. Chaitanya Studio: University has its own state of the art HD "Chaitanya" studio for producing high end Audio- Video programmes.

VII. SWADHYAY TV: Audio- Video programmes are made available online on university's official website through SWADHYAY TV.

VIII. E- SLM: An e-learning portal named OMKAR has been launched by the

university. It is digital repository where the study materials are uploaded for the learners.

IX.   ASK-ME-Kiosk: Initiative by BAOU, it is a student friendly internet enable digital touch screen device displaying detailed information about the university free of cost

X.   SMS and e-mail Alert Facility: University has initiated an SMS and e-mail alert facility for learners regarding any news, events and learner-related information of the university.

1.8 Newsletter

BAOU Newsletter can be accessed at https://baou.edu.in/news-announcements

1.9 How to contact the BCA Program Coordinator

Learners may contact the BCA Programme Coordinator by sending a communication through post to the BCA Programme Coordinator, BAOU, Jyotirmay Parisar, Sarkhej-Gandhinagar Highway, Chharodi, opp. Shri Balaji Temple, Ahmedabad, Gujarat 382481, or can send an email to kmro@baou.edu.in

2. Instructional System

Through face to face contact programme - Counselling sessions will be conducted at respective study centres/ Learner Support centre on Saturdays, Sundays and on public holidays.

Various others techniques are also used to benefit the learners:

- By providing Self Learning Material
- Swadhyay TV (Video lecture through web portal)
- VANDE Gujarat Educational channel 16 of Govt. of Gujarat

2.1 Print Material (Self Learning Material)

Self Learning Material is the primary form of instructional materials. These are supplied to the learners in the form of 4 booklets called blocks. Each block consists of 3-6 units. The size of a unit is such that the material given therein may be expected to be studied by a student in a session of about 6 to 8 hours of study. Therefore, you are advised to concentrate mainly on the Self Learning Material, which we will distribute to you in a hard copy as well as soft copy as fast pace of computer industry necessitates that students must do some additional readings. Students are advised to study reference books which we have sited after the end of each and every units.

2.2 E-Book

E Book are also available in order to felicitate our learners so that they can study anywhere, any time at ease. Below is the glimpse of the E Book.
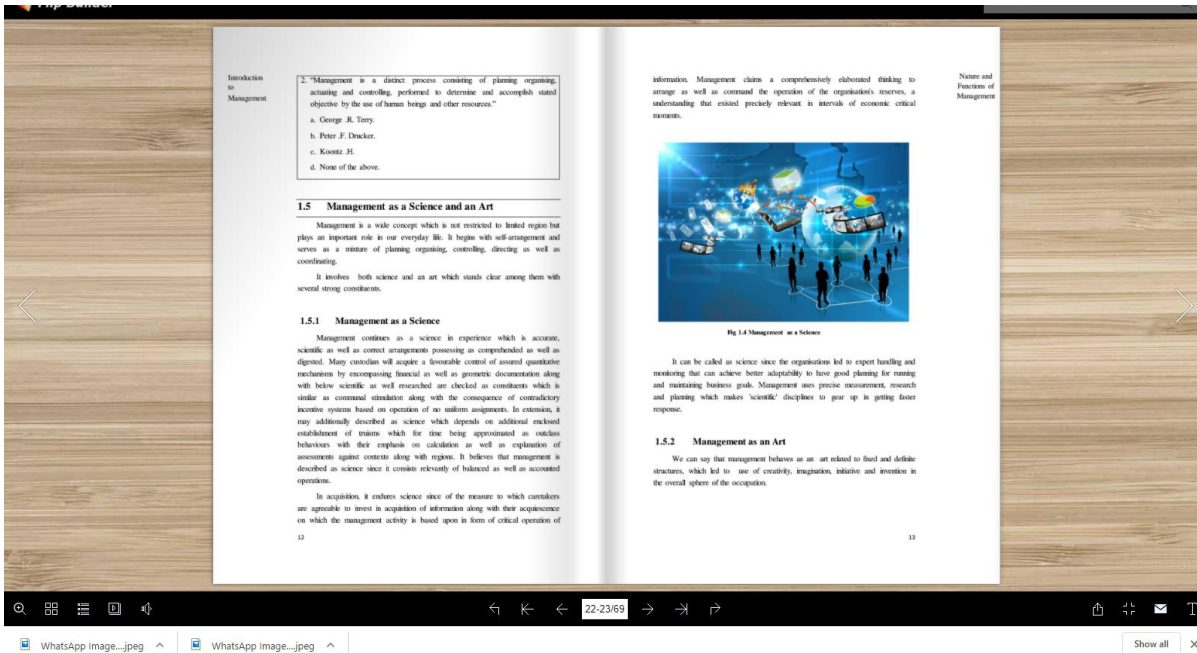
2.3 Video Material

BAOU produces high quality audio-visual content at State of the art full HD "Chaitanya" studio with facilities for post production, storage of content and archival of content. Video lectures are recorded by the Professor, Pricipal, Subject Expert, Emminent Personnel, Renowned Teachers across India in order to equip learners with knowledge and skills.

Below is the weblink to watch the video lecture:
http://14.139.122.7/swadhyaytv/school.aspx?id=2

2.4 Vande Gujarat

Government of Gujarat, under the "Vande Gujarat" program, undergraduate education, skill enhancement, women empowerment, computer training, health, agriculture and animal husbandry, departmental training and expansion, digital knowledge, cleanliness campaign etc.

Vande Gujarat URL : https://vande.gujarat.gov.in/Home_guj.aspx

Schedule of Lecture : https://vande.gujarat.gov.in/programlist.aspx

2.5 Swdhyay TV, Swdhyay Radio, OMKAR-e

Today TV and Radio have come up as very powerful mediums of edutainment. They provide education with the fun and concentration of entertainment. Considering the importance and need of imparting quality education and training by TV and Radio production as a part of the curriculum of the University, Dr. Babasaheb Ambedkar Open University, Government of Gujarat has initiated two projects through its state-of-the-art Studio and Radio. They are named as „Swadhyay TV" and „Swadhyay Radio". These innovative project initiatives by BAOU, facilitate web based learning through video and radio. A state of the art High Definition TV and Sound recording studio with post production facilities supplement these initiatives to ensure high quality educational content production. This facility and initiatives will also work towards enriching the archival system for OMKAR-e (Online Courses at BAOU).

The great initiatives facilitates Internet enabled High definition Television called "Swadhyay TV" and Internet enabled Radio station called "Swdhyay Radio" at the "Jyotirmay" campus of University. The Dr. Babasaheb Ambedkar

Open University has established a state-of-the-art HDTV and sound recording studio called "Chaitanya" with post production facilities suitable for premier educational institution with required infrastructure for production of TV and audio content. BAOU utilizes these facilities for preparation of audio/video instruction material for its courses as well as content development of other subjects.

2.6 Counselling Sessions

Counseling sessions are divided into two parts, one is Theory Sessions and the another one is Practical Sessions. Below is the details of the theory and practical Counseling sessions are furnished.

2.6.1 Theory Session: This theory sessions are mainly conducted to solve the quarries of the learners because in ODL system, face-to-face contact between the learners and their tutors/counsellors is relatively less. If learners have doubt they can avail the sessions to clarify their doubts that may not be possible through any other means of communication. It also provides learners with an opportunity to meet their fellow students. There are academic counsellors at the Study Centres to provide Counseling and guidance to them in the courses that they have chosen for study. Normally, these sessions will be held at the study centres on Saturdays and Sundays. The Learner should note that the Counseling sessions would be very different from the classroom teaching or lectures. Counsellors will not be delivering lectures as in conventional teaching.

2.6.2 Practical Sessions: The practical sessions will be held in the computer centres / labs of the Learner Support Centre/ Study Centres. In these computer labs, the participants will have the facility to use the computer and software packages relevant to the syllabus.

2.6.3 Practical Manual: Practical Manuals are provided to the learners which are as follows:

Sr. No.	Year	Subject Code	Subject Name
1	1st Year- 1st Semester	BCAR-103	Fundamental of Programming Using C Language
2	1st Year- 1st Semester	BCAR-104	Introduction to Internet Technologies and HTML
3	1st Year- 2nd Semester	BCAR-202	Database Management System (DBMS)

4	1st Year- 2nd Semester	BCAR-204	Object Oriented Concepts & Programming-1 (Core Java)
5	2nd Year- 3rd Semester	BCAR-302	Relational Database Management System (RDBMS)
6	2nd Year- 3rd Semester	BCAR-304	Object Oriented Concepts & Programming-II (Advance Java)
7	2nd Year- 4th Semester	BCAR-401	Web Technology using FOSS (LAMP/WAMP)
8	2nd Year- 4th Semester	BCAR-403	Client/Server Architecture and Interface (C#)
9	3rd Year- 5th Semester	BCAR-503	Mobile Application Development
10	3rd Year- 5th Semester	BCAR-504	Internet Programming (ASP.NET Using C#)

Guidelines to learners (LAB):

- Equipment in the lab for the use of learner's community. Learners need to maintain a proper decorum in the computer lab.

- Learners must use the equipment with care. Any damage is caused is punishable.

- Learners are required to carry their observation / programs book with completed exercises while entering the lab.

- Learners are supposed to occupy the machines allotted to them and are not supposed to talk or make noise in the lab. The allocation is put up on the lab notice board.

- Lab can be used in lab time decided by lab-in charge.

- Lab records need to be submitted on or before date of submission.

- Learners are not supposed to use any USB or other devices.

- Use of computer network is encouraged.

Project Guidelines: Project Guidelines are provided to the learners which are as follows:

Sr. No.	Year	Subject Code	Subject Name
1	Third Year-Fourth Semester	BCAR-404	Project Work
2	Third Year-Sixth Semester	BCAR-602	Project Work

2.6.4 Counselling Session Details:

Subject wise Number of Counselling Sessions (Theory/Lab)			
Subject Code	**Subject Name**	**Credits Point**	**No. of Counselling Sessions**
BCAR-101	Fundamental of Computer and Information Technology	4	12
BCAR-102	Operating System and Software Installation	4	12
BCAR-103	Fundamental of Programming Using C Language	4	12
BCAR-104	Introduction to Internet Technologies and HTML	4	12
BCAR-105	Communication Skills	4	12
BCAR-201	Data Structure Using C	4	12
BCAR-202	Database Management System (DBMS)	4	12
BCAR-203	Digital Electronics and Computer Organisation	4	12
BCAR-204	Object Oriented Concepts & Programming-1 (Core Java)	4	11
BCAR-205	System Analysis and Design	4	11
BCAR-301	Introduction to Computer Network	4	12

BCAR-302	Relational Database Management System (RDBMS)	4	12
BCAR-303	System Programming and Introduction to Microprocessor	4	12
BCAR-304	Object Oriented Concepts & Programming-II (Advance Java)	4	11
BCAR-305	Personality Development	4	11
BCAR-301	Introduction to Computer Network	4	12
BCAR-401	Web Technology using FOSS (LAMP/WAMP)	4	12
BCAR-402	Software Engineering	4	12
BCAR-403	Client/Server Architecture and Interface (C#)	4	11
BCAR-404	Project Work	4	12
BCAR-501	Business Application and Introduction to ERP	4	12
BCAR-502	Object Oriented Analysis and Design	4	12
BCAR-503	Mobile Application Development	4	11
BCAR-504	Internet Programming (ASP.NET Using C#)	4	12
BCAR-601	E-Commerce	4	12
BCAR-602	Project Work	8	24

Note: BCAR-404 & BCAR-602 courses, number of counselling sessions will be as per the requirement of the learners.

3.   Browsing BAOU's Website

BAOU Website URL : https://baou.edu.in/

3.1   Navigation from Home Page
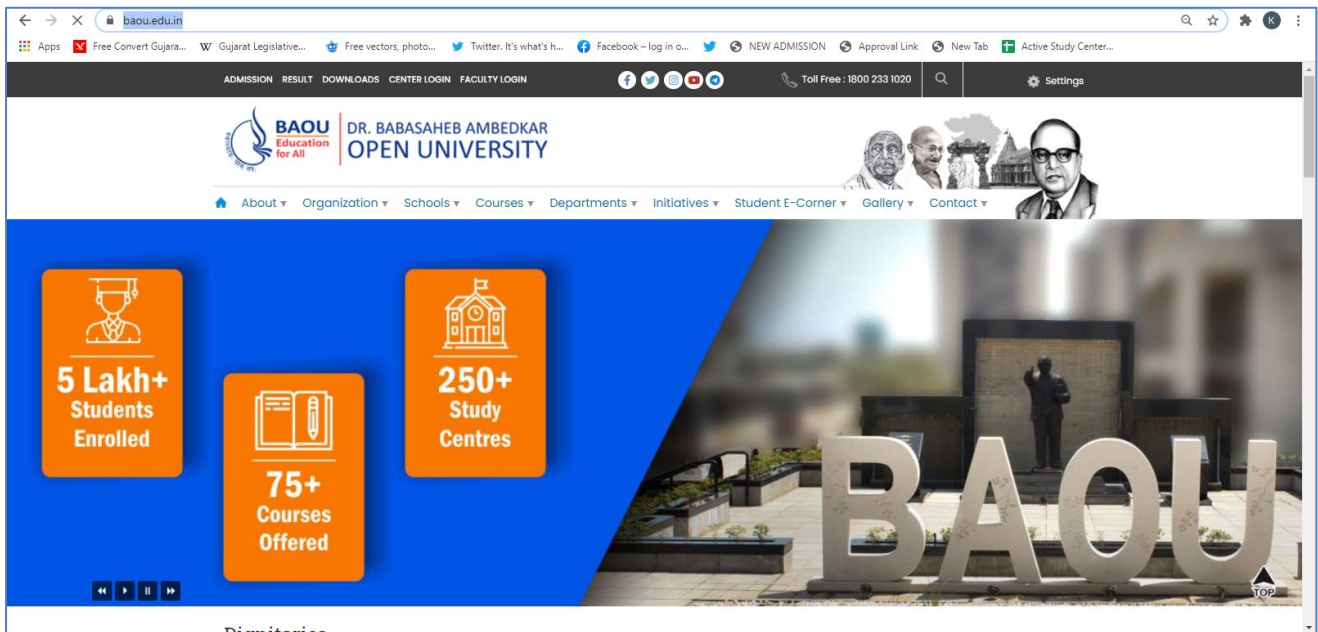
3.2   Navigation of BCA pages

Step-1 : Visit https://baou.edu.in/ website.

Step-2 : Click to 4th Section from left side Course, Click Vocational and Professional Courses.
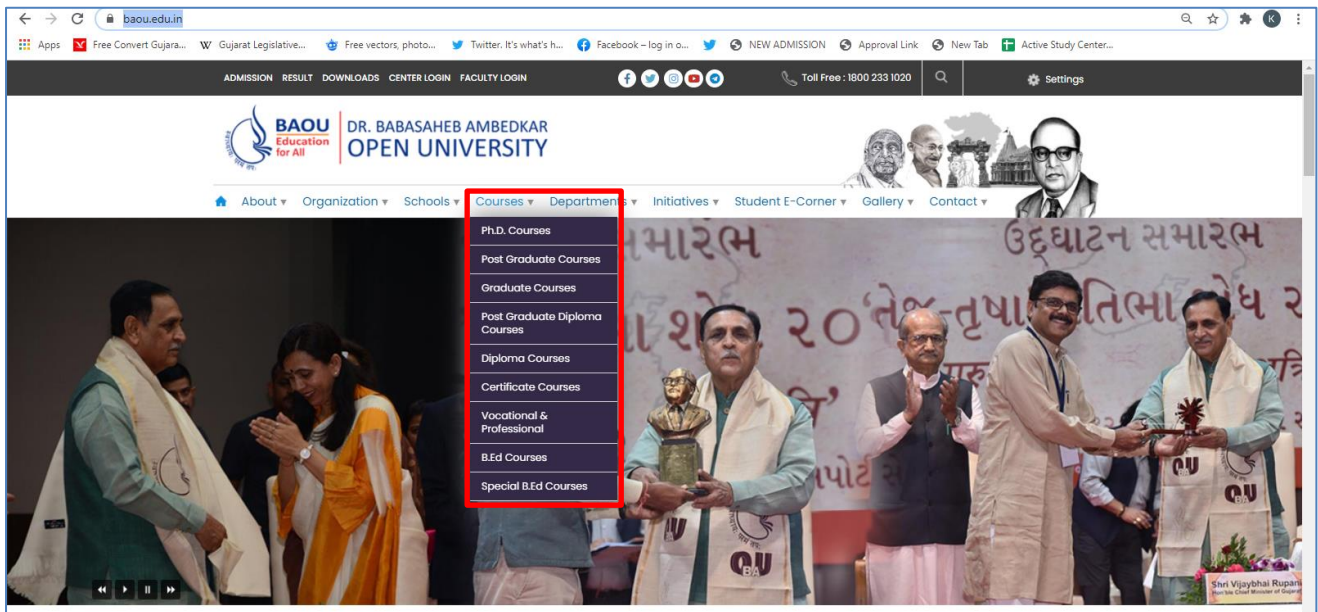
Step-3 : Select Bachelor Programmes
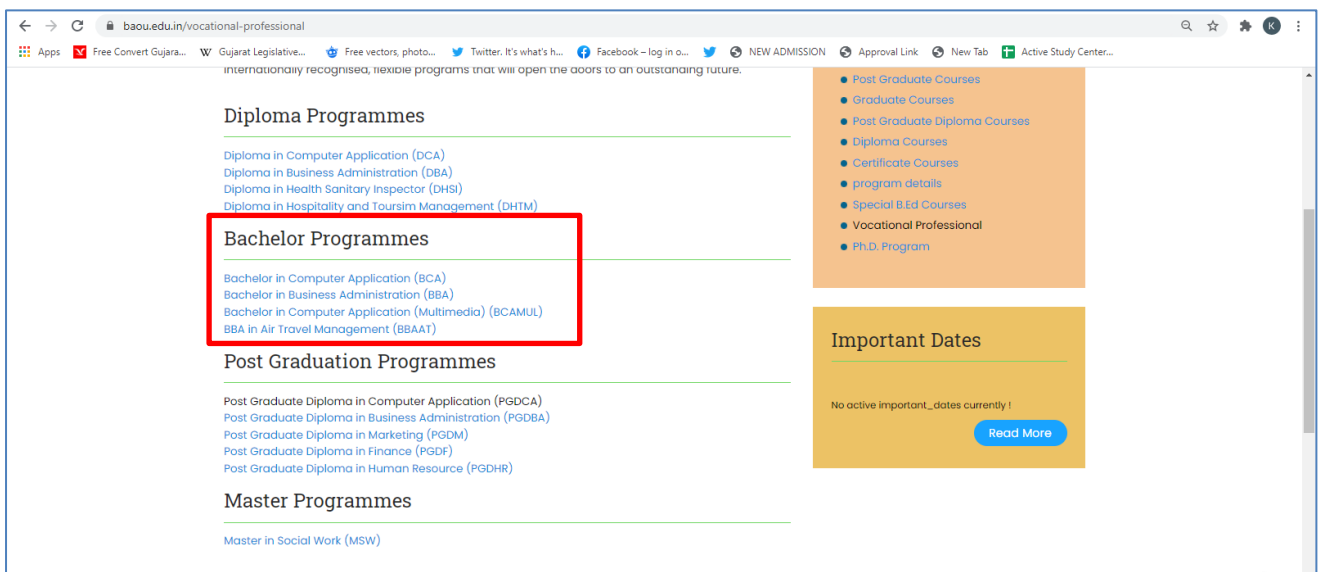
4. Bachelor of Computer Application (BCA) (Revised) Programme Structure

Subject Code	Course Code	First Year- First Semester	Theory	Practical
		Subject Name		
BCAR-101	BCA	Fundamental of Computer and Information Technology	4	--
BCAR-102	BCA	Operating System and Software Installation	4	--
BCAR-103	BCA	Fundamental of Programming Using C Language	2	2
BCAR-104	BCA	Introduction to Internet Technologies and HTML	2	2
BCAR-105	BCA	Communication Skills	4	
		Second Semester		
BCAR-201	BCA	Data Structure Using C	4	--
BCAR-202	BCA	Database Management System (DBMS)	2	2
BCAR-203	BCA	Digital Electronics and Computer Organisation	4	--
BCAR-204	BCA	Object Oriented Concepts & Programming-1 (Core Java)	2	2
BCAR-205	BCA	System Analysis and Design	4	--
		Second Year- Third Semester		
BCAR-301	BCA	Introduction to Computer Network	4	--
BCAR-302	BCA	Relational Database Management System (RDBMS)	2	2
BCAR-303	BCA	System Programming and Introduction to Microprocessor	4	
BCAR-304	BCA	Object Oriented Concepts & Programming-II (Advance Java)	2	2
BCAR-305	BCA	Personality Development	4	
		Fourth Semester		
BCAR-401	BCA	Web Technology using FOSS (LAMP/WAMP)	2	2
BCAR-402	BCA	Software Engineering	4	--
BCAR-403	BCA	Client/Server Architecture and Interface (C#)	2	2
BCAR-404	BCA	Project Work	--	4
		Third Year- Fifth Semester		
BCAR-501	BCA	Business Application and Introduction to ERP	4	--
BCAR-502	BCA	Object Oriented Analysis and Design	4	--

BCAR-503	BCA	Mobile Application Development	2	2
BCAR-504	BCA	Internet Programming (ASP.NET Using C#)	2	2
Sixth Semester				
BCAR-601	BCA	E-Commerce	4	--
BCAR-602	BCA	Project Work		8
TOTAL			**72**	**32**

Total Credit Points: 104

5. Evaluation Scheme

To get a degree of the Bachelor of Computer Application (BCA) requires successful completion of both Assignment component as well as the Term-end Examination component for each of the courses in the programme. The total numbers of courses in BCA (Revised) are 25 and the total number of credits are 104.

The Evaluation procedure will be the same as followed by the university.

- ✓ Each semester shall have a weightage of 30% for Internal Exams (assessment through assignments) and 70% for term end exams.
- ✓ Examination will be conducted at the end of the year. Examination conducted in two times i.e. May/June and also in December/January
- ✓ Every candidate must secure 40% marks in each head of passing (Assignments, Term End Examination, Field Work, Dissertation)
- ✓ The passing marks for external examination will thus be 28 out of 70 and for internal examination 12 out of 30 and aggregate marks taking both together will be 40 marks.

5.1 Instructions for Assignments

The following guidelines which are required to be followed while answering Assignments:

I. General nstructions for assignments

The assignments provide Knowledge and Awareness on technical topics, it helps in widening their cognitive skill horizons and it improves the writing skills as well. The word limits for answering most of the assignment questions depending on the marks. There are short question type and long question types. It is advisable to keep the following points in mind:

First comes to Plan: First you need to read the whole assignment carefully. Then go through the units on which they are based. Make some points regarding each question and rearrange these in a logical order.

Organise your Answers: Now you need to be selective and analytical and rational before drawing up a rough outline of your answer. In an essay-type question, you need to write the introduction part and conclusion as well. The introduction must offer brief interpretation of the question and how you propose to develop it. The conclusion must summarize your response to the question.

Exhibition: Once you complete the process of writing and if you are satisfied with your answers, you can write down the final version for submission. It is advisable to write each answer tidily and underscoring the points you want to

highlight.

II.   The following format is to be followed for submission of the assignment:

The top of the first page of your response sheet for each assignment should look like this:

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Dr. Babasaheb Ambedkar Open University

Course Name: _____

Subject Code: _____

Subject Name: _____

Name of Student: _____

Enrollment No.: _____

Name of the Study Centre: _____

Study Centre Code: _____

Date of Submission : _____

III. The assignments answers sheets should be hand written. However the s/w coding, snapshots, test cases etc. can be in the printed form.

IV. The learners should write each assignment separately. All the assignments should not be written in continuity.

V. The learners should use only A4 size paper for their answers and tag all the pages carefully. Avoid using very thin paper.

VI. The students should not copy the assignments from others. If copying is noticed, the assignments of such students will be rejected, and disciplinary action will be taken against the students as per rules of the University.

VII. The completed assignment answers should be sent to the Coordinator of the Learner Support Centre/ Study Centre.

VIII. Assignments have to submit to center compulsory.

IX. The Volume of one assignment should be Minimum 30 pages including Text, Tables, Graphs, Photographs, etc. The assignment is a part of continuous assessment system and mandatory for the submission.

X. In order to seat for the examination, it is must for the students to submit the assignment. Without submission of the assignment students will not allowed to seat for the examination.

6.   Other Useful Information

6.1   Requirement to seat in terms end examination

   i.   Completion of minimum time duration of the programme after enrollment
  ii.   Submission of the assignment in particular time duration
 iii.   Filling and submission of the examination form in particular time duration
 iv.   If you have appeared in the previous examination and still its result is awaited than it is advisable to fill up the examination form without waiting for the result
  v.   Exam form will be uploaded from time to time on the website for Regular and Repeater students for more information browse :: http://www.baou.edu.in/

6.2   Scholarship

Students belonging to Scheduled Caste, Scheduled Tribe, Nomadic Tribes and Denotified Tribes who have accepted Bodh Religion can get the benefit of Scholarship according to the rule of Government. This scholarship is declared by Government of India under the head of Post Matric Scholarship. In this, the included caste in particular course shall get scholarship from concern State Government Department, if the application form of scholarship is approved.

6.3   Rules of fees refund

The University will not refund any fee for any reasons, whatsoever, to any student. Under uncommon cases, the decision of the Vice Chancellor will remain final.

6.4   How to take back the extra fee paid for the programme

For any reason, if the extra amount is paid, than the student has to give an application by enclosing all the required documents (copy of Fee receipt, etc.) within 30 days.

6.5   Allotment of the Learners Support Centre/ Study Centre

To every student, study center is allocated according to their preference by the university. But the student may be allocated to a nearby study centre if the selected study centre does not fulfill the condition of minimum enrollment.

6.6   Changes in Address

Students shall write an application in case if there is change in address. Till the changes are not done in the university records students have to make arrangement to get post from the old address.

6.7 Policy on pursuing two or more programmes simultaneously

The Distance Education Council, in its 40th meeting held on 08 June 2012, approved a policy on pursuing two or more programmes simultaneously in various combination as under.
Two Degree Programmes cannot be allowed to be pursued simultaneously. However, a student can pursue two programmes simultaneously through distance mode or combination of distance and regular mode from the same or different Universities/ Institutions in various combinations, viz., 1 One Degree and one Diploma / P G Diploma / Certificate 2 One P G Diploma and one Diploma / Certificate 3 One Diploma and one Certificate 4 Two P G Diploma 5 Two Diplomas 6 Two Certificates

6.8 Learner's Communication

If the student is communicating via letter, than it is advisable to write full name, address, enrollment number, study center name and address which shall be addressed to V&P department. Separate letter is to be written for different issues i.e. Admission, study material, assignment and examination.

6.9 Duplicate I-Card

Generally I-Card is issued to the student by the University. But in uncommon situation if I-card is missed than student shall apply for the duplicate I-card. An application for Duplicate I-Card with Rs 25/- in cash if in person or demand draft in favour of Dr. Babasaheb Ambedkar Open University payable at Ahmedabad is to be submitted at University office. Enclose one photograph and any other Photo I-D proof with an application.

7. Examination Centre

Generally, student's study / programme center or nearby center will be his/her exam center but the decision of the University will remail final and binding for all the students in the matter of examination center in any circumstances.

7.1 Examination Fees

Repeater student has to pay examination fees (Pay-in slip) at their study center or university, along with an examination form, each time he wishes to appear for the examination. Examination Fees for the repeater student is Rs. 200/- per subject. Examination Forms are available at the University, Study Centre and on Website. Examination Fees covers conduct and result declaration of examination for all those subject for which examination fees is paid.

7.2 Programme Coordinator

A person in charge of the administrative and academic affairs at the study center. He/She plans the availability of counsellors, looks after the distribution of self-learning material, arranges and co-ordinates counselling sessions, etc.

7.   Some Useful Address

Sr. No.	Purpose	Concern Department
1	Admission / Re-Admission / Assignment / Lab Manual / I-Card	Concerned Study Center or University Vocational and Professional Department 'JYOTIRMAY' Parisar, Opp: Shri Balaji Temple, Sarkhej- Gandhinagar Highway, Chharodi, Ahmedabad: 382 481 Phone: 9099994484, 9099994461, 9978408584, 9998814484
2	Change of Name/ Correction of name/ address/ Contact no.	Concerned Study Center or University Vocational and Professional Department 'JYOTIRMAY' Parisar, Opp: Shri Balaji Temple, Sarkhej- Gandhinagar Highway, Chharodi, Ahmedabad: 382 481 Phone: 9099994484, 9099994461, 9978408584, 9998814484
3	Collecting Study Material (Self Learning Material)	Concerned Study Center
4	Bonofide Certificate	Concerned Study Center or University Vocational and Professional Department 'JYOTIRMAY' Parisar, Opp: Shri Balaji Temple, Sarkhej- Gandhinagar Highway, Chharodi, Ahmedabad: 382 481 Phone: 9099994484, 9099994461, 9978408584, 9998814484
5	Exam / Hall-Ticket	University Examination Department 'JYOTIRMAY' Parisar, Opp: Shri Balaji Temple, Sarkhej- Gandhinagar Highway, Chharodi, Ahmedabad: 382 481 Phone: 9099994484, 9099994461, 9978408584, 9998814484
6	Marksheet / Transcript / Migration / Degree Certificate	University Examination Department 'JYOTIRMAY' Parisar, Opp: Shri Balaji Temple,

		Sarkhej- Gandhinagar Highway, Chharodi, Ahmedabad: 382 481 Phone: 9099994484, 9099994461, 9978408584, 9998814484
7	Scholarship	University Scholarship Department 'JYOTIRMAY' Parisar, Opp: Shri Balaji Temple, Sarkhej- Gandhinagar Highway, Chharodi, Ahmedabad: 382 481 Phone: 9099994484, 9099994461, 9978408584, 9998814484
8	Assignment Submission	Concerned Study Center
9	Submission of Project Reports	Concerned Study Center
10	Prospectus	Concerned Study Center

8. Old Question Papers

Dr. Babasaheb Ambedkar Open University
Term End Examination January – 2017

Course	:	BCA	**Date**	:	08-02-17
Subject Code	:	BCAN-101(NEW) / DCA-101(NEW)	**Time**	:	03:00 to 06:00
Subject Name	:	Fundamental of Comp& Informa Tech	**Duration**	:	03 hours
			Max. Marks	:	70

Section A

Answer the following (Attempt any three) (30)
1. What is Computer? Explain advantages and disadvantages of Computer.
2. What is data base system? Explain different type of database system in detail
3. Explain uses of computer in a human life.
4. List all Input devices and explain any 4 input devices.
5. Explain network operating system.

Section B

Answer the following (Attempt any four) (20)
1. What is Computer Network? Characteristics of Computer Network.
2. Difference between Internet and Intranet.
3. What is printer? List types of printer and explain any two.
4. Explain RAM and ROM.
5. List the names of programming language and explain any one.
6. Write a short notes on Utilities

Section C

(A) Choose Correct answer (10)
1   The brain of computer system is
    (a)Memory (b) RAM (C) CPU (D) CU
2   The two types of main memory are
    (a)ROM and RAM (b) Primary and Secondary (C) Random and Sequential (d) All of above
3   Minicomputer is _____
    (a)Digital   (b) Analog   (c) a & b both   (d) None of these
4   Which is input device?
    (a)CRT   (b) Printer   (c) Digital camera   (d) None of these
5   How many generations of computers we have?
     (a) 6   (b) 7   (c) 5   (d) 4
6   The input device that can point, click, drag, and scroll is the _____
     (a) Mouse   (b) Keyboard   (c) Scanner   (d) None of these
7   _____ is the parts of the computer that you can see but cannot touch.
     (a) Software   (b) Hardware   (c) a & b both   (d) None of these
8   A _____ is an instance of a program

(a) Application (b) Process   (c) Programming (d) None of these

9   IP stands for _____
(a) Internet Process   (b) Internet Prototype   (c) Internet Protocol   (d) None of these

10   Which Operating system does not interact with the computer directly?
(a) Batch OS (b) Network OS (C) Multiple OS (d) Realtime OS

(B) Do as Directed   **(10)**

1   Full form of LAN
2   Full form of CRT
3   Full form of ASCII
4   ROM is a volatile memory.   (True / False)
5   Full form of EPROM
6   Sharing of executable files in LAN is possible.   (True /   False)
7   Operating system acts as an interface between user and the hardware. (True / False)
8   What is Scanner?
9   What is e-mail?
10   Full form of MODEM.

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Course	:	BCA	Date :	09-02-17
Subject Code	:	BCAN-102(NEW)/DCA-102	Time :	03:00 to 06:00
Subject Name	:	Operation system &Software Installation	Duration :	03 hours
			Max. Marks :	70

Section A
Answer the following (Attempt any three) (30)
1. Explain the Real-Time Operating system.
2. Explain the operating system for desktop PC.
3. Explain the Architecture of windows 2000.
4. Explain steps step to install the application software.
5. Explain the troubleshooting Mouse problems.

Section B
Answer the following (Attempt any four) (20)
1. Multitasking
2. GUI
3. Difference between DOS and Windows.
4. Minimum requirement for Windows XP.
5. Microprocessor Colling system.
6. UPS

Section C (A)
M.C.Q (10)
1. If there are more than processor and different tasks are designed to different processor it is called_____
   (A) Multiuser   (B) Multitasking
   (C) Process   (D) Threads
2. _____are designed several users to perform several tasks simultaneously.
   (A) Multiuser   (B) Multitasking
   (C) Process   (D) Threads
3. _____are popular way to improve CPU's performance through parallelism.
   (A) Threads   (B) Process
   (C) Multiuser   (D) Multitasking
4. _____was designed as the desktop operating system.
   (A) Windows 2000 professional   (B) Windows 2000 server
   (C) Windows 2000 advance server   (D) Windows 2000 datacenter server
5. _____has added features with Network Load balancing that increaser scalability, availability and controllability.
   (A) Windows 2000 professional   (B) Windows 2000 server
   (C) Windows 2000 advance server   (D) Windows 2000 datacenter server

6. The windows 2000 _____ has also full access to the hardware and system resources of the computer.
   (A) Kernel mode   (B) User mode
   (C) Object manager   (D) I/O manager
7. An_____ is a series if a programs that is used to run a computer.
   (A) Operating System   (B) Operational system
   (C) Open system   (D) None of these
8. _____for the mouse involves isolating it from its host port.
   (A) Mouse Hardware checks   (B) Mouse configuration checks
   (C) Keyboard Hardware checks   (D) Basic keyboard checks
9. _____ is essential to retain the integrity and lifetime of the battery.
   (A) Periodic maintenance   (B) Periodic System
   (C) Major system inspection   (D) Minor system inspection
10. _____inspection should be performed at least annually for small to medium systems.
    (A) Periodic maintenance   (B) Periodic System
    (C) Major system inspection   (D) Minor system inspection

Section C (B)
True or False/Fill in the blanks/one sentence answer (10)

1. In command line interface the user has to type in text – based commands to give instruction to the computer: (True / False)
2. The process in which ROM sends instruction to the CPU to start operations is called_____
3. Time sharing operating system is an (OS) intended to server application request : (True/ False)
4. Single user operating system allows multiple users to access a computer system concurrently: (True / False)
5. What is a Windows?
6. Give the full Name: DOS
7. Cache is used to improve the performance of the I/O systems: (True / False)
8. Workgroups and domain provide way for multiple windows – based computers on a network to communicate: (True / False)
9. What is a Micro Computer?
10. Give the full Name: ROM and RAM

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Course	:	BCA	Date	:	10-02-17
Subject Code	:	BCA/DCA - 103(NEW)	Time	:	03:00 to 06:00
Subject Name	:	Fundamental of Programming using	Duration	:	03 hours
		'C'	Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. Explain types of operators in detail.
2. Explain looping in detail.
3. Explain categories of functions with example?
4. Explain structure in detail.
5. Explain constants in detail.

Section B
Answer the following (Attempt any four) (20)
1. Explain goto statement with examples.
2. Explain Nesting of if…else statement with example.
3. Write a C program to find the average of n numbers.
4. Explain Recursion with examples.
5. Example fgetc and fputc functions.
6. Explain parts of C program.

Section C (A)
Explain the following (any five) (10)
1. Scanf() function.
2. Break statement.
3. Single dimensional Array
4. Explain strcat() function
5. Any 4 file_types in files.
6. Mathematical functions.
7. C tokens.

Section C (B)
Answer the following. (10)
1. Variables names are case _____.
2. Double data type stores_____ bytes.
3. do while loop is.
    (A) Entry controlled loop (B) Exit controlled loop
    (C) Middle controlled loop (D) Infinite loop
4. Any C program can have at least one function: (True / False) - Justify.

5. A variable declared inside a function in which they utilized that are called_____

(A) Automatic variable   (B) External variable
(C) Both (A) and (B)   (D) None of these

6. _____ function can convert an uppercase character to a lowercase.

7. Members whose individual data types may differ from one another. However all the data members share the same storage area is called_____
   (A) Structure   (B) Union
   (C) Array   (D) String

8. Strlen() function is used to count number of characters present in a string:
   (True / False)

9. Minimum number of times the do …while loop will be executed?
   (A) 0   (B) 1
   (C) Cannot predicated   (D) None of the above

10. C language is:
    (A) High Level Language   (B) Middle Level Language
    (C) Low Level Language   (D) None of the above

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Course	: BCA	**Date**	: 13-02-17
Subject Code	: BCAN -104(NEW) DCA - 104 (NEW)	**Time**	: 03:00 to 06:00
Subject Name	: Introduction to Internet Techno&HTML	**Duration**	: 03 hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three)   (30)

1. Explain any three types of internet connections.

2. Write short note on World Wide Web (WWW)

3. Write short note on Packet switching

4. Explain Component of E-Commerce

5. What is DHTML? Explain its Advantages

Section B

Answer the following (Attempt any four)   (20)

1. Explain Bus topology with it's Advantage and Disadvantages

2. Explain Advantages and Disadvantages of social networking

3. Explain IMG tag with example

4. Explain Form Tag attribute

5. Explain Java Server Pages (JSP).

6. Explain Universal Resources Locator

Section C

(20)

   1. Fill in the blanks   10

1. DNS stands for _____

2. IPv4 address length is _____ bit.

3. ISDN stands for _____

4. Face is attribute of _____ tag.

5. An / A _____ is an extension of the information system of the company to its partners located outside of the network

6. VPN stands for _____

7. HTTP stands for _____

8. .biz domain used for _____

9. SMTP stands for _____

10. SSL stands for _____

2. State true or false.   **10**

1. Bgcolor is attribute of Input tag.

2. GIF stands for Graphics Internet Format.

3. Colspan is attribute of Table Tag.

4. No fragmentation problem arise in ATM.

5. Browser is software that enable preview of web pages.

6. Switched Virtual Circuit (SVC): dedicated virtual circuit established for continuous use, and no need for repeated call setup and clearing.

7. Download—To send data from a local computer to a remote computer.

8. History shows a list of Web sites you've visited

9. Computer network topology is the way in which various components of a network (like nodes, links, peripherals, etc) are arranged.

10. IPv6 stands for Internet Protocol Variance 6.

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Course	:	BCA	**Date**	: 14-02-17
Subject Code	:	BCA – 105 (NEW / OLD)/DCA-105	**Time**	: 03:00 to 06:00
Subject Name	:	Introduction to Computer	**Duration**	: 03 hours
		Application (Office Suite)	**Max. Marks**	: 70

Section A
Answer the following (Attempt any three) (30)
1. Discuss different versions of Windows in detail.
2. Explain different methods to change font face, font size in MS-Word.
3. Explain how to create a chart and how to insert a chart in MS-Excel with example.
4. Explain the steps used to implement transitions and effect to the slides in MS-PowerPoint.
5. Explain Outlook email types.

Section B
Answer the following (Attempt any four) (20)
1. Discuss Display utilities of control panel.
2. What are features of Windows XP?
3. Write a short note on Headers and Footers in MS-Word.
4. Explain components of an excel workbook.
5. Explain the diming process in MS-PowerPoint.
6. Explain different views of MS-PowerPoint slides.

Section C (A)
M.C.Q (10)
1. Taskbar is the long horizontal at the _____ of desktop.
   (A) Left side   (B) Right side   (C) Top   (D) Bottom
2. A_____ is a program that displays moving graphics or words on the screen when you are not working.
   (A) Modem   (B) Desktop   (C) Screensaver   (D) Windows Explorer
3. A typical windows desktop contains a series of labeled pictures referred to as_____
   (A) Start menu   (B) Icons   (C) Taskbar   (D) Control panel
4. For center alignment in MS-Word_____ short cut key is used
   (A) Ctrl + c   (B) Ctrl + a
   (C) Ctrl + e   (D) Ctrl + f
5. The_____ displays information about the currently active document.
   (A) Scroll bar   (B) Status bar   (C) Drawing toolbar   (D) Menu bar
6. In MS-Excel worksheet there are _____ rows.

(A) 256   (B) 56363   (C) 526   (D) 65636

7. The intersection of column and a row is called as a _____
   (A) Cell   (B) Spreadsheet   (C) Work book   (D) Work area
8. _____ Function key is used to run slide show / presentation.
   (A) F1   (B) F8   (C) F5   (D) F12
9. GIF stands for_____
   (A) Great Image File   (B) Good Image File
   (C) Graphic Interchange Format   (D) Glass Image Format
10. Outlook's primary role is to provide_____ capabilities.
   (A) Emails   (B) presentation   (C) Graphics   (D) Document

Section C (B)

Answer the following.   **(10)**
1. Give full form of GUI.
2. What is Recycle bin?
3. What is windows clipboard?
4. To save MS-Word document _____ shortcut key is used.
5. Ctrl + f is used to invoke find & Replace utility in MS-Word: (True / False)
6. What is Macro in MS-Excel?
7. Each worksheet can have many active cell: (True / False)
8. What is Slide sorter view?
9. A small picture of the slide is called slide icon: (True / False)
10. Outlook express users can import email & email accounts into outlook:(True / False)

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Course	:	BCA	**Date**	: 08-02-17
Subject Code	:	BCAN-201(NEW)/DCA-201(NEW)	**Time**	: 11:00 to 02:00
Subject Name	:	Data Structure Using 'C'	**Duration**	: 03 hours
			Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Give definition of stack and queue. Explain PUSH and POP function.

2. What is data structure? Explain its types. Also explain time complexity and space complexity.

3. Define binary tree and complete binary tree. Give in order , pre order and post order traversal for the given figure.
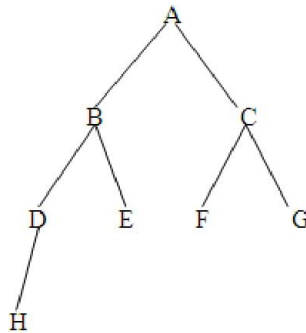
4. Write down bubble sort algorithm and explain it with example.

5. Write down algorithm for singly link list and explain operations on singly link list with example.

Section B

Answer the following (Attempt any four) (20)

1. What is array? Explain its types.

2. Apply insertion sort on given Data.
   34,56,77,54,11,23,45

3. Explain BFS with example.

4. Differentiate Link list and Array.

5. Explain Circular queue, De queue and priority Queue with example.

6.   Explain Hashing Techniques.

Section C

A	**Do as Directed**	10

1   Stack is LIFO. (True/False)

2   Define Directed Graph.

3   Define Height of a tree.

4   Merge Sort is based on Divide and Conquer Technique. (True/False)

5   Define Separate chaining.

6   Define Spanning Tree.

7   What is Data Structure?

8   Write down time complexity of quick sort.

9   Define Graph.

10 A procedure that calls itself is called_____

B	**Choose correct answer**	10

1   Full form of DFS _____.
    (A) Data flow search (B) Data file system
    (C) Depth first search (D) Data file service

2   Which is not a liner data structure?
    (A) Stack (B) Queue (C) Tree (D) Linked list

3   Which one of the below mentioned is nonlinear data structure –
     (A) Queue (B) Stack (C) Arrays (D) Graph

4   The complexity of binary search algorithm is?
    (A)N   (B) nlogn   (C) logn   (D) n^2

5   Sparse matrices have?
    (A) many zero entries (B)many non- zero entries
    (C) higher dimension   (D)none of above

6   The postfix expression for (a + b) * (c – d) is?
    (A) ab + cd - * (B) ab cd + - *   (C) ab + cd * -   (D) ab + - cd *

7   The memory address of the first element is called?
    (A)Floor Address (B) Foundation Address (C)First Address (D) Base Address

8   Among following expression which is having the highest priority.
    (A) ^ (B) +   (C) -   (D) *

9   Which is not user define data type.
    (A) Enum (B) Structure (C) Union (D) Double

10 a + b * c is in the form of _____.
    (A) Infix (B) Prefix (C) Postfix (D) None of above

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Course	:	BCA	Date	:	09-02-17
Subject Code	:	BCAN-202(NEW)/DCA-202(NEW)	Time	:	11:00 to 02:00
Subject Name	:	Database Management System	Duration	:	03 hours
			Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. What is DBMS? Discuss its advantages and disadvantages.
2. Explain Relational Model in detail.
3. Explain different attributes types with respect to ER Model.
4. Comparison Hierarchical, Network and Relational Model.
5. Explain the all types of transaction.

Section B
Answer the following (Attempt any four) (20)
1. Comparison between RDBMS and OODBMS.
2. Difference between Data mining and Normal query.
3. Discuss the capacity planning.
4. Explain terms ODBC, MDBS, DCOM, and CORBA.
5. Explain the basic structure of SQL.

Section C (A)
M.C.Q (10)
1. _____is a collection of facts and figures.
   (A) Data   (B) Enqueuer
   (C) Floppy   (D) Cd
2. _____is set of programs that to store modify and extract information.
   (A) MPSD   (B) DBMS
   (C) MBDS   (D) BDMS
3. Data dictionary stores about the_____
   (A) Meta-data   (B) Only data
   (C) None   (D) Datasheet
4. ____is set for specific types of atomic data values.
   (A) Domain   (B) Constraints
   (C) Referential   (D) Integrity
5. The rows of a relation are called_____
   (A) Tuples   (B) Attributes
   (C) Model   (D) Scheme

6. Need of normalization is done in order to _____ data redundancy.
   (A) Maximum   (B) Minimum
   (C) Minimize   (D) Maximize
7. _____ statements are used to define the database structure or scheme.
   (A) DDL   (B) LDD
   (C) DLD   (D) BDL
8. A transaction is directly related to a _____
   (A) Session   (B) Transact
   (C) SID   (D) DDL
9. Organization wide data mart is a subset of the_____
   (A) Data   (B) Enqueuer
   (C) Floppy   (D) cd
10. _____ is online analysis processing.
   (A) OLAP   (B) ALP
   (C) KLAP   (D) LAPO

Section C (B)

True or False   **(10)**

1. Data is a collection of facts and figures.
2. The RDBMS provides support languages for definition and manipulation of data in the database.
3. Relational model stores data in the form of tables.
4. An entity set is a collection of difficult entities.
5. Capacity planning is important in ensuring that adequate storage is available for future growth.
6. Prime attribute which is part of prime-key, is prime attribute.
7. Column is the name of the table to be created.
8. Table is the name of the column to be added or modified.

9. Entity Relationship shows relation between attributes.
10. Normalization reduces the duplication of data.

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Course	:	BCA	Date	: 10-02-17
Subject Code	:	BCAN-203(NEW) /DCA - 203 (NEW)	Time	: 11:00 to 02:00
Subject Name	:	Digital Electro & Comp Organization	Duration	: 03 hours
			Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Explain Encoder and Decoder in detail.

2. Explain logic gates in detail.

3. Explain K-map with an example.

4. Describe parallel-in-parallel-out shift register.

5. Describe J-K flip – flop.

Section B

Answer the following (Attempt any four) (20)

1. DeMorgan's Theorem.

2. Multiplexer in detail.

3. Gray Code

4. A 4-bit synchronous up counter.

5. Setting and Resetting Nand Latch

6. Explain D flip-flop

Section C

(A) Choose the correct answer. (10)

1. The circuit used to store one bit of data is known as _____

    (A) Register   (B) Encoder   (C) Decoder   (D) Flip Flop

2. Which of the following is not a weighted code?

    (A) Decimal Number system   (B) Excess 3-cod

    (C) Binary number System   (D) None of these

3. In computers, subtraction is carried out generally by _____

(A) 1's complement method   (B) 2's complement method

(C) signed magnitude method   (D) BCD subtraction method

4. How is a J-K flip-flop made to toggle?

(A) J = 0, K = 0   (B) J = 1, K = 0   (C) J = 0, K = 1   (D) J = 1, K = 1

5. How many select lines would be required for an 8-line-to-1-line multiplexer?

(A) 2   (B) 3   (C) 4   (D) 8

6. BCD stands for _____

(A) Basic Coding Description   (B) Binary Coded Decimal

(C) Bit Code Design   (D) None of these

7. Output of Exclusive OR gate is 1 when inputs are _____.

(A) 0, 0   (B) 1, 0   (C) 1 , 1   (D) None of these

8. Binary equivalent of decimal number 25 is _____

(A) 011001   (B) 011101   (C) 011111   (D) 010011

9. What is the bit string represented by the Hexadecimal notation: 2D

(A) 00101100   (B) 00101101   (C) 01001101   (D) 01001100

10 Write the 2's complement for 01001 is _____

(A) 10111   (B) 10101   (C) 11001   (D) 11111

(B) Answer the following.   **(10)**

1. Full form of RAM

2. Define: Registers

3. ALU stands for _____

4. Convert hexadecimal value 16 to decimal.

5. Convert binary 111111110010 to hexadecimal.

6. Convert the octal number 17 to decimal.

7. Convert the binary number 010111100 to octal.

8. How many binary digits are required to count to (100) 10 ?

9. Convert the decimal number 127 to BCD.

10 Digital electronics is based on the _____ numbering system.

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Course	: BCA	**Date**	:	13-02-17
Subject Code	: BCAN-204(NEW) DCA - 204 (NEW)	**Time**	:	11:00 to 02:00
Subject Name	: Core Java	**Duration**	:	03 hours
		Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. Explain the procedure for event handling.
2. Explain life cycle of thread.
3. Explain call bye value and call by reference with example.
4. What do you mean by package? Explain with program.
5. Explain method overriding with example.

Section B
Answer the following (Attempt any four) (20)
1. Explain multi-threaded, dynamic, Robust, portability and security feature of java.
2. Which are the steps to execute Java program?
3. Explain type conversion.
4. Define the four categories of visibility for class members.
5. Explain try, catch and finally with help of syntax and sample code.
6. Write shot note on applet life cycle.

Section C
(A) Multiple choice questions. (20)
1 A token can be _____.
    (a) Reserved word   (c) Constant
    (b) Identifier   (d) All of these

2 _____ method cannot be overridden.
    (a) Super   (c) Static
    (b) Final   (d) Println
3 Which of the following is a valid declaration of an object of class Box?
    (a) Box obj = new Box()   (c) Box obj = new Box;
    (b) obj = new Box();   (d) new Box obj;
4 Runnable is a_____
    (a) Class   (c) Variable
    (b) Method   (d) Interface
5 Which of these is a process of converting a simple data type into a class?
    (a) type wrapping   (c) type conversion
    (b) type casting   (d) None of the Mentioned.

6   Which of the following is correct way of implementing an interface salary by class manager?
     (a) class manager extends salary {}   (c) class manager implements salary {}
     (b) class manager imports salary {}   (d) None of the mentioned.
7   Which method is used to start the applet?
     (a) main()   (c) destroy()
     (b) init()   (d) repaint()
8   Java language has support for which of the following types of comment ?
     (a) block, line and javadoc   (c) javadoc, literal and string
     (b) javadoc, char and string   (d) single, multiple and quote
9   The java compiler
     (a) creates executable   (c) translates java source code to byte code
     (b) creates classes   (d) produces java Interpreter
10   Which one is not supported by OOP?
     (a) Abstraction   (c) Polymorphism
     (b) Encapsulation   (d) Global variables

(B) Fill in the blank.
1   _____ and _____ two component of java platform.
2   Deallocation process is done by _____ technique.
3   _____ package bundles the fundamental classes.
4   Static instance variable are also called _____.
5   _____ is the process of defining more than one method in a class differentiated by method signature.
6   Java uses _____ to represent characters.
7   JVM stands for _____.
8   Command to execute a compiled java program is _____.
9   Condition which cause run time error in program is known as _____.
10   _____ is the first applet enable browser developed in java to support running of applets.

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Course	:	BCA	**Date**	:	23-01-17
Subject Code	:	BCA - 301(OLD/NEW)	**Time**	:	11:00 to 02:00
Subject Name	:	Introduction to Computer Network	**Duration**	:	03 hours
			Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. What is Networking? Explain Advantages and Disadvantages of networking.
2. Explain LAN topologies.
3. Write short note on NetBIOS over TCP/IP.
4. Discuss fault detection and troubleshooting mechanism.
5. Write connection oriented with client side program.

Section B
Answer the following (Attempt any four) (20)
1. Write a short note on networking layers.
2. Write a short note on circuit switching and packet switching.
3. What is workgroup?
4. How the image file downloaded? Write the procedure.
5. What is IP address?
6. What is Socket? How to talk between Sockets.

Section C (A)
M.C.Q (10)
1. The_____ layer supports application and end user processes
   (A) Application   (B) Data link
   (C) Presentation   (D) Transport
2. Full form of HDLC protocol_____
   (A) Haigh Definition Language Control   (B) High level Datalink Control
   (C) High level Definition link control   (D) Haigh Definition Language Configuration
3. TCP (Transmission Control Protocol) Provides_____
   (A) Computer address   (B) It relates IP address with MAC
   (C) Connections are made and maintained   (D) Dial-up network connection
4. _____is the set of functions that detect, isolate and correct malfunctions in a telecommunication network
   (A) Network management   (B) Configuration management
   (C) Performance management   (D) Fault management
5. Identify odd one

(A)   Microwave   (B)   IP address   (C)   Twisted pair   (D)   Coaxial cable
6. _____is an electronic device that interconnect two or more computer network
   (A)   Router   (B)   Frame   (C)   Workstation   (D)   Socket
7. Full form of SMTP_____
   (A)   Simple message transfer protocol   (B)   Simple mail transfer protocol
   (C)   Simple mail transport protocol   (D)   Simple management transport protocol
8. A_____ topology is a LAN architecture that consist of a series of a devices connected to one another by unidirectional transmission links to from a single closed loop
   (A)   Star   (B)   Tree   (C)   Bus   (D)   Ring
9. _____is a physical data link layer technology for local area networks
   (A)   Internet   (B)   Ethernet   (C)   Extranet   (D)   None of above
10. _____is a wireless network technology
   (A)   Bluetooth   (B)   Router   (C)   Repeater   (D)   Switch

Section C (A)
True or False/Fill in the blanks/One Sentence Answer **(10)**
1. Define: Frame relay
2. Explain multiple master domain model
3. Ping is option to allow management through a terminal emulation program for TCP/IP networks such as internet : True / False
4. List out states of TCP protocol
5. PPP stands for _____Protocol
6. The receive () and send () functions are used to listen to socket connection : True / False
7. What is bus topology
8. A modem is a device that interprets digital and analog signals : True / False
9. Window NT is a family of Operating system developed by Microsoft : True / False
10. What is terminal emulator?

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Course	: BCA		**Date**	: 24-01-17
Subject Code	: BCAN-302(NEW)		**Time**	: 11:00 to 02:00
Subject Name	: Programming Principle &		**Duration**	: 03 hours
	Algorithm		**Max. Marks**	: 70

Section A
Answer the following (Attempt any three) (30)
1. Define about variable in C Language. Explain Local and Global Variable with example.
2. List out Operator in C language and Explain any four Operators with example.
3. Draw flow chart of For Loop with example.
4. List out of Storage classes and describe about it.
5. Write a C program to find out Prime number of given number.

Section B
Answer the following (Attempt any four) (20)
1. Explain Type of C function.
2. Describe about Switch statement with example.
3. Give one example of Conditional operator statement.
4. Give definition of Recursion. Give on example of it.
5. Define about Flowchart. Draw and explain Symbol of Flowchart.
6. Write a C program of find out Sum of First N Numbers.

Section C (20)
(A) Multiple Choice Questions

1. A function that calls itself for its processing is known as
   a. Inline Function   c. Overloaded Function
   b. Nested Function   d. Recursive Function
2. Which is an example type of divide-and-conquer algorithm?
   a. Bubble sort   c. Insertion sort
   b. Quick sort   d. All
3. Graphical representation of algorithm is _____
   a. Pseudo-code   b. Graph
   c. Flow Chart   d. Program
4. In a program, the flow of pseudo code is from:
   a. top to bottom   c. left to top
   b. bottom to top   d. right to left
5. Which among the following is a step-by-step procedure for calculations?
   a. Program   b. Algorithm
   c. Greedy Method   d. Problem
6. What will be result of multiplication of two digit numbers 15 and 16?
   a. 265   c. 240

b. 350   d. 450

7 What is the correct formula of finding sum of first n numbers?
  a. (n+1)/2   c. n(n+2)/2
  b. n(n)/2   d. n(n+1)/2

8 What is the correct value of 11/5:
  a. 3   c. 4
  b. 2   d. all

9 What is the correct representation of number 435, if the digits are reversed?
  a. 543   c. 345
  b. 453   d. 534

10 The value of 6! is:
  a. 540   c. 120
  b. 720   d. 340

(B) **True/False**

1 A short integer is at least 16 bits wide and a long integer is at least 32 bits wide.
2 If scanf() is used to store a value in a char variable then along with the value a carriage return(\r) also gets stored it.
3 Bitwise & and | are unary operators.
4 A function cannot be defined inside another function
5 Functions cannot return more than one value at a time
6 If return type for a function is not specified, it defaults to int
7 In C all functions except main() can be called recursively.
8 Functions can be called either by value or reference
9 A structure can be nested inside another structure.
10 Sizeof() return always interger value.

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Course	:	BCA	Date	:	25-01-17
Subject Code	:	BCAN-303(NEW)	Time	:	11:00 to 02:00
Subject Name	:	Relational Database Management	Duration	:	03 hours
		system	Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. Write a short note on features of DBMS.
2. Explain store procedure.
3. Explain the use of INSERT command and UPDATE command with example.
4. Explain cursor with attributes.
5. Explain User-Defined exceptions with all the steps in detail.

Section B
Answer the following (Attempt any four) (20)
1. Write a short note on DBA.
2. Define various keys on RDBMS.
3. Explain package creation.
4. Explain BEFORE trigger with example.
5. Explain COMMIT and ROLLBACK with suitable example.
6. Write a short note on VIEWs.

Section C
(A) Multiple choice questions. (10)

1 A _____ is any combination of fields within a table that uniquely identifies each record within that table.
   a. Super key   b. Composite key
   c. Candidate key   d. Secondary key

2 _____ is a set of constraints between two attributes in a relation.
   a. Axioms   b. Database
   c. Functional dependency   d. None of these

3 The relational databases are defined by _____ , which indicate the relationship among the tables.
   a. Table   b. Schema   c. Structure   d. None of these

4 A _____ is a data structure that stored procedures and Pre-processor use at runtime to point to the result rows in a response set returned by an SQL query.

a. Cursor   b. Stored procedure

c. Pointer   d. Trigger

5   A _____ is the information technician responsible for ensuring the ongoing operational functionality and efficiency of an organization's databases and the applications that access those databases.

a. End User   b. RDBMS

c. DBMS   d. DBA

6   A copy of an existing table can be created using a combination of the CREATE TABLE statement and the _____ statement.

a. ALTER   b. SELECT

c. SHOW   d. UPDATE

7   _____ pinpoints the table that you want to pull the data from.

a. FROM   b. SELECT

c. VIEW   d. None of these

8   A _____ is nothing more than a SQL statement that is stored in the database with an associated name.

a. Functions   b. Store Procedures

c. Triggers   d. Views

9   _____ are used mainly to improve the performance of distributed applications and productivity of application development.

a. Stored procedures   b. Cursors

c. Indexes   d. Views

10   The _____ parameter causes the redo to be buffered to the redo log, along with other concurrently executing transactions.

a. IMMEDIATE   b. BATCH

c. NOWAIT   d. WAIT

(B) True or False.   (10)

1   A secondary key is a candidate key that is most appropriate to be the main reference key for the table.

2   FROM clause allows you to filter your query to be more specific.

3   DECODE function expressions are quite difficult to read.

4   The DROP TABLE command not only removes the contents of the table, but also the table itself.

5   CEIL will convert a decimal value to the next highest absolute value.

6   The NOWAIT parameter causes the commit to return to the client whether or not the write to the redo log has completed.

7   The AFTER option of a trigger is used to specify when the trigger must be fired.

8   Raise_Application_Error terminates the operation abruptly and comes to the SQL prompt.

9   A package is a schema object that groups logically related PL/SQL types, items, and subprograms.

10 A parent-child relationship between two tables can be created only, when there is a Candidate key in one table and Foreign key in another table.

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Course	:	BCA	**Date**	: 27-01-17
Subject Code	:	BCA - 304(OLD/NEW)	**Time**	: 11:00 to 02:00
Subject Name	:	System Programming and	**Duration**	: 03 hours
		Introduction to Microprocessor	**Max. Marks**	: 70

Section A
Answer the following (Attempt any three) (30)
1. Explain Pass I and Pass II Assembler.
2. Define microprocessor system. Also draw its block diagram and discuss its each component.
3. Explain the 8085 microprocessor system register in detail
4. Explain Absolute and Direct Linking loaders.
5. Explain one byte, two byte, three byte instruction with example.

Section B
Answer the following (Attempt any four) (20)
1. Define macro. Discuss the working of macro processor.
2. Discuss the registers of 8085 microprocessors. Also explain the application of microprocessor.
3. Define secondary storage devices. Explain Bluetooth & compact disk.
4. Difference between SRSM Vs. DRAM & EPROM Vs. EEPROM.
5. Explain 8086 programming Registers.
6. Explain the features of Pentium PRO and Pentium V.

Section C (A)
M.C.Q (10)
1. In pass two assembler the pseudo code EQU is to be evaluate during.
   (A) Pass I   (B) Pass II
   (C) Not evaluate   (D) None
2. _____register deals with sequencing the execution of instruction.
   (A) Accumulator   (B) Stack Pointer
   (C) Flag   (D) Program counter
3. A_____ is an identifier that is assigned the address of the first byte of the instruction in which it appears appropriate when saving your file for web publishing?
   (A) Label   (B) Operand   (C) Comment   (D) None
4. 8086 as _____ of segment registers.
   (A) 4   (B) 5   (C) 8   (D) 2
5. _____is a special component used in 8086 for block transfer of data to or from a port
   (A) EMA   (B) DMA   (C) DNA   (D) BMA

6. In_____ environment two or more process is executed in a time multiplexed fashion?
    (A) Multi programming   (B) I/O
    (C) Multi-processing   (D) None
7. Which of the following is an 8085 hardware interrupt?
    (A) TRAP   (B) CRAP   (C) SLI   (D) None
8. Instruction that sets the carry flag.
    (A) Set CY   (B) LTR   (C) STR   (D) STC
9. Zero flag is to _____ if the result of an arithmetic operation is zero.
    (A) 0   (B) 1   (C) -1   (D) 2
10. An interrupt initiated by a signal on the NMI pin is called a _____
    (A) NON maskable interrupt   (B) Maskable interrupt
    (C) Number Maskable interrupt   (D) None

Section C (B)
True or False/Fill in the blanks/one sentence answer   **(10)**
1. _____is the program that accept a source program in a high level language and produces an object program.
2. The address bus is a 16 bit directional bus : True / False
3. ALE means_____
4. Define : Machine cycle
5. _____is defined as one subdivision of operation performed in one block period.
6. Set interrupt mask is a 1 byte instruction : True / False
7. Define : Cash memory
8. HLT instruction stop the program : True / False
9. USB means_____
10. SSI means_____

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Course	: BCA	**Date**	:	30-01-17
Subject Code	: BCAN-305(NEW)	**Time**	:	11:00 to 02:00
Subject Name	: System Analysis and Design	**Duration**	:	03 hours
		Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. Describe about SDLC (system development Life cycle) in detail
2. Draw E –R diagram for Hotel management.
3. Explain about Database Design in detail.
4. Explain Relationship cardinality & participation.
5. What is normalization? Explain 1NF and 2NF with example.

Section B
Answer the following (Attempt any four) (20)
1. List of important characteristics of system and describe it.
2. Explain Types of System in detail.
3. Write all responsibility of system analysis.
4. Draw all symbol of DFD with meaning.
5. Explain 3GLs and 4GLs.
6. Write difference between static testing and dynamic testing.

Section C (20)
(A) Multiple choice Questions
1. The most important factor in respect to management information system is_____.
   a. System   c. Process
   b. Data   d. None of these
2. Which among the following is not a characteristic of well-designed system?
   a. Practical   c. Expensive
   b. Effective   d. Flexible
3. _____ refers to the process which involves in production of reliable and workable information systems
   a. Case tools   c. Decision table
   b. System Development Life Cycle   d. Success factors
4. In System Development Life Cycle, up gradation, improvement and bug Fixations are normally performed at the time of _____stage.
   a. Maintenance   c. Design
   b. Evaluation   d. Maintenance and Evaluation
5. Which of the following shows the features of information?
   a. accuracy   c. completeness

	b. advance	d. all of these
6	The information system outputs:	
	a. raw data	c. refine data
	b. clear data	d. processed data
7	Data that is kept in DFD shows:	
	a. sequential file	c. repository of data
	b. storage disk	d. memory
8	Reviews can be conducted:	
	a. orally	c. verbally
	b. documenting	d. all
9	To prepare software what is not compulsory?	
	a. people	c. process
	b. office	d. technology
10	Which is not a third generation language?	
	a. FORTRAN	c. Unix
	b. COBOL	d. BASIC

(B)   True/False

1   Systems analysis and design focuses on understanding the business problem and outlining the approach to solve it.
2   A systems analyst needs to understand people and the way they work.
3   A systems analyst needs to be an expert in all types of technology.
4   Analysts must upgrade their knowledge and skills continually.
5   Technology alone increases productivity and profits.
6   The systems analyst's work is described as problem solving for an organization.
7   The first four major phases of the predictive systems development life cycle (SDLC) are the planning phase, the analysis phase, the design phase, and the prototyping phase.
8   Implementation is the actual construction, testing, and installation of a functioning information system.
9   The most important activity of project planning is to define precisely the business problem and the scope of the required solution
10 A predictive SDLC has a high technical risk.

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Course	:	BCA	Date	: 15-02-17
Subject Code	:	BCAN-401(NEW)	Time	: 11:00 to 02:00
Subject Name	:	Object Oriented Concept and Prog-2	Duration	: 03 hours
			Max. Marks	: 70

Section A
Answer the following (Attempt any three) (30)
1. Discuss about the Swing Component.
2. Describe Networking Classes in JDK with example.
3. Write a detailed note on RMI (Remote Method Invocation) architecture.
4. What is Java Beans? Explain it.
5. Explain Architecture of the Servlet Package?

Section B
Answer the following (Attempt any four) (20)
1. Explain the features of Java Platform.
2. Write a difference between TCP & UDP
3. How to create JDBC Statements? Explain in brief.
4. Write a short note on Java Naming and Directory Interface (JNDI).
5. Write a note on Request Dispatcher.
6. What is Struts Action Classes? Discuss in short.

Section C
Q.1 Fill in the blanks. (10)
(1) J2ME stands for _____.
(2) Server Socket class is used by_____.
(3) _____ is a connectionless protocol located above Internet Protocol showing unreliable packet delivery.
(4) _____ method is used to load and register the JDBC driver
(5) To call stored prodcedures, we should call methods in _____class.
(6) _____- is a standard Java API for database that involves Java programming language with databases.
(7) CORBA stands for _____.
(8) _____ application is a Client & Server Program.
(9) _____ is intended to support early development of JavaBeans components which acts as standard reference base.
(10 LDAP stands for _____.

Q.2 Give Answer in one or two sentences. (10)
(1) What is bytecode?

(2)	What is Interface?
(3)	Describe Socket in one sentence.
(4)	Which protocol is an example of connectionless protocol?
(5)	Which method is use to create the connection of application with the database.
(6)	What is RMI Registry?
(7)	What is the use of README html in java beans?
(8)	What is Bound Properties of Beans?
(9)	What is the purpose of directory object?
(10	When init() method of servlet gets called?

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Course	: BCA	**Date**	:	16-02-17
Subject Code	: BCAN-402(NEW)	**Time**	:	11:00 to 02:00
Subject Name	: E-Commerce	**Duration**	:	03 hours
		Max. Marks	:	70

Section A

Answer the following (Attempt any three) (30)

1. Write note on Next Generation E-commerce.

2. Explain various Internet protocols with reference to OSI model.

3. What is E- commerce? Explain types of E-commerce in detail.

4. Write short note on different modes of online payment.

5. Write note on steps in promoting e-commerce website.

Section B

Answer the following (Attempt any four) (20)

1. Explain the function of web design.

2. Explain the function of Payment gateway.

3. What is the difference between IPv4 and IPv6 address? Explain with examples.

4. Write note on growth of web.

5. How does DSL is different from fixed broadband connection.

6. Write short note on Strategic planning.

Section C

(A) Multiple Choice Questions (10)

1 Shopping in Malls involves:
   (A) Desk shopping   (B) E-shopping

   (C) Order shopping   (D) None of above

2 Which of the following is not the example of business to consumer (BtoC) e-commerce?

(A) Amazon.com (B) google.com

(C) ebay.com   (D) lastminute.com

3   What are the benefits of EDI?
    (A) Reduces time delay   (B) Reduces errors

    (C) Ease in information access   (D) All of these

4   Which of the following behavioral approach is followed in E- commerce?
    (A)Computer science   (B) Management science

    (C) Economics   (D) All of these

5   Electronic Currency system consists of_____.

    (A) smart card   (B) online cash systems

    (C) both of these   (C) None of these

6   Which of the following is not a function of E-commerce

    (A) Marketing   (B) Warehousing
    (C) Advertising   (D) None of the above

7   How E-commerce can help consumers?

    (A) It provides user more options and quicker delivery of products.

    (B) It improves the brand image of the company

    (C) It helps organization to provide better customer services

    (D) It helps government to deliver public services

8   The address length in IPv6 is:
    (A) 16 bits   (B) 128 bit
    (C) 32 bit   (D) 512 bit

9   Internet Service Provider exchanges internet traffic between their networks by using
    _____.
    (A) ISP end point   (B) Internet exchange point
    (C) subscriber end point (D) All of these

10 Computerised saving account will update:
    (A) debit entry   (B) credit entry

(C) both a and b   (D) Neither a nor b

(B) Do as directed.   **(10)**

1   Define Firewall.

2   ERNET stands for _____.

3   Push Technology is based on Antivirus Program. True/False.

4   The maximum withdrawal amount that can be enchased from Saving Account from an ATM will be _____.

5   Internet security is provided by IPSec & SSL protocol. True/False.

6   Define Payment Gateway.

7   Business-to-Consumer (B2C) is _____.

8   FTT stands for_____.

9   EDI stands for _____.

10 Define Cross Selling.

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Course	:	BCA	Date	: 17-02-17
Subject Code	:	BCAN-403(NEW)	Time	: 11:00 to 02:00
Subject Name	:	Software Engineering	Duration	: 03 hours
			Max. Marks	: 70

Section A
Attempt any Three of the following: (30)
1. Explain Software Project management in detail.
2. Explain Briefly Risk Management Strategies
3. Explain in Brief Version Control
4. Explain in Brief Verification and Validation (V&V)
5. Explain in Brief Software Performance Testing and Load Testing

Section B
Write short notes on any four. (20)

1. Team Risk Management
2. Risk Management Method
3. Measuring a Software Project
4. Analysis and Planning
5. Grey Box Testing
6. Documentation Standards

Section C
(A) Multiple Choice Questions. (Give Four options for each MCQ) (10)
1 The principles of Scientific management is published by_____.
   a. Henry Gantt   b. Frederic Taylor
   c. Both of these   d. None of these
2 A generic process framework for software engineering encompasses five activities. What are those activities?
   a. Communication, risk management, measurement, production, deployment.
   b. Communication, Planning, Modeling, construction, deployment.
   c. Analysis, designing, programming, debugging, maintenance
   d. None of the above.

3 Which of the following are the part of Software Development Process?
   a. Requirement analysis   b. Implementation
   c. Testing   d. All of these
4 Software is defined as _____ .
   a. Instructions   b. Data Structures

c. Documents   d. All of the above

5. Which phase is refers to the support phase of software development?
   a. Acceptance Phase.   b. Testing.
   c. Maintenance.   d. None of the above.

6. If requirements are easily understandable and defined then which model is best suited?
   a. Spiral model   b. Waterfall model
   c. Prototyping model   d. None of the above

7. Design phase is followed by _____ .
   a. Coding   b. Testing
   c. Maintenance   d. None of the above.

8. An entity in ER Model is a real world being, which has some properties called_____ .
   a. Attributes   b. Relationship
   c. Domain   d. None of the above

9. Activities and action taken on the data that are represented by Circle or Round-edged Rectangles are called, _____ .
   a. Process   b. Data storage
   c. Data flow   d. Entities

10. Software Requirement Specification (SRS) is also known as specification of _____.
    a. White box testing   b. Acceptance testing
    c. Integrated testing   d. Black box testing

(B)   **True or False.**   **(10)**

1. Software Engineering is defined as systematic, disciplined and quantifiable approach for the development, operation and maintenance of software. True/ False
2. The only deliverable work product for a successful project is the working program. True/ False
3. A general statement of objectives is the major cause of failed software efforts.True/False
4. Traceability is not considered in Requirement Analysis. True/False
5. Requirements should specify 'what' but not 'how'. True/False
6. In static test techniques, behavioral and performance properties of the program are observed. True/False
7. A white box test scales up well at different granularity levels of testing. True/False
8. Agility is defined as the ability of a project team to respond rapidly to a change. True/False
9. Agile methods seem to work best when team members have a relatively high skill level. True/False
10. Software quality assurance consists of the auditing and reporting functions of management. True/False

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Course	: BCA	**Date**	: 20-02-17
Subject Code	: BCAN-404(NEW)	**Time**	: 11:00 to 02:00
Subject Name	: Client/Server Architecture &	**Duration**	: 03 hours
	Interface	**Max. Marks**	: 70

Section A

Answer the following (Attempt any three) (30)

1. Write short note on Remote Procedure Call.

2. Write short notes on Client/server architecture.

3. Explain characteristics of MS.NET Memory Management.

4. Write short notes Availability and Serviceability.

5. Write note on Object Oriented User Interface Clients.

Section B

Answer the following (Attempt any four) (20)

1. Explain the features of Client Services.

2. Write short note CORBA.

3. What is ASP.NET?

4. Write short note on Server Request.

5. List the type of servers used nowadays.

6. What are the features of Project management?

Section C

(A) Multiple choice questions. (10)

1   Which of the following is the example of non GUI client that requires multitasking?

(A)   Robots   (B)   Testers

(C)   ATMs   (D)   none of these

2   A Remote Procedure Call is initiated by the _____.

(A) Server   (B) Client

(C) Both of these   (D) None of these

3   Which of the following is the characteristics of client server architecture?

(A) Scalability   (B) Integrity

(C) Resource Sharing   (D) All of these

4   Which of the following is network management tool?

(A) OpenVision   (B) NetView

(C) UNMA   (D) All of these

5   What is server?

(A) Single user system   (B) Multi user processors

(C) Both of these   (D) None of these

6   The Client can_____.

(A) Send request to server   (B) Send response to server

(C) Receive request from server   (D) None of these

7   queries in Entity Framework is given by:

(A) LINQ   (B) NQIL

(C) ILNQ   (D) QINL

8   The _____is a simple object model that use OLE DB, and is frequently used for database applications.

(A) ADO   (B) XML

(C) ODBC   (D) None of these

9   Form authentication is base on:

(A) temp   (B) cookie

(C) both a and b   (D) neither a nor b

10   SOAP is:

(A) Simple Object Access Protocol   (B) Sample Object Access Protocol

(C) Simple Oriented Access Protocol   (D) Simple Object Access Process

(B) Do as directed.   **(10)**

1   PDA stands for _____,

2   Define OOUI.

3   BPR stands for _____.

4   Define API.

5   Just-in-time converts_____.

6   Define Shared server.

7   OLE stands for _____.

8   Explain function of AddRange.

9   Full form of CASE is _____.

10   What is meant by Standard skeleton programs?

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Course	:	BCA	Date	: 31-01-17
Subject Code	:	BCAN-501(NEW)	Time	: 11:00 to 02:00
Subject Name	:	Business Application and Intro…to	Duration	: 03 hours
		ERP	Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. What are the advantages of ERP?
2. Explain ERP Lifecycle.
3. Explain the Inventory Management module of ERP.
4. Compare some of the key ERP vendors.
5. What is BPR? How can BPR be applied to an organization?

Section B

Answer the following (Attempt any four) (20)

1. List down Do's and Don'ts during ERP implementation.
2. Why ERP is considered to be the backbone of E-business?
3. Write a short note on Six Sigma.
4. Write a short note on CRM.
5. List down common ERP myths.
6. Explain the concept of data mining.

Section C

Fill in the blanks. (05)

1. ERP stands for _____.
2. The ERP module dealing with attendance is _____.
3. _____ are interactive information systems which support management in the decision making process.
4. _____ is a computer processing that allow users to simply and selectively take and view data from multiple dimensions.
5. CRM stands for _____.

Multiple Choice Questions. (05)

1. HR modules does not have:
   a) Training section
   b) Recruitment section
   c) Budgeting section
   d) Payroll section
2. Which of the following is not a potential risk of ERP implementation?
   a) Inadequate training
   b) Software stability

      c) Software selection
      d) None of the above
3. ERP is appraised at _____ of SEI's Capability Maturity Model integration.
      a) Level 1
      b) Level 2
      c) Level 3
      d) None of the above
4. A company's Production and Materials Management executives have made plans for new buildings and equipment and related personnel needs. What sort of planning is this?
      a) Long range plan
      b) Medium range plan
      c) Short range plan
      d) Performance plan
5. Which functional area is responsible for taking customer orders?
      a) Marketing and Sales
      b) Production and Materials Management
      c) Accounting and Finance
      d) Human Resources

Mark the following statements as True/False.   **(10)**

1. ESS/ EIS is normally developed to assist the operation level decision making.
2. DSS should not have the capability to interfere with corporate database.
3. Artificial intelligence focus on decision support for specific business problems.
4. Data mining requires data warehouse.
5. The Capability Quality Model (CQM) is a framework to assess the quality level of an organization's information systems development and management processes and products.
6. "Tracking & Authorization of all incoming invoices" is a key functionality of Accounts Payable module.
7. The quality control includes vendor evaluation, quality analysis in the QM information system and statistical process control using control charts.
8. ERP systems have a database for each of a company's functional areas.
9. OpenERP is not an open source ERP.
10. Marketing details are included in ERP Lifecycle.

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Term End Examination January – 2017

Course	:	BCA	**Date**	: 01-02-17
Subject Code	:	BCAN-502(NEW)	**Time**	: 11:00 to 02:00
Subject Name	:	Object Oriented Analysis and Design	**Duration**	: 03 hours
			Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Write short notes on certain tools applied in Object Oriented Design?

2. Write short notes on Use Case Model?

3. Write short notes on UML Collaboration Diagram?

4. What are the requirements for Component Based Development?

5. What are the advantages of Software Components?

Section B

Answer the following (Attempt any four) (20)

1. Write note on Software Life Cycle?

2. What is Modeling?

3. Write short note on Business Domain Model?

4. Explain UML Package Diagram?

5. Write short note on State Transition Diagrams?

6. What is UML Diagrams?

Section C

(A)   **Multiple Choice Questions.** (10)

1. Object Oriented analysis includes_____.
   a. Object modeling   b. Dynamic modeling
   c. Functional modeling.   d. All of these

2 What is class?
   a. Collection of similar objects.   b. Collection of different types of objects
   c. Group of information   d. None of these

3 What are the benefits of object oriented modeling?
   a. improved reliability   b. improved flexibility

c. reduced maintenance   d. all of these

4   What is object oriented modeling strategy?
a. Use of algorithms   b. Use of objects
c. Use of classes   d. Both B and C

5   When the exit action does is performed?
a. When a transaction enters the state   b. When the transaction leaves the state
c. When the task is performed   d. None of these

6   A collaboration diagram is similar to:
a. flowchart   b. network
c. both a and b   d. none of above

7   Which of the following is used to describe the movements of elements between states?
a. State machine diagram   b. Deployment diagram
c. Sequence diagram   d. None of these

8   Which of the following diagram is used to show the hardware and software of the system?
a. Class diagram   b. Package diagram
c. Deployment diagram   d. None of these

9   Which among the following does not represents distributed computing system standards?
a. UNIX   b. CORBA
c. COM   d. JAVA

10   Attribute of object carry information about:
a. behavior   b. method
c. state   d. procedures

(B)   **TRUE / FALSE**   **(10)**

1.   In a flowchart, process can be represented by diamond shaped object

2   Prototyping is a Linear process.

3   Slows disk access time is a hindrance of secondary storage?

4   Invoking the method of another object is meant by sending message to object?

5   Model testing involves modelling activity and testing activity

6   In UML collaboration diagram, Use case is shown as Circle

7   By using an eclipse can we represent an interface?

8   It can easily mapped the records to corresponding database table are the advantages of using object modelling?

9   The benefit of Standards in Software is cording with same hardware'?

10   Increase in time to market are the benefits for component based product lines?

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Course	: BCA	Date	:	02-02-17
Subject Code	: BCAN-503(NEW)	Time	:	11:00 to 02:00
Subject Name	: Web Technology using FOSS	Duration	:	03 hours
		Max. Marks	:	70

Section A
Answer the following (Attempt any three) (30)
1. What is protocol? Explain internet protocol with example.
2. What is HTML? Explain fundamental elements of HTML.
3. Explain Berkeley Source Distribution License and GNU General Public License.
4. Explain following Linux Command with example : Copy Command, Listing Files command.
5. Discuss about Web Services Description Language (WSDL).

Section B
Answer the following (Attempt any four) (20)
1. Discuss about the characteristics of client.
2. Write a short note on Open Source Software Development Model.
3. What is TCP/IP? Discuss basics of TCP/IP Networking & routing.
4. What is boot up process? Explain it.
5. Write a short note on Java Servlets,
6. Write a brief note on Simple Object Access Protocol (SOAP).

Section C
1. Fill in the blanks (10)
(1) A global network of many computers linked by data lines and wireless systems known as _____ .
(2) HTML stands for _____.
(3) HTTP client requests by establishing _____ connection among port on server.
(4) Ajax is a set of _____.
(5) JSP provides good way of _____.
(6) RPC stands for _____.
(7) SOAP is _____ which allows applications exchange information over HTTP
(8) Internet protocol is the native protocol of _____ machines.
(9) Telephone lines are made of with _____.
(10 A _____ is a collection of records..

2. Give short answer in one or two sentences. (10)
(1) Which device is connects your computer to the Internet?
(2) Which server is used for sending and receiving requests from web server?

(3) Which event is using XML Reader?
(4) Which command will execute when servlet is loaded in server?
(5) Who is the basis for Web Services?
(6) Which library function is known as system call?
(7) Which command you use for editing of text document?
(8) Define ISP word in single line.
(9) Define Open Source word in two line.
(10 GPL stands for?

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Course	: BCA		Date	: 03-02-17
Subject Code	: BCAN-504(NEW)		Time	: 11:00 to 02:00
Subject Name	: Internet Programming		Duration	: 03 hours
			Max. Marks	: 70

Section A
Answer the following (Attempt any three) (30)
1. Explain ASP.Net Object in details
2. Explain all validator control in ASP.net
3. Write a Asp.Net program to create a table and insert 2 record in the table
4. Explain sitemap and treeview in site
5. Explain Access rules for all type user. How to implement this rules

Section B
Answer the following (Attempt any four) (20)
1. Explain Delegates in C#
2. Explain Grid view Control
3. Explain Login Control in details
4. Explain Sqldatasource control in details
5. Explain Subroutines and function
6. Explain MasterPage in details

Section C
M.C.Q (20)
1 Choose the form in which Postback occur
   A. HTMLForms
   B. Webforms
   C. Winforms
2 How do you get information from a form that is submitted using the "post" method?
   A. Request.QueryString
   B. Request.Form
   C. Response.write
   D. Response.writeln
3 Which of the following base class do all Web Forms inherit from?
   A. Window class
   B. Web class
   C. Form class
   D. Page class
4 Which of the following object is not an ASP component?
   A. LinkCounter

B. Counter
C. AdRotator
D. File Access

5   Which of the following method must be overridden in a custom control?
A. The Paint() method
B. The Control_Build() method
C. The default constructor
D. The Render() method

6   Where do we include the user lists for Form authentication?
A. < credential>
B. < authorization>
C. < Identity>
D. < authentication>

7   What class does the ASP.NET Web Form class inherit from by default?
A. System.Web.UI.Page
B. System.Web.UI.Form
C. System.Web.GUI.Page
D. System.Web.Form

8   Attribute must be set on a validator control for the validation to work.
A. ControlToValidate
B. ControlToBind
C. ValidateControl
D. Validate

9   File extension used for ASP.NET files.
A. .Web
B. .ASP
C. .ASPX
D. None of the above

10   Why is Global.asax is used?
A. Declare Global variables
B. Implement application and session level events
C. No use

11   Which DLL translate XML to SQL in IIS?
A. SQLISAPI.dll
B. SQLXML.dll
C. LISXML.dll
D. SQLIIS.dll

12   What is used to validate complex string patterns like an e-mail address?
A. Extended expressions
B. Basic expressions
C. Regular expressions
D. Irregular expressions

13   An alternative way of displaying text on web page using
A. asp:label
B. asp:listitem
C. asp:button

14 Default Session data is stored in ASP.Net.
   A. StateServer
   B. Session Object
   C. InProcess
   D. all of the above
15 Which object can help you maintain data across users?
   A. Application object
   B. Session object
   C. Response object
   D. Server object
16 Which of the following control is used to validate that two fields are equal?
   A. RegularExpressionValidator
   B. CompareValidator
   C. equals() method
   D. RequiredFieldValidator
17 Mode of storing ASP.NET session
   A. InProc   B. StateServer
   C. SQL Server   D. All of the above
18 Default scripting language in ASP.
   A. EcmaScript
   B. VBScript
   C. PERL
   D. JavaScript
19 Caching type supported by ASP.Net
   A. Output Caching
   B. DataCaching
   C. a and b
   D. none of the above
20 Web.config file is used...
   A. Configures the time that the server-side codebehind module is called
   B. To store the global information and variable definitions for the application
   C. To configure the web server
   D. To configure the web browser

9. Forms and Enclosures

Dr. Babasaheb Ambedkar Open University

(Established by Government of Gujarat)
'Jyotirmay' Parisar, Opp. Shri Balaji Temple,
Sarkhej-Gandhinagar Highway, Chharodi, Ahmedabad - 382 481
E-mail: kmro@baou.edu.in Website: www.baou.edu.in

APPLICATION FORM FOR ISSUE OF DUPLICATE I-CARD

1. NAME : ....

2. COURSE : .... SEMESTER/YEAR : ....

3. ENROLLMENT NO. ....CENTER CODE : ....

4. STUDENT ADDRESS : ....

   ....

   ....PIN NO. : ....

5. FEE DETAILS : (The fee for Duplicate I-Card is Rs.25/- which is to be paid through Demand Draft in favour of 'Dr.Babasaheb Ambedkar Open University' Payable at Ahmedabad or Cash at Dr. BAOU Campus.)

   Demand Draft No. : .... DD Date : ....

   Issuing Bank : ....

   Date :.................................   (Signature of Applicant)

   The Filled in form with the requisite fees is to be sent to :-

   Vocational and Professional Department,

   Dr. Babasaheb Ambedkar Open University,

   Jyotirmay Parisar, Sarkhej-Gandhinagar Highway,

   Ahmedabad-382481.

Dr. Babasaheb Ambedkar Open University

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Sarkhej-Gandhinagar Highway, Chharodi, Ahmedabad - 382 481
E-mail: kmro@baou.edu.in Website: www.baou.edu.in

APPLICATION FORM FOR ISSUE OF TRANSCRIPT

1. NAME : ....

2. COURSE : .... SEMESTER/YEAR : ....

3. ENROLLMENT NO. ....CENTER CODE : ....

4. STUDENT ADDRESS : ....

....PIN NO. : ....

5. PURPOSE :..

6. FEE DETAILS : (The fee for 5 Copy Transcript is Rs.500/- which is to be paid through Demand Draft in favour of 'Dr. Babasaheb Ambedkar Open University' Payable at Ahmedabad or Cash at Dr. BAOU Campus.)

   Demand Draft No. : .... DD Date : ....

   Issuing Bank : ....

Date :...............................   (Signature of Applicant)

The Filled in form with the requisite fees is to be sent to :-
Exam Department,
Dr. Babasaheb Ambedkar Open University,
Jyotirmay Parisar, Sarkhej-Gandhinagar Highway,
Ahmedabad-382481.

Require Documents (Compulsory):
1. Marksheet Xerox
2. Degree Certificate Xerox
3. 6 Passport Size Photo

Dr. Babasaheb Ambedkar Open University

(Established by Government of Gujarat)
'Jyotirmay' Parisar, Opp. Shri Balaji Temple,
Sarkhej-Gandhinagar Highway, Chharodi, Ahmedabad - 382 481
E-mail: kmro@baou.edu.in Website: www.baou.edu.in

APPLICATION FORM FOR ISSUE OF MIGRATION CERTIFICATE

1. NAME : ……

2. COURSE : ……………………………………… SEMESTER/YEAR : …………………………………

3. ENROLLMENT NO. ……………………………………………CENTER CODE : ……………………

4. STUDENT ADDRESS : …………………………………………………………………………………

   ……

   ……………………………………………………………………PIN NO. : ……………………………

5. PURPOSE :………………………………………………………………………………………………

6. FEE DETAILS : (The fee for Migration Certificate is Rs.100/- which is to be paid through Demand Draft in favour of 'Dr.Babasaheb Ambedkar Open University' Payable at Ahmedabad or Cash at Dr. BAOU Campus.)

   Demand Draft No. : ……………………………… DD Date : …………………………………………

   Issuing Bank : ………………………………………………………………………………………………

Date :……………………………   (Signature of Applicant)

The Filled in form with the requisite fees is to be sent to :-

Exam Department,

Dr. Babasaheb Ambedkar Open University,

Jyotirmay Parisar, Sarkhej-Gandhinagar Highway,

Ahmedabad-382481.

Require Documents (Compulsory):

1. Marksheet Xerox

2. Degree Certificate Xerox

3. Passport Size Photo

Dr. Babasaheb Ambedkar Open University

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'Jyotirmay' Parisar, Opp. Shri Balaji Temple,
Sarkhej-Gandhinagar Highway, Chharodi, Ahmedabad - 382 481
E-mail: kmro@baou.edu.in Website: www.baou.edu.in

APPLICATION FORM FOR ISSUE OF BONAFIDE CERTIFICATE

1. NAME : ....

2. COURSE : .... SEMESTER/YEAR : ....

3. ENROLLMENT NO. ....CENTER CODE : ....

4. STUDENT ADDRESS : ....

   ....

   ....PIN NO. : ....

5. PURPOSE :..

6. FEE DETAILS : (The fee for Bonafide Certificate is Rs.50/- which is to be paid through Demand Draft in favour of 'Dr.Babasaheb Ambedkar Open University' Payable at Ahmedabad or Cash at Dr. BAOU Campus.)

   Demand Draft No. : .... DD Date : ....

   Issuing Bank : ....

Date :...............................   (Signature of Applicant)

The Filled in form with the requisite fees is to be sent to :-

Vocational and Professional Department,

Dr. Babasaheb Ambedkar Open University,

Jyotirmay Parisar, Sarkhej-Gandhinagar Highway,

Ahmedabad-382481.

પદવી પ્રમાણપત્ર મેળવવા માટેનું અરજીપત્રક

(પાછળ દર્શાવેલ સુચનાઓ ધ્યાનથી વાંચ્યા બાદ ફોર્મ ભરવું)

પ્રતિ,
કુલસચિવશ્રી,
ડૉ. બાબાસાહેબ આંબેડકર ઓપન યુનિવર્સિટી,
અમદાવાદ – 382 481

શ્રીમાન,

હું (નામ)…………………………………………………….………… ડિગ્રી પ્રોગ્રામ ………………………………………
અભ્યાસક્રમનું ડિગ્રી પ્રમાણપત્ર મેળવવા માટે ભરવાની થતી ફી પેટે રૂા 110/- રોકડા/ડિમાન્ડ ડ્રાફ્ટ નંબર
………………………, બેંકનું નામ ……………………… શાખા ………………………તા. ………………………
નો મોકલી આપુ છુ. આ સાથે મેં ………………………… અભ્યાસક્રમ ઉત્તીર્ણ કર્યાના ગુણપત્રકની પ્રમાણિત ઝેરોક્ષ
નકલ સામેલ કરેલ છે.

ડિગ્રી પ્રમાણપત્ર મેળવવા માટે વિધાર્થીએ કોઈ એક વિકલ્પની પસંદગી કરી (√) નિશાની કરવી.

[ ] હું ડિગ્રી પ્રમાણપત્ર પદવીદાન સમારંભમાં ઉપસ્થિત રહી મેળવવા માગું છું.

[ ] મને ડિગ્રી પ્રમાણપત્ર ફોર્મમાં દર્શાવેલ સરનામે મોકલી આપવા વિનંતી.

સ્થળ : આપનો/આપની વિશ્વાસુ
તારીખ :

(……….…………………)

(નીચેની વિગતો અરજદારે મોટા અને સ્વચ્છ અક્ષરોમા ભરવી)

નામ : ……………………………………………………………………………………

     <u>અટક</u>   <u>નામ</u>   <u>પિતા/પતિનું નામ</u>

નામ : ……………………………………………………………………………………
(અંગ્રેજી કેપિટલ અક્ષરોમા માર્કશીટ મુજબ)

કાયમી રહેઠાણનું સરનામું :

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………… પિન કોડ નંબર : ……………………………………
ફોન નં : ……………………………………… મોબાઈલ : ……………………………………
ઈ–મેઈલ : ………………………………………

અભ્યાસક્રમની વિગત

અભ્યાસક્રમનું નામ   : ……………………………………………
નોંધણી નંબર   : ……………………………………………
પરીક્ષા સત્ર   : [ ] જાન્યુઆરી–ફેબ્રુઆરી-2016   [ ] જૂન–જુલાઈ-2016
માર્કશીટ નંબર   : ……………………………………………
પ્રાપ્ત કરેલ વર્ગ   : ……………………………………………
પસંદ કરેલ મુખ્ય વિષય : ……………………………………………

ગુણ ચકાસણી માટેની અરજી

અરજી નં._____
(કાર્યાલય માટે)

તા. _____   સત્રાંત પરીક્ષા : જાન્યુઆરી/જુલાઈ_____

નોંધણી નંબર   :
વિદ્યાર્થીનું નામ   : _____
સરનામું   : _____
                           : _____
                           : _____ પીન કોડ : _____
ફોન નં. (રહે.)   : _____   ફોન નં. (ઓ) : _____
(એસ.ટી.ડી. કોડ સાથે)   (એસ.ટી.ડી. કોડ સાથે)

મોબાઈલ   : _____
અભ્યાસક્રમનું નામ   : _____
અભ્યાસકેન્દ્રનું નામ   : _____
પરીક્ષાકેન્દ્ર કોડ   : _____

જેમાં ગુણ ચકાસણી કરાવવી છે તે પાઠ્યક્રમો :

અં. નં.	પાઠ્યક્રમનું નામ	પાઠ્યક્રમ	ગુણપત્રક પ્રમાણે મેળવેલ ગુણ

નોંધ :- ગુણપત્રકની નકલ સાથે બિડવી.

પાઠ્યક્રમ દીઠ રૂ. લેખે પુનઃચકાસણી ફી ની વિગત : (ડૉ. બાબાસાહેબ આંબેડકર ઓપન યુનિવર્સિટી, અમદાવાદની તરફેણ નો ડીમાન્ડ ડ્રાફ્ટ મોકલવાનો રહેશે)

રકમ	ડીમાન્ડ ડ્રાફ્ટ નંબર	તારીખ	બેંકનું નામ

સ્થળ   : _____
તારીખ : _____

_____
અરજી કરનાર વિદ્યાર્થીની સહી

અરજી નીચેના સરનામે મોકલવાની રહેશે

પ્રતિ, નિયામકશ્રી (વિદ્યાર્થી સેવાઓ) , ડૉ. બાબાસાહેબ આંબેડકર ઓપન યુનિવર્સિટી,
આર. સી. ટેકનીકલ ઇન્સ્ટીટ્યૂટ કેમ્પસ, સરખેજ–ગાંધીનગર હાઈવે,
ગુજરાત હાઈકોર્ટ સામે, સોલા, અમદાવાદ–૩૮૦ ૦૬૦.