

**GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI**  
**BACHELOR OF COMPUTER APPLICATIONS PROGRAMME**

**SECOND SEMESTER EXAMINATION**

<b>Code No.</b>	<b>Paper</b>	<b>Course Category</b>	<b>L</b>	<b>T/P</b>	<b>Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Max Marks</b>
<b>*Skill Enhancement Course (SEC) Choose any one</b>								
BCA 132	** MOOC course from SWAYAM/NPTEL	SEC-1	0	0	2	100	0	100

**\*\* Instructions for MOOC course**

1. MOOC course should be done from SWAYAM /NPTEL as per the guidelines of UGC.
2. For securing the credits, the student is required to complete the assessment of the course and to provide the certificate of the course done from SWAYAM /NPTEL.
3. The fees (if any) for the registration and/or assessment of the MOOC course must be borne by the student only.
4. If the student secures more than 2 credits for the MOOC course even then 2 credits shall be considered for this subject and the grade/marks provided by assessing authority shall be transferred to the university by the institution where the student is studying. The result of the MOOC courses shall be taken on record by the University's Examination Division and a result declared for these papers. The student must submit the result of such papers to their respective institutions. All results for the MOOC's course may be submitted before the completion of other requirements including credit requirements.

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**THIRD SEMESTER EXAMINATION**

Code No.	Paper	Course Category	L	T/P	Credits	Marks Internal	Marks External		Max Marks
							Th.	Pr.	
<b>***Skill Enhancement Course (SEC) Choose any one</b>									
BCA 231	** MOOC course from SWAYAM/NPTEL	SEC-1	0	0	2	100	0	0	100

**\*\* Instructions for MOOC course**

1. MOOC course should be done from SWAYAM /NPTEL as per the guidelines of UGC.
2. For securing the credits, the student is required to complete the assessment of the course and to provide the certificate of the course done from SWAYAM /NPTEL.
3. The fees (if any) for the registration and/or assessment of the MOOC course must be borne by the student only.
4. If the student secures more than 2 credits for the MOOC course even then 2 credits shall be considered for this subject and the grade/marks provided by assessing authority shall be transferred to the university by the institution where the student is studying. The result of the MOOC courses shall be taken on record by the University's Examination Division and a result declared for these papers. The student must submit the result of such papers to their respective institutions. All results for the MOOC's course may be submitted before the completion of other requirements including credit requirements.
5. If the student secures more than 2 credits for the MOOC Course even then 2 credits shall be considered for this subject and the grade marks provided by assessing authority shall be transferred to the university.

## Implementation Rules:

1. The examinations, attendance criteria to appear in examinations, promotion and award of the degree shall be governed by the Ordinance 11 of the University. The term "major discipline" / "primary discipline" in this document refers to the discipline in which student is admitted/ studies from 3<sup>rd</sup> semester onwards.
2. Minimum duration of the Bachelor of Computer Applications (SCA) programme shall be 3 years (N=4 years) (6 semesters).
3. Maximum duration of the Bachelor of Computer Applications (BCA) programme shall be 5 years (N+2 years). After completion of N+2 years of study, if the student has appeared in the papers of all the semesters upto 6th semester, then a maximum extension of 1 year may be given to the student for completing the requirements of the degree if and only if the number of credits already earned by the student is atleast 120. Otherwise, the admission of the student shall stand cancelled. After the period of allowed study, the admission of the student shall be cancelled.
4. The MOOC courses may be taken through SWAYAM / NPTEL MOOCs platform. The student desirous of doing a specific MOOC based course must seek approval of the APC of the institution for the same before the commencement of the semester. The APC shall allow the MOOC paper to the student if and only if the MOOC subject/ course being considered for the student is being offered in line with the Academic Calendar applicable. The student shall submit the successful completion certificate with marks to the institution for onwards transfer to the Examination Division. The Examinations Divisions shall take these marks on record for incorporation in the result of the appropriate semester. These marks / grades of these courses shall be used for calculation of the SGPA/CGPA of the student concerned by the examination division of the University. Though the result of the MOOC courses may be declared subsequently. The MOOC course credits shall not be considered for calculation of the promotion criterion from one academic year of study to the next academic year.
5. Maximum Credits: at least 162. The student has to appear in the examinations for these credits in all components
6. Minimum Credits: at least 150.
7. To earn an Honours degree, the student may enroll for 20 credits or more through SWAYAM / NPTEL MOOCs platform. This point has to be read together with other points specially point
8. The acquisition of the credits should be completed before the 15th of the July of the admission year plus 3 years. That is, if a student is admitted in the year X, then these credits must be acquired through MOOCs by 15th July of the year (X+3), no extra duration or time shall be allocated. Honours in the degree shall be awarded if and only if at least 20 credits are acquired through MOOCs. To obtain Honours in the programme, the student must apply to the institution about the same, before the commencement of the 2nd semester and about registration for the MOOCs and the specific courses through MOOCs shall be registered by the student only after approval by the Academic Programme Committee (APC) of the Institution. The APC shall approve the course if it is not already studied by the student or the student shall not study it in future and adds value to the major area of specialization (which is the degree). The papers for which the student desires to appear for Honours through MOOCs, all papers results shall be submitted by the student to the school for onwards transfer to Examination Division of the University, to be taken on record of the University. The results of these papers shall be a part of the records of the examinations of the students. The records shall be submitted by the student to the school,

then transferred to the Examinations division, shall be notified by the examinations division of the University, and a separate marksheet shall be issued by the Examinations divisions. The cost of taking the MOOC course is to be borne by the concerned student. Such courses shall be reflected as additional courses / papers for the student. The "Honours" in the degree shall be awarded if and only if in addition to the 20 credits earned as specified the student has a CGPA of 7.5 or above.

If a student acquires less than 20 credits through MOOCs, following the mechanism specified, and then also the results of these papers shall be taken on record as specified above, though no Honours degree shall be awarded. The papers through MOOCs for Honours degree shall not be a part of the set of the papers over which the SGPA/CGPA of the student shall be collected.

The papers through MOOCs for Honours degree shall be additional papers studied by the students and are to be taken into account only for award of Honours in the degree programme, if 20 credits are earned through MOOCs as approved by APC, by a student. See Clause 8 also.

<b>CBCS COURSE STRUCTURE FOR BCA PROGRAMME</b>					
<b>Semester wise placement of the courses</b>					
<b>Semester</b>	<b>CORE COURSE (18)</b>	<b>Ability Enhancement Compulsory Course (AECC) (3)</b>	<b>Skill Enhancement Course (SEC) (2)</b>	<b>Elective: Discipline Specific (DSE) (5)</b>	<b>Elective: Generic(GE) (2)</b>
<b>II Total Credits 26</b>	CC5 (4) Applied Mathematics	AECC2 (2) EnvironmentStudies	SEC -1 (2)		
	CC6 (4+2) Web Based Programming				
	CC7 (4+2) Data Structures & Algorithm Using 'C'				
	CC8 108 (4+2) Database Management System				
<b>III Total Credits27</b>	CC9 (4) Computer Network	AECC3(2) Human Valuesand ethics	SEC -2 (2)	DSE- 1 (4+1)	Any course from the list GE-1(4)
	CC10 (4) Computer Organization and Architecture				
	CC11 (4+2) Object Oriented Programming with C++				
<b>IV Total Credits27</b>	CC12(4+2) Java Programming	AECC4 (4) Introduction to Management & Entrepreneurship Development Programme	SEC-3 (2) Personality Development Skills	DSE -2 (4+1)	Any course from the list GE-2 (4)
	CC13 (4+2) Software Engineering				
<b>V Total Credits27</b>	CC14 (4+2) Operating System & Linux Programming	AECC 5 Minor Project (4)	SEC-4 (2) Summer Internship	DSE -3 (4+1)	
	CC15(4+2) Computer Graphics				
	CC 16 (4) Cloud Computing				
<b>VI Total Credits27</b>	CC17 (4) Data warehousing and Data Mining	AECC 6 Major Project (6)	SEC-4 (2) Seminar/Confer ence Presentation	DSE -4 (4+1)	
	CC18 (4) E-Commerce				
	CC19 (4+2) Internet of Things				

### **Skill Enhancement Course 1 (SEC-1)**

SEC 1 (choose one) Skill development course from the following

- (i) MOOC course from SWAYAM/NPTEL of minimum 2 credits. Certificate is mandatory for the degree
- (ii) Front End Design Tool VB.Net Lab
- (iii) Statistical Analysis using Excel
- (iv) Designing Lab Photoshop

### **SEC 2 (choose one)**

- (i) MOOC course from SWAYAM/NPTEL of minimum 2 credits. Certificate is mandatory for the degree
- (ii) Designing Lab Corel Draw
- (iii) ASP.Net
- (iv) AR/VR