

हेमचंद यादव विश्वविद्यालय, दुर्ग (छ.ग.)



एम. एस-सी. रसायन शास्त्र
पाठ्यक्रम
सेमेस्टर परीक्षा- 2019-21

SYLLABUS

M. Sc. CHEMISTRY

SEMESTER EXAMINATION

2019-2021

Arjun
5/7/2019

Divastan

21
17/2/19

Nels

EXAMINATION SCHEME

M.Sc. examination will be conducted in four SEMESTERS. Each semester exam shall consist of FOUR THEORY PAPERS AND TWO LAB COURSES.

SEMESTER -I (20 CREDIT)

THEORY (16 CREDIT)

PAPER	COURSE	CREDIT	DURATION	INTERNAL ASSESSMENT	THEORY MARKS	TOTAL MARKS
CH - 1	GROUP THEORY AND CHEMISTRY OF METAL COMPLEXES	4	3 Hrs	20	80	100
CH - 2	CONCEPTS INORGANIC CHEMISTRY	4	3 Hrs	20	80	100
CH - 3	QUANTUM CHEMISTRY, THERMODYNAMICS AND CHEMICAL DYNAMICS - I	4	3 Hrs	20	80	100
CH - 4	THEORY AND APPLICATIONS OF SPECTROSCOPY-I	4	3 Hrs	20	80	100

PRACTICAL (4 CREDIT)

PAPER	COURSE	CREDIT	DURATION	MARKS
CH - 5	Lab Course - I	2	8 Hrs	100
CH - 6	Lab Course - II	2	8 Hrs	100

SEMESTER -II (20 CREDIT)

THEORY (16 CREDIT)

PAPER	COURSE	CREDIT	DURATION	INTERNAL ASSESSMENT	THEORY MARKS	TOTAL MARKS
CH - 7	TRANSITION METAL COMPLEXES	4	3 Hrs	20	80	100
CH - 8	REACTION MECHANISMS	4	3 Hrs	20	80	100
CH - 9	QUANTUM CHEMISTRY, THERMODYNAMICS AND CHEMICAL DYNAMICS - II	4	3 Hrs	20	80	100
CH - 10	THEORY AND APPLICATIONS OF SPECTROSCOPY-II	4	3 Hrs	20	80	100

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PRACTICAL (4 CREDIT)

PAPER	COURSE	CREDIT	DURATION	MARKS
CH - 11	Lab Course - III	2	8 Hrs.	100
CH - 12	Lab Course - IV	2	8 Hrs.	100

**SEMESTER -III (20 CREDIT)
THEORY (16 CREDIT)**

PAPER	COURSE	CREDIT	DURATION	INTERNAL ASSESSMEN	THEORY MARKS	TOTAL MARKS
CH - 13	RESONANCE SPECTROSCOPY, PHOTOCHEMISTRY AND ORGANOCATALYSIS	4	3 Hrs	20	80	100
CH - 14	CHEMISTRY OF BIOMOLECULES	4	3 Hrs	20	80	100
CH - 15	CATALYSIS, SOLID STATE AND SURFACE CHEMISTRY	4	3 Hrs	20	80	100
CH - 16	ANALYTICAL TECHNIQUES AND DATA ANALYSIS	4	3 Hrs	20	80	100

PRACTICAL (4 CREDIT)

PAPER	COURSE	CREDIT	DURATION	MARKS
CH - 17	Lab Course - V	2	8 Hrs.	100
CH - 18	Lab Course - VI	2	8 Hrs.	100

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**SEMESTER -IV
(20 CREDIT)**

THEORY (16 CREDIT)

PAPER	COURSE	CREDIT	DURATION	INTERNAL ASSESSMENT	THEORY MARKS	TOTAL MARKS
CH - 19	INSTRUMENTAL METHODS OF ANALYSIS	4	3 Hrs	20	80	100
CH - 20	NATURAL PRODUCT AND MEDICINAL CHEMISTRY	4	3 Hrs	20	80	100
CH - 21	MATERIAL AND NUCLEAR CHEMISTRY	4	3 Hrs	20	80	100
CH - 22	ENVIRONMENTAL & APPLIED CHEMICAL ANALYSIS	4	3 Hrs	20	80	100
OPTIONAL PAPERS						
In place of CH 22 students can opt any optional papers CH 22a to CH 22c						
CH - 22 a	CHEMISTRY OF SURFACTANTS	4	3 HRS	20	80	100
22 b	NANOCHEMISTRY	4				
22 c	POLYMERS	4				

PRACTICAL (4 CREDIT)

PAPER	COURSE	CREDIT	DURATION	MARKS
CH - 23	Lab Course - VII	2	8 Hrs.	100
CH - 24	Lab Course - VIII	2	8 Hrs.	100

SCHEME FOR PRACTICAL EXAMINATION

EXPERIMENT	MARKS
Experiments	60
Viva-voce	20
Sessional Marks	20
TOTAL MARKS	100

Arjun *Divastan* *12/11/2019* *Neha*
 5/7/2019