

PROGRAMME STRUCTURE AND SCHEME OF EXAMINATION
M.SC GEOGRAPHY
UNDER CHOICE BASED CREDIT SYSTEM W.E.F. 2019-20 AMENDED IN 2020-21
M. Sc. Geography
Semester - I


Core Courses (CC)

Sr. No.	Course Code	Nomenclature of the course	Credits				Contact Hrs/week	Maximum Marks			
			L	T	P	Total		Theory	EA	P	Total
1	GEOG101	Climatology	4	0	0	4	4	80	20	0	100
2	GEOG102	Geomorphology	4	0	0	4	4	80	20	0	100
3	GEOG103	Advance Geography of India	4	0	0	4	4	80	20	0	100
4	GEOG104	Computer Applications	2	0	2	4	6	60	00	40	100
5	GEOG105	Seminar/Journal Club				1	-	-	-	-	25
6	GEOG106	Self-Study Paper				1	-	-	-	-	25
7	GEOG107	Lab Course-1: Study and Interpretation of Topographical sheets	0	0	4	4	8	-	-	50	50
8	GEOG108	Lab Course-2: Climatology and Geomorphology	0	0	4	4	8	-	-	50	50
Discipline Centric Elective courses (DCEC): One course from each group											
Group -A											
9	GEOG109	Urban Geography	4	0	0	4	4	80	20	0	100
10	GEOG110	Rural Geography	4	0	0	4	4	80	20	0	100
Group -B											
11	GEOG111	Resource Geography	4	0	0	4	4	80	20	0	100
12	GEOG112	Cultural Geography	4	0	0	4	4	80	20	0	100
Total						24	42				750

Total Credits: 24

Total Contact hours per week: 42

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M. Sc. Geography
Semester – II

Core Courses (CC)

Sr. No.	Course Code	Nomenclature of the course	Credits				Contact Hrs/week	Maximum Marks			Total
			L	T	P	Total		Theory	IA	P	
1	GEOG201	Geographical Thought	4	0	0	4	4	80	20	0	100
2	GEOG202	Economic Geography	4	0	0	4	4	80	20	0	100
3	GEOG203	Population Geography	4	0	0	4	4	80	20	0	100
4	GEOG204	Statistical Methods in Geography	4	0	0	4	4	80	20	0	100
5	GEOG205	Seminars/Journal Club				1	-	-	-	-	25
6	GEOG206	Self-Study Paper				1	-	-	-	-	25
7	GEOG207	Lab Course-I: (Economic Geography & Population Geography)	0	0	4	4	8	-	-	50	50
8	GEOG208	Lab Course-II: Computer based data management and Cartography.	0	0	4	4	8	-	-	50	50

Discipline Centric Elective courses (DCEC) Any one of the following two courses

9	GEOG209	Oceanography	4	0	0	4	4	80	20	0	100
10	GEOG210	Soil Geography	4	0	0	4	4	80	20	0	100

Foundation Course (Compulsory)

11	GEOG211	Communication Skills & Personality Development	2	0	0	2	2	40	10	0	50
Total						32	38				700

Total Credits: 32

Total Contact hours per week: 38



M. Sc. Geography
Semester – III

Core Courses (CC)

Sr. No.	Course Code	Nomenclature of the course	Credits				Contact Hrs/week	Maximum Marks			
			L	T	P	Total		Theory	IA	P	Total
1	GEOG301	Regional development and Planning with special reference to India	4	0	0	4	4	80	20	0	100
2	GEOG302	Environmental Geography	4	0	0	4	4	80	20	0	100
3	GEOG303	Remote Sensing (RS)	4	0	0	4	4	80	20	0	100
4	GEOG304	Geographical Information System (GIS)	4	0	0	4	4	80	20	0	100
5	GEOG305	Seminar/Journal Club				1	-	-	-	-	25
6	GEOG306	Self-Study Paper				1	-	-	-	-	25
7	GEOG307	Lab Course-1: Visual Interpretation of Aerial Photographs	0	0	4	4	8	-	-	50	50
8	GEOG308	Lab Course -2 (Field- Work): Socio- Economic Survey & Report Writing	0	0	4	4	8	-	-	50	50

Discipline Centric Elective courses (DCEC): Any one of the following three courses

9	GEOG309	Agricultural Geography	4	0	0	4	4	80	20	0	100
10	GEOG310	Biogeography	4	0	0	4	4	80	20	0	100
11	GEOG311	Political Geography	4	0	0	4	4	80	20	0	100

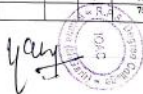
Open Elective Courses (OEC): To be opted out of a pool of OECs.

To be chosen from the pool of Open Elective courses provided by the University (Excluding the OEC offered by the Dept. of Geography)

12	GEOG312	Fundamentals of Geography	3	0	0	3	3	80	20	0	100
Total						33	39				750

Total Credits: 33

Total Contact hours per week: 39



M. Sc. Geography
Semester - IV

Core Courses (CC)

Sr.No.	Course Code	Nomenclature of the course	Credits				Contact hrs/week	Maximum Marks			
			L	T	P	Total		Theory	IA	P	Total
1	GEOG401	Research Methodology	4	0	0	4	4	80	20	0	100
2	GEOG402	Geography and Disaster Management	4	0	0	4	4	80	20	0	100
3	GEOG403	Application of Remote Sensing and Geographical Information system	4	0	0	4	4	80	20	0	100
4	GEOG404	Hydrology	4	0	0	4	4	80	20	0	100
5	GEOG405	Seminar/Journal Club				1	-	-	-	-	25
6	GEOG406	Self-Study Paper				1	-	-	-	-	25
7	GEOG407	Lab Course-1: Digital Image Processing Techniques	0	0	4	4	8	-	0	50	50
8	GEOG408	LabCourse-2: GIS Exercises	0	0	4	4	8	-	0	50	50

Discipline Centric Elective courses (DCEC): Any one of the following three courses

9	GEOG409	Geography and Water Resource Management	4	0	0	4	4	80	20	0	100
10	GEOG410	Social Geography	4	0	0	4	4	80	20	0	100
11	GEOG411	Geography of Tourism	4	0	0	4	4	80	20	0	100
Total						30	36				650

Total Credits: 30

Total Contact hours per week: 36

Total Credits for M. Sc. Geography: 34 + 32 + 33 + 30 = 129



M. Sc. Geography
Semester – IV

Core Courses (CC)

Sr.No.	Course Code	Nomenclature of the course	Credits				Contact hrs/week	Maximum Marks			
			L	T	P	Total		Theory	IA	P	Total
1	GEOG401	Research Methodology	4	0	0	4	4	80	20	0	100
2	GEOG402	Geography and Disaster Management	4	0	0	4	4	80	20	0	100
3	GEOG403	Application of Remote Sensing and Geographical Information system	4	0	0	4	4	80	20	0	100
4	GEOG404	Hydrology	4	0	0	4	4	80	20	0	100
5	GEOG405	Seminar/Journal Club				1	-	-	-	-	25
6	GEOG406	Self-Study Paper				1	-	-	-	-	25
7	GEOG407	Lab Course-I: Digital Image Processing Techniques	0	0	4	4	8	-	0	50	50
8	GEOG408	Lab Course-2: GIS Exercises	0	0	4	4	8	-	0	50	50

Discipline Centric Elective courses (DCEC): Any one of the following three courses

9	GEOG409	Geography and Water Resource Management	4	0	0	4	4	80	20	0	100
10	GEOG410	Social Geography	4	0	0	4	4	80	20	0	100
11	GEOG411	Geography of Tourism	4	0	0	4	4	80	20	0	100
Total						30	36				650

Total Credits: 30

Total Contact hours per week: 36

Total Credits for M. Sc. Geography: 34 + 32 + 33 + 30 = 129



DEPARTMENT OF GEOGRAPHY
M.Sc. Programme in Geography (w.e.f. 2020-21)

Total Credit Points

Semester	Core Course	DCEC	Open Elective	Foundation Course	Total
First	26	08	00	00	34
Second	26	04	00	02	32
Third	26	04	03	00	33
Fourth	26	04	00	00	30
Total	104	20	03	02	129

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CHE-407	Practical-V Inorganic Chemistry/ Physical Chemistry/ Organic Chemistry	C.C	-	02X03	06	-	03	03	-	-	50	50										
CHE-408	Practical-VI Inorganic Chemistry/ Physical Chemistry/ Organic Chemistry	C.C	-	02X03	06	-	03	03	-	-	50	50										
CHE-409	Seminar	-	-	-	-	-	-	01	-	-	-	25										
CHE-410	Self Study Paper	--	-	-	-	-	-	01	-	-	--	25										
Total													20	18	38	20	09	31	380	120	150	700

CC = Core Course DCEC= Discipline Centric Elective Course
 Duration: 02 Years Total Credits = 129 Total Marks = 2950



Scheme of Examination for M.Sc. Chemistry
Semester-II

Credits = 13

Marks = 750

Paper Code	Subjects	Type of Course	Contact Hours Per Week			Credits			Examination Scheme			Total
			Theory	Practical	Total	Theory	Practical	Total	Theory	Internal Assessment	Practical	
CHE-201	Inorganic Chemistry-II (Organometallic Chemistry & Molecular Clusters)	CC	04	-	04	04	-	04	30	20	-	100
CHE-202	Physical Chemistry-II (Physical Chemistry-I: Concepts & Applications)	CC	04	-	04	04	-	04	30	20	-	100
CHE-203	Organic Chemistry-II (Organic Reaction Mechanism)	CC	04	-	04	04	-	04	30	20	-	100
Discipline Centric Elective Course (Any Two)												
CHE-204	Supramolecular & Photochemistry	DCEC	04	-	04	04	-	04	30	20	-	100
CHE-205	Group Theory & Molecular Spectroscopy	DCEC	04	-	04	04	-	04	30	20	-	100
CHE-206	Organic Chemistry of Polymers	DCEC	04	-	04	04	-	04	30	20	-	100
CHE-207	Communication Skills & Personality Development	PEC	02	-	02	02	-	02	40	10	-	50
CHE-208	Practical-I Inorganic Chemistry	C.C	-	02+03	05	-	03	03	-	-	50	50
CHE-209	Practical-II Physical Chemistry	C.C	-	02+03	05	-	03	03	-	-	50	50
CHE-210	Practical-III Organic Chemistry	C.C	-	02+03	05	-	03	03	-	-	-	-
CHE-211	Seminar	-	-	-	01	-	-	01	-	-	-	25



CHE-212	Self Study Paper				01			01				25
Total		22	18	42	21	09	33	440	110	350	750	

CC = Core Course

DCEC = Discipline Centric Elective Course

FEC = Foundation Elective Course



Scheme of Examination for M.Sc. Chemistry

Semester-III

Credits = 24

Marks = 800

Paper Code	Subjects	Type of Course	Contact Hours Per Week			Credits			Examination Scheme			Total
			Theory	Practical	Total	Theory	Practical	Total	Theory	Internal Assessment	Practical	
CHE-301	Organic Spectroscopy	C.C	04		04	04		04	80	20		100
CHE-302	Inorganic Spectroscopy	C.C	04		04	04		04	80	20		100
CHE-303	Analytical Chemistry	C.C	04		04	04		04	80	20		100
CHE-304(a)	Inorganic special-I	C.C	04		04	04		04	80	20		100
CHE-304(b)	Physical Special-I											
CHE-304(c)	Organic Special-I											
CHE-305(a)	Inorganic special-II	C.C	04		04	04		04	80	20		100
CHE-305(b)	Physical Special-II											
CHE-305(c)	Organic Special-II											
Open Elective Course												
CHE-306	To be chosen from the pools of open electives provided by the other departments of University	O/E/C	03		03			03	80	20		100
CHE-307	Practical-I Inorganic Chemistry/ Physical Chemistry/ Organic Chemistry	C.C		02X03	06			03	03		50	50
CHE-308	Practical-II Inorganic Chemistry/ Physical Chemistry/ Organic Chemistry	C.C		02X03	06			03	03		50	50
CHE-309	Practical-III Inorganic Chemistry/ Physical Chemistry	C.C		02X03	06			03	03		50	50



Organic Chemistry											
CHE-310	Seminar	-	-	-	-	-	01	-	-	-	25
CHE-311	Self Study Paper	-	-	-	-	-	01	-	-	-	25
Total		23	18	41	20	09	34	490	120	150	800

CC = Core Course

DCEC = Discipline Centric Elective Course

OEC = Open Elective Course



Scheme of Examination for M.Sc. CHEMISTRY

Semester-IV

Credits = 31

Marks = 700

Paper Code	Subjects	Type of Course	Contact Hours Per Week			Credits			Examination Scheme			Total
			Theory	Practical	Total	Theory	Practical	Total	Theory	Internal Assessment	Practical	
CHE-401(a) CHE-401(b) CHE-401(c)	Inorganic special-III Physical Special-III Organic Special-III	C.C	04	-	04	04		04	80	20		100
CHE-402(a) CHE-402(b) CHE-402(c)	Inorganic special-IV Physical Special-IV Organic Special-IV	C.C	04		04	04		04	80	20		100
CHE-403(a) CHE-403(b) CHE-403(c)	Inorganic special-V Physical Special-V Organic Special-V	C.C	04		04	04		04	80	20		100
CHE-404(a) CHE-404(b) CHE-404(c)	Inorganic special-VI Physical Special-VI Organic Special-VI	C.C	04		04	04		04	80	20		100
CHE-405	Computational Chemistry	C.C	04		04	04		04	60	40		100
CHE-406	Practical-IV Inorganic Chemistry/ Physical Chemistry/ Organic Chemistry	C.C		02X03	06		03	03			50	80



SCHEME OF EXAMINATION FOR B.Sc. (HONS) IN CHEMISTRY
w.e.f. 2016-17 onwards

B.Sc. Ist (Hons.) Ist Semester

Paper No.	Code No.	Nomenclature of the Paper	Hours	Maximum Marks Written	I.A.	Exam duration
I	CH (H) -101	Inorganic Chemistry(Theory)	45	40	10	3 hrs.
II	CH (H) -102	Physical Chemistry(Theory)	45	40	10	3 hrs.
III	CH (H) -103	Organic Chemistry(Theory)	45	40	10	3 hrs.
IV	CH (H) -104	Optional Paper-I	45	40	10	3 hrs.
V	CH (H) -105	Optional Paper-II	45	40	10	3 hrs.
VI	CH (H) -106	English	45	40	10	3 hrs.
VII,VIII,IX	CH(H)-107,108,109	Practicals	60 each	50+50+50		3+3+3 hrs.
X,XI	CH(H) - 110,111	Practicals(optional papers)	60 each	50+50		3+3 hrs.

Total marks of B.Sc. Ist Semester =550 (500 if Math as optional)

B.Sc.Ist (Hons) IInd Semester

Paper No.	Code No.	Nomenclature of the Paper	Hours	Maximum Marks Written	I.A.	Exam duration
XII	CH (H) -201	Inorganic Chemistry(Theory)	45	40	10	3 hrs.
XIII	CH (H) -202	Physical Chemistry (Theory)	45	40	10	3 hrs.
XIV	CH (H) -203	Organic Chemistry (Theory)	45	40	10	3 hrs.
XV	CH (H) -204	Optional Paper-I	45	40	10	3 hrs.
XVI	CH (H) -205	Optional Paper-II	45	40	10	3 hrs.
XVII	CH (H) -206	English	45	40	10	3 hrs.
XVIII, XIX,XX	CH (H) - 207,208,209	Practicals	60each	50+50+50		3+3+3 hrs.
XXI,XXII	CH (H) -210,211	Practicals (optional papers)	60 each	50+50		3+3 hrs.

Total marks of B.Sc. IInd Semester =550 (500 if Math as optional)

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NEW SCHEME

**Scheme of Examination of
B.Sc. (Honours) Mathematics, Semester-I
(w.e.f. 2018-2019)**

Paper Code	Title of the paper	Teaching Hours	Max. Marks			
			Theory	Internal Assessment	Practicals	Total Marks
BHM 111	Algebra	4 Hours/week	60	15	-	75
BHM 112	Calculus	4 Hours/week	60	15	-	75
BHM 113	Solid Geometry	4 Hours/week	60	15	-	75
BHM 114	Discrete Mathematics-I	4 Hours/week	60	15	-	75
BHM 115	Opt(i) : Descriptive Statistics	4 Hours/week	60	15	-	75
	Opt(ii) : Chemistry -I	4 Hours/week				
BHM 116	Opt(i) : Computer Fundamentals and MS-OFFICE	4 Hours/week	60	15	-	75
	Opt(ii) : Physics -I	4 Hours/week				
BHM 117	Practicals/ Computational work based on Paper BHM115	4 Hours/week			25	25
BHM 118	Practicals/ Computational work based on Paper BHM116	4 Hours/week			25	25
BHM 119	English-I	4 Hours/week	60	15	-	75
Total marks of Semester-I						575

Note : The other conditions will remain the same as per relevant Ordinance and rules and regulations of the University.



Scheme of Examination
B. Sc. (Hons.) Physics Semester-V & VI for the sessions 2018-19

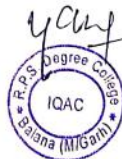
Semester-V

Paper No.	Title	Periods Per week	Total Marks	Internal Assessment	Max. Marks
Phy-501	Mathematical Physics V	3	50	10	40
Phy-502	Electro-magnetic Theory-I	3	50	10	40
Phy-503	Statistical Physics-I	3	50	10	40
Phy-504	Physics of Materials -I	3	50	10	40
Phy-505	Electronics Devices: Physics and Application -I	3	50	10	40
Phy-506	Any one of the following (a) Nano Technology (b) Environmental Physics	3	50	10	40
		3	50	10	40
Phy-507	Physics Lab. V	6	75	--	75
Phy-508	Physics Lab.VI And Project	6	75	--	75
Total Marks			450		

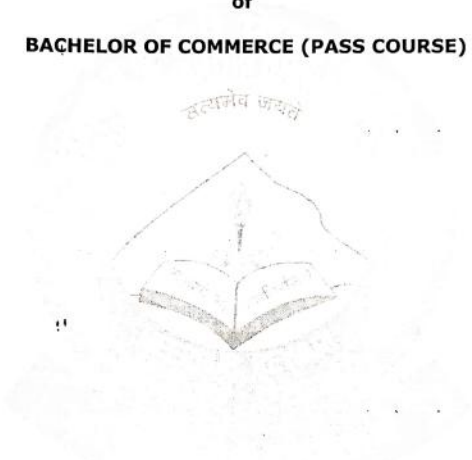
Semester-VI

Paper No.	Title	Periods Per week	Total Marks	Internal Assessment	Max. Marks
Phy-601	Mathematical Physics VI	3	50	10	40
Phy-602	Electro-magnetic Theory-II	3	50	10	40
Phy-603	Statistical Physics-II	3	50	10	40
Phy-604	Physics of Materials -II	3	50	10	40
Phy-605	Electronics Devices: Physics and Application -II	3	50	10	40
Phy-606	Any one of the following (a) Nano Technology (b) Environmental Physics	3	50	10	40
		3	50	10	40
Phy-607	Physics Lab. VII	6	75	---	75
Phy-608	Physics Lab.VIII And Project	6	75	---	75
Total Marks			450		

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SCHEME OF EXAMINATION
&
SYLLABI
of
BACHELOR OF COMMERCE (PASS COURSE)



INDIRA, GANDHI UNIVERSITY MEERPUR, REWARI
(HARYANA)



B.Com (Pass Course)
Scheme of Examinations w.e.f session 2017-18

B.Com-III -Vth Semester

S.No.	Nomenclature of the Paper	Theory Marks	Internal Assessment	Total Marks	Time
5.01	Taxation Law -I	80	20	100	3 Hrs.
5.02	Cost Accounting-I	80	20	100	3 Hrs.
5.03	Accounting for Management	80	20	100	3 Hrs.
5.04	Financial Market Operations	80	20	100	3 Hrs.
5.05	Entrepreneurship and Small Scale Business	80	20	100	3Hrs.
5.06	Optional (Any one out of followings)	80	20	100	3 Hrs.
	i. International Trade				
	ii. Investment Management				
	iii. Computer: Essentials of E-Commerce-I				
	iv. International Business Environment				

Total Marks = 600

B.Com-III -VIth Semester

S.No.	Nomenclature of the Paper	Theory Marks	Internal Assessment	Total Marks	Time
6.01	Taxation Law-II	80	20	100	3 Hrs.
6.02	Cost Accounting -II	80	20	100	3 Hrs.
6.03	Financial Management	80	20	100	3 Hrs.
6.04	Auditing	80	20	100	3 Hrs.
6.05	Goods and Services Tax & Customs Law	80	20	100	3 Hrs.
6.06	Optional (any one out of the followings)	80	20	100	3 Hrs.
	i. International Marketing				
	ii. Fundamentals of Operations Research				
	iii. Computer: Essentials of E-Commerce-II				
	iv. Tax Planning and Management				

Total Marks = 600

Total Marks of IIIrd Year(5th & 6th Semester) = 600 + 600 = 1200

Grand Total of B.Com. (Pass Course) = 1200+1200+1200 = 3600 Marks



INDIRA GANDHI UNIVERSITY, MEERPUR
M.Sc. Physics (Two year Course)
Choice Based Credit System
Scheme of Examination
Session 2019-20

M.Sc. 1st Semester

Paper Code	Type of Course	Nomenclature	Contact Hours Per Week (L+T+P)	Credit	Examination Scheme			Total
					Theory	Internal Assessment	Practical	
PHY - 101	C.C	Mathematical Physics	4+0+0=04	04	80	20		100
PHY - 102	C.C	Classical Mechanics	4+0+0=04	04	80	20		100
PHY - 103	C.C	Quantum Mechanics -I	4+0+0=04	04	80	20		100
PHY - 104	C.C	Electronic Devices	4+0+0=04	04	80	20		100
PHY - 105	C.C	Practical General	0+0+12=12	06			100	100
PHY - 106	C.C	Practical Electronics	0+0+12=12	06			100	100
PHY - 107		Seminar	01	01				25
PHY - 108		Self Study Paper	01	01				25

CC = Core Course DCEC = Discipline Centric Elective Course FEC = Foundation Elective Course
 Note:

- Maximum marks of M.Sc. 1st semester will be 650.
- All papers in M.Sc. 1st semester are mandatory.
- Each theory paper will include 20% marks as internal assessment as per University rules.
- Total credits = 30



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M.Sc. Physics (Two year Course)
Choice Based Credit System
Scheme of Examination
Session 2019-20

M.Sc. 2nd Semester

Paper Code	Type of Course	Nomenclature	Contact hours (L+T+P)	Credit	Examination Scheme			Total
					Theory	Internal Assessment	Practical	
PHY-201	C.C	Statistical Mechanics	4+0+0=04	04	80	20		100
PHY-202	C.C	Quantum Mechanics -II	4+0+0=04	04	80	20		100
PHY-203	C.C	Atomic & Molecular Physics	4+0+0=04	04	80	20		100
PHY-204		Solid State Electronics Or Physics of Laser and Laser Applications			80	20		100
PHY-205	D.C.E.C	Practical General	4+0+0=04	04				
PHY-206	C.C	Practical Electronics	0+0+12=12	06			100	100
PHY-207	C.C	Computer	0+0+12=12	06			100	100
PHY-208	C.C	Foundation Elective	4+0+0=04	04	60	40		100
PHY-209	F.E.C	Seminar	2+0+0=02	02	40	10		50
PHY-210		Self Study Paper	01	01				25
PHY-211			01	01				25

CC = Core Course DCEC = Discipline Centric Elective Course FEC = Foundation Elective Course

Note:

- Paper PHY-209 will be chosen by M.Sc. Physics Students out of the existing foundation elective papers.
- Maximum marks of M.Sc. 2nd semester will be 800.
- Each theory paper will include 20% marks as internal assessment as per University rules.
- Each practical examination will be of 04 hours.
- Total Credits = 36

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M.Sc. Physics (Two year Course)
Choice Based Credit System
Scheme of Examination
Session 2019-20

M.Sc. 3rd Semester

Paper Code	Type of Course	Nomenclature	Contact Hours (L+T+P)	Credit	Examination Scheme			Total
					Theory	Internal Assessment	Practical	
PHY-301	C.C	Condensed Matter Physics	4+0+0=04	04	80	20		100
PHY-302	C.C	Electrodynamics and Wave Propagation	4+0+0=04	04	80	20		100
PHY-303	D.C.E.C	Solid State Physics-1	4+0+0=04	04	80	20		100
PHY-304		Or Electronics-1						
PHY-305	D.C.E.C	Computational Methods & Programming-1	4+0+0=04	04	80	20		100
PHY-306		Or Atomic & Molecular Physics-1						
PHY-308	C.C	Practical General	0+0+12=12	06			100	100
PHY-309	D.C.E.C	Practical Solid State Physics-1	0+0+06=06	03			50	50
PHY-310		Or Electronics-1						
PHY-311	D.C.E.C	Practical Computational Methods & Programming-1	0+0+06=06	03			50	50
PHY-312		Or Atomic & Molecular Physics-1						
PHY-313		Open Elective-1	3+0+0=03	03	80	20		100
PHY-314		Seminar	01	01				25
PHY-315		Self Study paper	01	01				25

CC = Core Course DCEC = Discipline Centric Elective Course FEC = Foundation Elective Course

Note:

- Paper PHY-313 will be chosen by M.Sc. Physics students out of the existing open elective papers.



A. Sahoo

- Maximum marks of M.Sc. 3rd semester will be.
- Each theory paper will include 20% marks as internal assessment as per University rules.
- Total Credits = 33
- Total marks = 750.





NOTIFICATION

A combined list of Open Elective Papers offered by various Teaching Departments is notified for all concerned as under. The students of all PG programmes under CBCS are required to study one open elective paper as per the Scheme of Examination of their course/programme. They may choose any one out of the following papers (excluding the courses offered by their own departments):

Sr. No.	Department	Semester	Paper
1.	Botany	3 rd	Plant Resource Utilization
2.	Computer Science & Engineering	3 rd	Introduction to Computer
3.	Economics	3 rd	Issues in Indian Economy
4.	Environmental Sciences	3 rd	Hydrology and Water Resources
5.	Management	3 rd	Basics of Management
6.	Hindi	3 rd	संक्षेप कौशल
7.	Physics	3 rd	Sources of Energy – II
8.	English	3 rd	Communication Skills - I
9.	Political Science	3 rd	Human Rights in India
10.	Geography	3 rd	Fundamentals of Geography
11.	Yoga	3 rd	Foundation of Yoga
12.	Commerce	3 rd	Tax Planning for Individuals
13.	Physics	2 nd	Sources of Energy – I
14.	English	4 th	Communication Skills - II

REGISTRAR

Endst No. IGU/Acad./BOS/52/2020/ 9954-50

Dated: 19/09/2020

Copy of the above is forwarded to the followings for information and necessary action: -

- 1 P.A. to Vice- Chancellor (for kind information of the Vice- Chancellor), Indira Gandhi University, Meerpur.
- 2 Dan Academic Affairs, Indira Gandhi University, Meerpur.
- 3 Dy. Controller of Examination, Indira Gandhi University, Meerpur.
- 4 Chairperson/Chairperson-Incharge, University Teaching Departments, Indira Gandhi University, Meerpur.
- 5 Incharge University Website, Indira Gandhi University, Meerpur alongwith syllabus of aforesaid Open Elective Papers to upload the above notification on the University Website.
- 6 Superintendent, College Branch, Indira Gandhi University, Meerpur.with request to circulate the above notification in all affiliated colleges of Rewari & Mahendgarh districts.



[Signature]
Deputy Registrar (Acad.)

Indira Gandhi University, Meerpur (Rewari)
Scheme of Examination
M.Sc. Mathematics
Under Choice Based Credit System
w.e.f. Session 2019-20

Semester-I

Core Courses

Course Code	Title of the Course	Theory Marks	Internal Marks	Practical Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-101	Abstract Algebra	80	20	-	4:0:0	4	4
MAT-102	Mathematical Analysis	80	20	-	4:0:0	4	4
MAT-103	Ordinary Differential Equations	80	20	-	4:0:0	4	4
MAT-104	Complex Analysis	80	20	-	4:0:0	4	4
MAT-105	Mathematical Statistics	80	20	-	4:0:0	4	4
MAT-106	Computer Applications	60	-	40	2:0:2	6	4
MAT-107	Mathematical Lab-I	-	-	50	0:0:2	4	2
MAT-108	Seminar	-	-	25	-	-	1
MAT-109	Self Study Paper	-	-	25	-	-	1

Total Credits : 28

Total Contact Hours per Week : 30

Max Marks : 700

Note: The criteria for awarding internal assessment of 20 marks for each paper shall be as under :

- | | |
|-----------------------------------|------------|
| (i) Sessional test | : 10 marks |
| (ii) Assignment/Presentation | : 5 marks |
| (iii) Attendance | : 5 marks |
| <i>Less than 65%</i> | : 0 marks |
| <i>65% and above but upto 70%</i> | : 2 marks |
| <i>Above 70% but upto 75%</i> | : 3 marks |
| <i>Above 75% but upto 80%</i> | : 4 marks |
| <i>Above 80%</i> | : 5 marks |



General Guidelines

1. Seminar

In each semester, there will be a paper on seminar presentation of 25 marks with 01 credit. In this paper, the student will be required to present a seminar of about 15-20 minutes on the theme/topic such as review of research papers/articles published in National/International Journals in his/her area of interest. The topic will be selected by the student in consultation with the teacher allotted to him/her by the department.

An internal committee of two teachers constituted by the Chairperson of the department for each student will evaluate the seminar presentation. The evaluation (Internal evaluation only) will be based on the presentation of student, depth of subject matter and answer to questions. There will be a Coordinator to be nominated by the Chairperson of the Department among the teachers of the Department.

For seminar, the topics should be chosen in the following manner:

1st Semester	Any topic (not related to the syllabi)
2nd Semester	Any Basic Research Paper/Article
3rd Semester	Any National Level Research Paper/Article
4th Semester	Any Foreign Research Paper/Article

2. Self Study Paper

In each semester, there will be a self study paper of 25 marks with 01 credit. The objective of this paper is to create habits of reading books and to develop writing skills in a manner of creativity and originality. The students will select a topic of their own interest in the given area in consultation with their teachers/incharge/mentors. After selecting a suitable title for the paper, the students will be required to prepare a hand written report of about 6-10 pages in his/her own handwriting. The students will be required to submit the report after getting it checked by the concerned teacher and will be asked to re-submit the report after making the required corrections(if any) before the commencement of the examinations of that semester. The structure of the paper will include the following:

- Introduction
- Main Body
- Conclusion

The thoughts presented in the paper must be original work of the students.

The paper will be evaluated by the panel (one external and one internal examiner) to be appointed by the Chairperson of Department from the prescribed panel of the University.

The evaluation of Self Study paper will be done as given below:

- Evaluation of the paper : 15 marks
- Viva-Voce on the paper : 10 marks
- Total : 25 marks



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Semester-II

Core Courses

Course Code	Title of the Course	Theory Marks	Internal Marks	Practical Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-201	Field Extensions and Galois Theory	80	20	-	4:0:0	4	4
MAT-202	Measure and Integration Theory	80	20	-	4:0:0	4	4
MAT-203	Integral Equations and Calculus of Variations	80	20	-	4:0:0	4	4
MAT-204	General Topology	80	20	-	4:0:0	4	4
MAT-205	Computing Lab-I (Documentation in LaTeX)	-	-	50	0:0:2	4	2
MAT-206	Seminar	-	-	25	-	-	1
MAT-207	Self Study Paper	-	-	25	-	-	1

Discipline Centric Elective Courses (Any one)

Course Code	Title of the Course	Theory Marks	Internal Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-208	Operations Research Techniques	80	20	4:0:0	4	4
MAT-209	Information Theory	80	20	4:0:0	4	4

Foundation Elective Courses (Any one)

Course Code	Title of the Course	Theory Marks	Internal Marks	Practical Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-210	Value Education	40	10	-	2:0:0	2	2
MAT-211	Communication Skills and Personality Development	40	10	-	2:0:0	2	2

Total Credits : 26

Total Contact Hours per Week : 26

Max Marks : 650



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Semester-III

Core Courses

Course Code	Title of the Course	Theory Marks	Internal Marks	Practical Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-301	Functional Analysis	80	20	-	4:0:0	4	4
MAT-302	Advanced Topology	80	20	-	4:0:0	4	4
MAT-303	Fluid Dynamics	80	20	-	4:0:0	4	4
MAT-304	Mathematical Lab-II	-	-	50	0:0:2	4	2
MAT-305	Seminar	-	-	25	-	-	1
MAT-306	Self Study Paper	-	-	25	-	-	1

Discipline Centric Elective Courses (Any two)

Course Code	Title of the Course	Theory Marks	Internal Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-307	Discrete Mathematics	80	20	4:0:0	4	4
MAT-308	Fuzzy Set Theory	80	20	4:0:0	4	4
MAT-309	Mechanics of Solids	80	20	4:0:0	4	4
MAT-310	Analytical Number Theory	80	20	4:0:0	4	4
MAT-311	Partial Differential Equations	80	20	4:0:0	4	4
MAT-312	Difference Equations	80	20	4:0:0	4	4
MAT-313	Mathematical Modeling	80	20	4:0:0	4	4
MAT-314	Computational Fluid Dynamics	80	20	4:0:0	4	4

Open Elective Course

To be chosen from the pool of open elective courses provided by the University (excluding the open elective course offered by the Department of Mathematics)	Max. Marks 100	Credits 3
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Open Elective Course offered by the Department of Mathematics

Course Code	Title of the Course	Theory Marks	Internal Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-315	Basics of Vedic Mathematics	80	20	3:0:0	3	3

Total Credits : 27

Total Contact Hours per Week : 27

Max Marks : 700

Note: Optional papers are offered subject to the availability of requisite resources/faculty.



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Semester-IV

Core Courses

Course Code	Title of the Course	Theory Marks	Internal Marks	Practical Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-401	Inner Product Spaces and Measure Theory	80	20	-	4:0:0	4	4
MAT-402	Classical Mechanics	80	20	-	4:0:0	4	4
MAT-403	Viscous Fluid Dynamics	80	20	-	4:0:0	4	4
MAT-404	Computing Lab-II (MATLAB)	-	-	50	0:0:2	4	2
MAT-405	Seminar	-	-	25	-	-	1
MAT-406	Self Study Paper	-	-	25	-	-	1

Discipline Centric Elective Courses (Any two)

Course Code	Title of the Course	Theory Marks	Internal Marks	Credits L:T:P	Contact hrs per week	Total Credits
MAT-407	Advanced Complex Analysis	80	20	4:0:0	4	4
MAT-408	Graph Theory	80	20	4:0:0	4	4
MAT-409	Applied Solid Mechanics	80	20	4:0:0	4	4
MAT-410	Bio Mechanics	80	20	4:0:0	4	4
MAT-411	Algebraic Number Theory	80	20	4:0:0	4	4
MAT-412	Algebraic Coding Theory	80	20	4:0:0	4	4
MAT-413	Bio-Fluid Dynamics	80	20	4:0:0	4	4
MAT-414	Fractional Calculus	80	20	4:0:0	4	4

Total Credits : 24

Total Contact Hours per Week : 24

Max Marks : 600

Total Credits of the Programme : 28 + 26 + 27 + 24 = 105

Max Marks of the Programme : 700 + 650 + 700 + 600 = 2650

Note: Optional papers can be offered subject to the availability of requisite resources/faculty.

