



PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

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B.A./B.Sc. (Honours) Co-terminus
SECOND YEAR
(SEMESTER III AND IV)
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**OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR
B.A./B.Sc. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER
NOVEMBER/DECEMBER 2017 AND FOURTH SEMESTER APRIL/MAY 2018, EXAMINATIONS.**

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

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URDU

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER -III

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER I : Poetry and Prose

Unit – I

Diwan-e-Ghalib Radif Alif : 30 Marks
Explanation (Tashrih of first 30 Ghazaliyat)

Unit – II

Critical notes on Ghalib ki Qasida Nigari 15 Marks

Unit – III

Mirza 30ar s

Unit -IV

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Books Rcommended:

URDU
SEMESTER -IV

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER II : Essay (Literary)

Unit – I

Fort William College Ki Adabi Khidmat

25 Marks

Unit – II

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER -III

Paper : I

Marks : 100

PERSIAN

FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

3rd Semester : APPLIED GRAMMAR AND DRAMA

Max. Marks : 100
Theory : 90 marks

FRENCH
B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-IV

4th Semester : PROSE, APPLIED GRAMMAR & VIVA-VOCE

Max. Marks	: 100
Theory	: 60 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Applied Grammar: 25 Marks

Prose : 35 Marks

La Symphonie Pastorale, André Gide,
Comprehension, explanation and literary appreciation of the prescribed text.

Courses of Reading :

La symphonie Pastorale, André Gide, (Edition Bordas) ou Nouveaux Classiqu

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GERMAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

Summary

Max. Marks : 100 marks(Total)

GERMAN
SEMESTER –IV

Summary

Max. Marks : 100 marks(Total)

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

DEFENCE & STRATEGIC STUDIES

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Outlines of Tests, Syllabi and Courses of Reading

Note There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The

Books Recommended :

1. Akhtar, Jamna Das,

B.A. /B.SC.(HONOURS) SECOND YEAR (SEMESTER SYSTEM) SYLLABUS 2017-2018

3. Costa, Benedict *Divergent of Pakistan*, Ludhiana: Kalyani Publisher, 1972.
4. Dasgupta, C. *War and Diplomacy In Kashmir*, 1947-48. New Delhi: Sage, 2002.
5. Feldman, Herbert. *Evolution In Pakistan*. London: Oxford U.P., 1967, Print.
6. Feldman, Herbert. *The End and the Beginning*. London: Oxford University Press, 1975.
7. Gupta, K.R., *India Pakistan Relations with Perspective to Kashmir*, New Delhi: Atlantic Publishers & Distributors, 2003.
8. Hackett, James T., *The Military Balance*. Oxfordshire: Routledge, 2011.
9. Johri, Sita Ram. *The Indo-Pak Conflict of 1965*. Lucknow: Himalaya Publications, 1967.
10. Kaul, Brij Mohan. *Confrontation With Pakistan*, Delhi: Vikas Publications, 1971.
11. Khaliq, Sheikh Abdul, *Pakistan, Peace and War*, London: Regency Press, 1973.
12. Lachhman Singh., *Indian Sword Strikes In East Pakistan*. New Delhi: Vikas, 1979.
13. Mankekar, D. R. *Pakistan Cut To Size*, New Delhi: Indian Book Co, 1972. Print.
14. Mankekar, D.R. *Twenty two Fateful Days*. Bombay: Manaktalas, 1967. Print.
15. Nath, Rajendra. *Military Leadership In India*. New Delhi, India: Lancers Books, 1990.
16. Palit, D.K. *The Lightning Campaign*. New Delhi: Thomson Press (India), 1972.
17. Sahni, Naresh Chander, *Politics in Pakistan*, Jullundur City: New Academic Pub. Co, 1969.
18. Sen. Lionel Protip. *Under the aegis of Kashmir Confrontations*

HISTORY

SYLLABUS OF B.A. (HONOURS) SEMESTER III/IV, 2017-18

Note The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any two papers, one in Semester III and one in Semester IV according to the following :

Semester III

(i) Social and Cultural Trends in Ancient India.

OR

(ii) Social and Cultural Trends in Medieval India.

Semester IV

(ii) Social and Cultural Trends in Medieval India.

OR

(iii) Social and Cultural Trends in Modern India.

Note: Candidates CANNOT OPT FOR PAPER (ii) in BOTH Semesters.

(i) **SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA:**

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES

1. The syllabus has been divided into four Units.
There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The paper-setter would avoid repetition between different types of question within one question paper.

Paper- SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Institutions: Varna, Jati, Ashrama and Samskara
2. Marginalized Sections of the Society: Shudras and slaves.

UNIT II

3. Women: Status and rights
4. Education: system of learning, Principal centres,

UNIT III

3. Early Religions : Harappan and Vedic
4. Protest Movements: Jainism and Buddhism

UNIT IV

5. Puranic Religions: Vaishnavism, Shaivism and Shaktism
6. Significant developments in art and architecture.
 - (a) Styles of Temple Architecture: Nagara, Dravida and Vesara
 - (b) Sculpture: Mauryan, Mathura, Gandhara and Gupta
 - (c) Painting: Ajanta caves.

(ii) SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA:**INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:**

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper II: SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives:

UNIT II

3. Mystical Dimensions of Islam: Organisation of the Chishti and Suhrawardi orders, with reference to their beliefs and practices.
4. Landmarks in Persian Historiography: The historical works of Ziauddin Barani and Abul Fazl.

UNIT III

5. State Intervention in the Socio-Religious Sphere: Akbar's liberal policy; his *Ibadat K ana* debates, the *aza* and breach with orthodox ulama; introduction of *au ul Ma* and social reforms
6. Muslim Revivalist Movements: Salient features of the Mahdawi movement; socio-religious ideas of Sheikh Ahmad Sirhindi and their impact.

UNIT IV

7. Development of Literature: the devotional writings of Tulsidas, Ravidas and Namdev; the contribution of Malik Muhammad Jaisi; Abdur Rahim Khan-i-Khanan and Ras Khan.
8. Fine Arts in Mughal India: the development of architecture, painting and music during the sixteenth

III. SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Socio-Cultural Trends in Early 19th Century: Religion, education and literature
2. Women Education: Aligarh Girls School; Kanya Maha Vidyalaya.

UNIT II

3. Socio-Religious Reform Movements in Punjab and North- West: The Arya Samaj; Singh Sabhas and the Ahmadiyas
4. Socio-Religious Awakening in the Central Belt and Maharashtra: The Manav Dharma Sabha; the Prathana Samaj; the Rahnumai Mazdayesan Sabha (among Parsis)

UNIT III

5. Cultural Reorientation in the South: Annie Besant and the Theosophical Movement
6. The Marriage Reform Efforts: Legislative measures for the abolition of Sati and Female infanticide; contribution of reformers towards the promotion of widow-remarriage

UNIT IV

7. The Social Protest Movements: Role of Jyotiba Phule in Maharashtra; Swami Narayana Guru in Kerala; Mangoo Ram and the Ad Dharm Movement in Punjab.
8. The Literary Trends: Development of literature in Hindi; Bengali and Marathi languages.

Recommended Readings:

1. Kenneth W., Jones: *The New Cambridge History of India: Social and Religious Reform Movements in British India* (Cambridge, 1989).
2. R.C.Majumdar and Others (ed.): *British Paramountcy and Indian Renaissance*, Part II, Bhartiya Vidya Bhavan Series, Vol. X.
3. Robert D, Baird (ed) *Essays on Modern India*, Manohar, New Delhi, 1981.
4. Gail Minault *The Indian Women's Movement* (Cambridge University Press, 1984)

POLITICAL SCIENCE
Semester-IV

OPTION (i) WESTERN POLITICAL THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

This paper aims to introduce to the students the major themes of western political thought. This will be done by undertaking an indepth study of the key thinkers of this tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units

There shall be 9 questions in all. The fissfi

OR

Suggested Readings :

1. Andrew Heywood : *Politics* (London : Macmillan, 1997).
2. Mary Mank Swarth and Mourice Kogan (ed.) : *The Encyclopedia of Government and Politics* (London : Routledge, 1992).
3. Rod Hague, Martin Harrop and Shaun Breslin : *Comparative Government and Politics An Introduction* (London : Macmillan, 1998). : ()-3.0120:
4. Gabriel Almond, G. Bingham Powell, Kaare Strom and Russel J. Dalton : *Comparative Politics Today* (Dee72.1687(w)35..6 0 Td [3(70724(y)-1.78252()]*[(S)1.78

Recommended Readings:

1. Eicher, C. & Witt, L. : Agriculture in Economic Development, Vera & Co., Bombay
(1970)
2. Frankel, Francis R.
(1971)

Paper -II : HISTORY OF ECONOMIC THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Pre Classical Economic thought Mercantilism : Mercantilist ideas, regulations of economic life, leading theory of Mercantilist school, Physiocracy : ideas with special reference to Quesnay and Turgot.

Unit-II

Classical and Marxian Political Economy The classical tradition : Adam Smith, Ricardo, J. S. Mill and Karl Marx on value, distribution and development.

Unit-III

Reaction Against Classics : Socialist and Nationalist thinkers, Sismondi, Saint-Simon, Robert Brown and Fourier, Subjective School : Menger, Weiser and Bohm Bewark.

Unit-IV

Neo Classical Economics Main features.

Marginalist Scope of Economics, theory of firm, time-element, partial equilibrium analysis.

Keynes Concept of effective demand, consumption, investment, inflationary gap.

Recommended Readings:

1. Blaug, M. (1968) : Economic Theory in Retrospect, Richard D. Irwin Inc. Illinois.
2. Gide & Rist (1964) : A History of Economic Doctrine, George G. Harper &

Supplementary Readings :

1. Ghosh , B. N. & Ghosh, Rama (1988) :

Essential Readings:

- Aggarwal, A. S. N. (1972) : India's Population Problem Tata McGraw Hills Co., Bombay.
- Becker, G. (1960) : An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
- Boserup, E. (1981) : Population and Technological Change University of Chicago Press, Chicago.
- Bouge, D. J. (1971) : Principles of Demography, John Wiley, New York.
- Bose, Ashish (1978) : India's Urbanization, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
- Coale, A. and E. Hoover (1958) : Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects. Princeton University, Press, Princeton.
- Chenery, H. and T.N. Srinivasan (eds.) (1989) : Handbook of Development Economics, Vol. 1 & 2, Elsevier, Amsterdam.
- Chandna, R. C. (2000) : A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
- Cox, Peter R. (1979) : Demography, Vikas Publishing House, New Delhi
- Easterlin, R. A. (1968) : Population, Labour Force and Long Swings in Economic Growth: National Bureau of Economic Research, New York.
- Ghosh, B. N. (ed.) (1987) : Studies in Population and Economic Development, Deep and Deep Publications, New Delhi
- John R. Weeks (2002)

ECONOMICS

Semester-IV

The candidates are required to study one paper out of the following three papers :

- I Industrial Economics.
- II Economics of Public Enterprises.
- III Theory of Statistics.

Paper-I : INDUSTRIAL ECONOMICS

Recommended Readings :

1. Barthwal, R. R. (2010) : Industrial Economics : An Introductory Text Book, New Age International Publisher (P.) Ltd., New Delhi.
2. Datt , Rudar & Sundharam K. P. M. (2012) : Indian Economy , S. Chand & Company.
3. Devine , P. J. et al. (1974) : An Introduction of Industrial Economics, George Allen & Unwin Ltd.,London.
4. Howe , W. Steward (1978) : Industrial Economics : An Applied Approach, The Macmillan Press Ltd.
5. Kuchhal, S. C. (1989) : Industrial Economy of India , Allahabad, Chaitanya Publishing House.

Supplementary Readings :

1. Ahluwalia , Ishar Judge (1985) : Industrial Growth in India : Stagnation Since Mid Sixties, Oxford University Press, Delhi.
2. Penrose, E. T. (1995) : The Theory of the Growth of the Firm, Wiley, New York.

Paper II : ECONOMICS OF PUBLIC ENTERPRISES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

Supplementary Readings :

1. Bhalla , G. S. (1968) : Financial Administration of Nationalised Industry in U.K. and India, Meenakshi, Meerut.
2. Gupta, K. R. (1978) : Issues in Public Enterprises, S. Chand & Co., New Delhi.

Paper- III : THEORY OF STATISTICS

Max. Marks : 100
Theory : 90 Marks

UNIT - IV

Parametric tests: Tests of significance based on Normal, 't' 'F' and 'Z' distributions. Testing the significance of means, proportions, correlation and regression coefficients and their interpretation. Elementary Knowledge of Analysis of Variance (one-way and two -way classification) and Analysis of Covariance.

Non Parametric tests: Chi-square test and sign test.

Quality Control Elementary Knowledge of quality Control and its simple application.

RECOMMENDED READINGS

1. Croxton, F.E. & Cowden, D.J. (latest edition)

SOCIOLOGY**SEMESTER-IV****SOCIAL PSYCHOLOGY**

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper exposes the honours students in Sociology to the related field - Social Psychology. The purpose of this paper is to introduce the basic concepts in Social Psychology, which have a bearing on the Social-Psychological understanding of social interaction, social groups, public opinion and leadership qualities. This course prepares the students to study social phenomena from social-psychological perspectives.

Course Content :**UNIT-I**

Introduction – Nature, Scope, Application and Relationship of Social Psychology with Sociology.

UNIT-II

Perception, Motivation, Learning, Attitudes and their Measurement.

UNIT-III

Social Groups – Groups and Classification. Collective Behaviour : Crowd, Audience, Mob and their differences.

UNIT-IV

PHILOSOPHY

Unit-IV

1. Sri Aurobindo
2. Swami Dayanand Saraswati, Swami Vivekananda.
3. Tagore

Essential Readings :

1. Inquiry into Meaning & Truth by Russell, Harper Collins, 1980.
- 2.

PHILOSOPHY
SEMESTER – IV

Paper: STUDY OF A SPECIAL PHILOSOPHER

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives:

The aim of this paper is to make students study a philosopher indepth amongst the options offered.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain **4** units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each U 9291.78252(c)641(d)-6.0241(i)0.89126(d)-629126(1)

OR

Option (iii) : IMMANUEL KANT

Unit-I : A –priori and A –posteriori judgements.

Unit-II : Nature of Space and Time.

Unit-III

Option (vii) : SAMKARA

- Unit-I** : Theory of Causation.
Unit-II : Prakriti as a Ultimate Cause.
Unit-III : Parinamavada Vs. Vivartavada.
Unit-IV : Refutation of Prakritikaranavada.

OR**Option (viii) : PATANJALI**

- Unit-I** : Language and meaning.
Unit-II : Word-meaning relationship.
Unit-III : Purpose of grammar.
Unit-IV : Sabda as a Pramana.

Essential Readings :

1. Aristotle-Metaphysics Ed. & Tr. By John Washington and with an introduction by Sir David Ross (London : Dentsons, 1956).
2. Being & Nothingness by J.P. Sartre, Washington Square Press, 1993.
3. Cambridge Companion to Sartre ed. By Christina Howells, Cambridge University Press, 1992.
4. Cratylus in Plato's Dialogues, Plato, D.N. Sedley, Cambridge University Press, 2003, Cambridge, U.K..
5. Kant-Critique of Pure Reason : Norman Kemp Smith (Tr.) (London, Macmillan, 1952).
6. Nagarjuna-Madhyamika Karika, Stcherbatsky Theo : Conception of Buddhist Nirvana Delhi : Bharatiya Vidya Prakashan, 2003.
7. Patanjali : Mahabhasya, Chaps. I & II Gita Press, Gorakhpur, 1927
8. Plato-Republic, Theatetus, Cratylus In : B. Jowett (Tr.) Plato's Dialogues (New York : Random, 1937).
9. Republic, Hackett Publishing Company, Indian Polish, 1992, U.S.A.
10. Samkara, Brahmasutrabhasya : Tarka Pada (First four Sutras, Thibaut, Sacred Books of the East, Delhi, Motilal Banarasi Dass, 1956).
11. Theatetus, Plato, Robin H. Waterfield, Penguin Books, London, 2004.

PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

PAPER : SOCIAL PSYCHOLOGY

Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objectives :

- (I) Social Psychology course emphasizes the relationship between society and individuals. It also enables the students in understanding group dynamics, role of attitudes and leadership behaviour in the society.
- (II) Pedagogy of the Course Work :
- 80 % Lectures (including expert lectures).
 - 20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit I : *Introduction* Nature of Social Psychology, Methods of Research in Social Psychology.

Unit II : *Attitudes* Concepts, Formation of Attitudes, Theories of Attitude Change; Measurement of Attitudes.

Unit III : *Leadership* Functions of Leaders, Theories of Leadership (Trait Theories, Behavioural Theories, Fiedler's Contingency Model).

Unit IV : Applications of Social Psychology: Pro Social behavior, Bulling, Ragging.

PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER IV

Books Recommended :**Suggested Readings**

1. Crompton, W.C. (2005): An Introduction to Positive Psychology. Singapore: Thomson.
2. Snyder, C.R. and Lopez, S.J. (2005): Handbook of Positive Psychology. New York: Oxford University Press.
3. Brannon, L. and Feist, J. (2007): Introduction to Health Psychology. New Delhi. Thomson – Wadsworth.
4. Cohen, L.M., M.C. Chague, D.E. and Colins, F.J.: The Health Psychology Handbook. New Delhi: Sage Publications.
5. Mohan, J. (2003) : Psychosocial Correlates of Coronary Artery Disease: A Monograph. New Delhi: Friends Publishers.
5. Mohan, J. and Sehgal , M. (2006) : Health Psychology. New Delhi: Abhijeet Publications.
7. Pestonjee, D.M. (2006): Stress and Coping: The Indian Experience. New Delhi: Sage Publications.

Reference Books:

1. Carr, A.(2004): Positive Psychology; The Science of Happiness and Human Str 2rs. Nereres

GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper-I : THE NATURE OF GEOGRAPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

1. To introduce the students to the philosophical and methodological foundations of the subject and its place in the world of knowledge.
2. To familiarise them with the major landmarks in development of geographic thought at different periods of time.

Course Content :

UNIT-I

- Nature and Development of Geography as a Discipline.
- Contribution of Eratosthenes, Ptolemy, Humboldt, Ritter and Darwin.

UNIT-II

Concepts in Geography:

- (i) Spatial Distribution (ii) Man-Environment Relationship (iii) Areal Differentiation and (iv) Spatial Organisation.

UNIT-III

Approaches:

Empirical/Theoretical, Systematic / Regional, Behavioural.

UNIT-IV

Schools of Thought:

Determinism, Possibilism, Neo Determinism, Humanism, Radicalism.

Note

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 units. Eight questions will be set 54-39.1566(54-39.1J(A)11.1569()-39.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
 2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.
 3. Special credit will be given to suitable use of maps.
 4. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings:

Essential Readings :

1. Chandna, R.C. : *A Geography of Population*, Kalyani Publishers, Delhi, 1996.
2. Clarke, J.I. : *Population Geography* Pergamon Press, Oxford, Latest Edition.

Further Readings :

1. Chandna, R.C. : *Population in India*, Kalyani Publishers, New Delhi, 1996.
2. Crook, N. : *Principles of Population and Development*, Pergamon, New York, 1997.
3. Jones, H.R. : *Population Geography*, Harper and Row, London, 1981.
4. Sundaram, K.V. & Nangia, S. (Eds.) : *Population Geography*, Heritage, New Delhi, 1986.
5. Trewartha, G.T. : *The Less Developed Area - A Population Geography*, McGraw-Hill, New York, 1972.
6. Trewartha, G.T. : *The More Developed Area - A Geography of its Population* Pergamon Press, Oxford, 1979.

Pedagogy :

1. Use maps and atlases.
2. Students should be encouraged to read Population Clock.
3. Consult census publications.
4. Organised field 6-6.0241(.)-3.01205(g)6.0241(a)-25.878

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks

PUBLIC ADMINISTRATION
SEMESTER -III

PAPER- I: ADMINISTRATIVE THOUGHT

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of select ancient, classical, neo-classical and modern administrative thinkers and their contribution to administration .

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

PUBLIC ADMINISTRATION**SEMESTER-IV**

PAPER- II: The candidates have to select one out of the following three options:

- Option (i) : Agricultural Administration in India**
Option (ii) : Industrial Administration in India
Option (iii) : Police Administration
Option (iv) : Public Policy and Analysis

PAPER-II – Option (i): AGRICULTURAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

Unit-III

New Technology for the Development of Agriculture
Marketing of Agriculture Produce
Agriculture Finance and Rural Indebtedness

Unit-IV

Role of NABARD in Agricultural Development
Agricultural Education and Research
World Trade Organisation and Agriculture

Essential Readings

Chaudhary, P. (1972). *Leadings in Indian Agriculture Development*. London: George Allen & Unwin.
Ghosh, R.N.(1977). *Agriculture in Economic Development with special reference to Punjab*. New Delhi: Vikas.
Mahajan, V.S. (1990). *Agriculture and Rural Economy in India* New Delhi: Deep & Deep Publications.
Rao, C.H. Hanumantha.(1975). *Economic Causes and Distribution of Gains in Indian Agriculture*. Delhi: Macmillan.

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INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one

Unit-II

Organization and functions of Union Ministry of Home Affairs

Police Administration at State level

Police Administration at District level

Unit-III

Police Personnel Administration in India: Recruitment and Training of Police Personnel at Centre (IPS) and State level (SPS)

Service conditions and Discipline in Police Services

PAPER-II-Option (iv) : Public Policy and Analysis

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to provide students an understanding of the basic concepts of public policy and the environment in which it operates .It attempts to help students understand and gain insights into the various stages in policy process with special reference to the social, political and administrative environment prevailing in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first

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Unit IV

Policy Monitoring and Evaluation ; Criteria for Evaluation;
Problems in Policy Evaluation

Essential Readings

Birkland, Thomas A. (2005) .An introduction to the Policy Process: Theories , Concepts and Models of
Public Policy Making M.E.Sharpe
Dye , Thomas (2002) Understanding Public Policy

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-18

SEMESTER-III

Note : The students shall have to opt for one paper for Semester III examination out of the following two papers :

OUTLINES OF TEST

Paper I : Social ideas and social life from the earliest times to 1000 A.D.

Paper-II : Economic ideas & economic life from the earliest times to 1000 A.D.

Paper-I : SOCIAL IDEAS AND

Paper-II : ECONOMIC IDEAS & ECONOMIC LIFE FROM THE EARLIEST TIMES TO 1000 A. D.

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objective :

1. The main objective of this paper is to familiarize the students with economic ideas as contained in the secular and non-secular literature of our country. It will also make a survey of the economic life in ancient India to help the students to understand economic problems of the people.
2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology, authorship and contents of the sources mentioned above. The changing condition of agriculture, industries, and trade and commerce should also be highlighted.

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Unit-IV

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY**SEMESTER-IV**

Note : The students shall have to opt for one paper for Semester - IV examination out of the following two papers :

OUTLINES OF TEST

Paper-III : Political ideas and institutions from the earliest times to 1000 A.D.

Paper-IV : History of Art and Architecture (Earliest times to C. 1000 A.D.)

Paper-III : POLITICAL IDEAS AND INSTITUTIONS FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The emphasis of this paper will be on the development of political ideas as enshrined in our secular and non-secular literature. It will also make a study of the administrative systems during various periods focusing on the ideologies of the kings.
2. **Pedagogy of the Course Work :**
The students are expected to know the broad rules laid down by the lawgivers and have knowledge of the administrative organization in different periods. They should be familiarized with the changing patterns of administrative set up at different times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-III:

5. Administrative Organisation under the Kushanas.
6. Administrative Organisation under the Guptas.

UNIT-IV:

7. Administrative Organisation under the Pushyabhutis.
8. Administrative Organisation under the Cholas.

Essential Readings :

1. Altekar, A.S. : *State and Government in Ancient India* Motilal Banarsidass, Delhi, 1958.
2. Devhuti, D. : *History of Ancient India* Oxford University Press, New Delhi, 2001.
3. Dikshitar, V.R.R. : *Hindu Administrative Institutions* University of Madras, Madras, 1929.
4. Ghoshal, U.N. : *A History of Indian Political Ideas* Oxford University Press, London, 1959.
5. Goyal, S.R. : *History of Imperial Guptas* Central Book Depot, Allahabad, 1968.
6. Jayaswal, K.P. : *Hindu Polity* Chowkhamba Sanskrit Pratisthan, Bangalore, 1967, 2005.
7. Mukherjee, B.N. : *Life and Faith of the Kushanas* Firma KLM, Calcutta, 1988.
8. Prasad, Beni : *State in Ancient India* Central Book Depot, Allahabad, 1974.
9. Satya Shraava : *Empire in India* Motilal Banarsidass, New Delhi, 1981.
10. Sharma, R.S. : *Some Aspects of Political Ideas and Institutions in Ancient India* Motilal Banarsidass, Delhi, 2001.
11. Shastri K.A.N. : *History of Ancient India*, *Cholas* New Delhi, 1979 (In Hindi).
12. Thapar, Romila : *The Mauryas* revised K.P. Bagchi and Company, Calcutta, 1988.
13. Thapar, Romila : *Asoka and the Decline of the Mauryas* 2nd ed Oxford University Press, New Delhi, 1977.

Paper VII: HISTORY OF ART AND ARCHITECTURE (EARLIEST TIMES TO C. 1000 A.D.)

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Total	:	3 Hours

Objectives :

The main objective of the paper is to acquaint the students with the architecture of ancient Buddhist and Hindu monuments, stone and bronze sculptures, that form an integral part of ancient history and heritage, for comprehensive understanding of the subject.

- Note*
1. The paper setter is required to set 9 questions in all.
 2. The candidates are required to attempt five questions in all.
 3. All questions shall carry equal marks.
 4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30

UNIT-IV:**Sculpture**

- (a) Early Period – Mauryan, Sunga and Kushanas.
- (b) Gupta and Early Medieval – Gupta, Pala and Chola.

Pedagogy of the Course Work :

Besides giving an outline of the history and salient features of the topics enumerated in the syllabus, students should be thoroughly acquainted with important monuments and images in stone and bronze of each period. Important schools of art should also be taught. Constant help of visual aids like slides and transparencies should form integral part of teaching.

POLICE ADMINISTRATION

B.A. (HONOURS) 3rd Semester EXAMINATION, 2017-18

SEMESTER-III

Semester III : Police Administration and Crime

(A) Course Objectives:

The objective of this course is to introduce to the students, the Concept, Characteristics, and Causes of Crime. The endeavour also is to discuss the special forms of crime. Towards the end the students will be imparted knowledge relating to the role of Police in controlling crime.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

- i. Internal Test-5%;
- ii. Academic activities (Seminar, Project, Assignment)-3%;
- iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit – I

Crime: Concept, Characteristics and Classification.

Causative factors of Crime.

Crime Statistics in India: Sources and Problems.

Unit- II

Organized Crime: Meaning, Characteristics and Types.

White Collar Crime: Meaning, Elements and Types.

Cyber Crime: Meaning, Causes and Types.

White Co Co Co Co Co Organic Crg, snas.

POLICE ADMINISTRATION

B.A. (HONOURS) 4th Semester EXAMINATION, 2017-18

SEMESTER-IV

Paper : Correctional Administration

(A) Course Objectives:

The Prime objective of this course is to familiarize the students with the meaning, nature , scope and principle of correctional administration. In addition the efforts are made to discuss with the students, Prison administration along with the alternative non-institutional methods of Probation and Parole elaborately.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

- i. Internal Test-5%;
- ii. Academic activities (Seminar, Project, Assignment)-3%;
- iii. Attendance-2%

Unit-IV

Prison Reforms in India.

Open Prisons: Concept, Origin and Advantages.

Prisons and Human Rights.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central Law Publication, Allahabad, 2008
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003
4. Davies, Martin : Prisoners of Society: Attitudes and After-Care.
5. Singh Deipa, Singh K P : Criminology, Penology and Victimology, The Bright Law House, New Delhi, 2013

Further Readings

1. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A. 2003
2. Hassine, Victor : Life without Parole: Living in Prison Today, Roxbury Publishing Company, California, 2004.
3. Carrbine, Eamonn. et.al. : Criminology: A Sociological Introduction, Routledge, London, 2005.
4. Pollock, Joyceiy M. : Prisons and Prison Life : Costs and Consequences, Roxbury Publishing Company, California, 2004.
5. Pachauri, S.K : Prisoners and Human Rights, A.P.H. Publishing Corporation, New Delhi, .01205(),.1.

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MUSIC (VOCAL AND INSTRUMENTAL)

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

General Instructions:-

- 1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
- 2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
- 3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
- 4) There will be ten questions in five units.

UNIT-II

1. Detailed Study of Ghranas of the following:
 - (a) Khayal Gayan
 - (b) Sitar Vadan.
2. A study of the following:-
Thumri, Maseetkhani, Razakhani Gat, Trivat
3. Brief Knowledge of the following:-
Nada, Swara, Shruti, Nyas, Vadi, Laya & Tala.

UNIT-III

1. Brief biographical sketches and contributions towards music of the following Musicians:
 - (a) Ustad Mushtaq Ali Khan.
 - (b) Ustad Alladiya Khan
 - (c) Ustad Alaudin Khan

UNIT-IV

1. Shudha Vikrat Swaas of Bharat and Sharangdev
2. Study of Shruti, Chaturarna or Bharat and Sharmgdev
3. Importance of Laya and Tala

UNIT-V

1. Description and Comparative study of Detailed and Non-detailed Ragas :-
 - (a) Detailed Ragas :-Hamir, Darbari
 - (b) Non-detailed Ragas :-Adana, Kamod
2. Notation of Detailed Ragas and Talas
 - A)
 - i) Notation of Khayal/Gat
 - ii) Notation of Tala prescribed in the syllabus
Dhmar, Adachantal, Deepchandi
 - B) Objective type questions

(c) Talas : Jhaptal, Ektal and Teental on Tabla.

(i) One slow Khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 5 marks

(iii) Ability to recite Dhamar, Adachautal and Deepchandi talas in single. 2.5 marks.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on 52(i)0.89126(l)0.89126(e)-1.78252(d)-6.024np rs-3.01205()-3.01205(L5()-3.012055()-3.0120

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:

(i) Kedar

(ii) Des

Books Recommended:

1. Sangeet swarit : Dr. Ramakant Dwivedi
2. Sangeetanjali : Pt. Onkar Nath Thakur
3. Abhinav Geetanjali : Pt. Ramashray Jha
4. Sanchar Aur Sanchar Madhyam : Dr. Chandra Prakash Mishra
5. Pillars of Hindustani Music : B.R. Deodhar
6. Sangeet Visharad : Basant
7. Raag Parichay : Harish Chandra Srivastav
8. Sangeet Prabodhika : Dr. Parmanand Bansal
9. Raag ka Udbhav Evam Vikas :

HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Second year has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2017-18

Unit II**Digital Electronics**

Number systems: Binary, Hexadecimal and octal number systems, Interconversions and Binary arithmetic, 2's complement arithmetic, Binary fractions and negative binary numbers, floating point representations,

Unit-IV**Stereochemistry II:**

(05 Lectures)

Hard Soft Acid Base principles: pka Values. Generation of Carbon Nucleophiles by Deprotonation, Regio selectivity and stereo selectivity in enolate formation, Medium effects, O versus C as site of alkylation, examples of Stork enamine reactions.

Instructions for paper setters and candidates :

Unit-II**Elementary Concepts II:** (05 Lectures)

Terms of mean, medium, precision and accuracy in chemical analysis, types of errors in analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, least square curve fitting, propagation of errors, significant figure convention, standard deviations, confidence limits.

Theory of volumetric and gravimetric methods of analysis, primary and secondary standards, theory of indicators and their selection for titrations, precipitation methods, optimum conditions for precipitation, steps involved in gravimetric analysis, important organic precipitants.

Unit-III**Acid-Base Equilibria :** (05 Lectures)

Acids and bases, ionization equilibria for weak monobasic acids, bases and related salts, acid base titration reagents and indicators for neutralization titrations, neutralization titrations for a strong acid with a strong base, polybasic acid with a strong base.

Unit-IV**Oxidation-Reduction Equilibria :** (05 Lectures)

Oxidation-reduction reactions, reduction potentials, Nernst equation, oxidation-reduction titrations and curves, oxidation-reduction indicators, applications of oxidation-reduction techniques, determination of water by the Karl Fischer titration method.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

- (i) *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
- (ii) *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
- (iii) *Compulsory question carries six marks and remaining all questions carry four marks each.*

Suggested Books:

CHEMISTRY**B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18****Outlines of Tests****SEMESTER - IV**

<i>Lecture Hours</i>	<i>Mar s</i>
<i>eory</i>	<i>Interna Assess ent</i>

Unit-IV**Pericyclic Reactions II:**

(05 Lectures)

(4+2) and (2+2) cycloadditions, exo and endo isomers, Examples Bicyclo (2, 2, 1) heptane and Bicyclo (2, 2, 2,) octane systems. Intramolecular Diels Alder reaction.

• *atropic rearrangements* Woodward and Hoffmann rules, Frontier Molecular orbital for 1, 3; 1, 5 and 1, 7 shifts. Examples including vitamin D₂ formation from 7-dehydro cholesterol (Provitamin D₃).

Instructions for paper setters and candidates :

- (i) *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
- (ii) *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
- (iii) *Compulsory questions carries six marks and remaining all questions carry four marks each.*

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India P2(1)0..45915.01205()-3.01206()

Unit- I**Precipitation Equilibria :**

(05 Lectures)

Solubility of precipitates, effect of competing equilibria on solubility of precipitates, separation of ions by control of concentration of precipitating reagents, effect of electrolyte concentration on solubility product, theory of precipitation titrations. The Vohlard and the Mohr's methods of analysis, adsorption indicators.

Unit-II**Complexation Equilibria :**

(05 Lectures)

BOTANY**B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18****Third Semester**

	Time	Theory	Int Assess.	Max Marks
Theory Paper-A : Plant Physiology	3 hrs.	36	04	40
Theory Paper-B : Development of Plants and their Utilization – I	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers	3 hrs.	18	02	20
Fourth Semester				
Theory Paper-A : Plant Ecology	3 hrs.	36	04	40
Theory Paper-B : Development of Plants and their Utilization – II	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers	3 hrs.	18	02	20
	Total			200

- Note :**
1. The number of teaching hours for theory and practical per session shall be 60 hrs. and 100 hrs. respectively.
 2. There will be a two theory papers (A & B) in each semester. Each paper will consist of nine questions. Question No. 1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

7. To determine the water potential of given tissue (any tuber).
8. To determine stomatal Index, stomatal frequency and percentage of leaf area open through stomata. Also study the effect of ABA on stomatal closure.
9. Effect of carbon dioxide concentration on the rate of photosynthesis.
10. To demonstrate that oxygen is evolved during photosynthesis.

Paper -B: DEVELOPMENT OF PLANTS AND THEIR UTILIZATION-I

Objective:

This paper deals with internal structure of various plant parts, their growth and development patterns. It gives an insight into plant domestication and role of wild plants in ecosystem functioning.

Teaching Methodology:

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Organization of the Higher Plant Body : The shoo Td ()Tj /R.494(t)0.89126(h)6.3012(B)-19.8307(b)-5(0)2-610041-68241(t)-6

B.A.

Guidelines for Botany Practical Examination:

BOTANY
SEMESTER-IV

PAPER-A: PLANT ECOLOGY

Objective: This paper deals with the role of environment in causing structural and functional variations in plants. It provides a broad idea about concept of population, community, ecosystem, ecological succession and role of plant indicators in environment monitoring.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discuss904(t)0.89126(e)-13.837(x)6.0241-.45768(p)-6.0241(()-27.1084(f)6.0241(aq)6.0241(l)0.89126(126(e)-13.z)-352.41(o)-6.

Suggested Laboratory Exercises

1. Study of vegetative and reproductive morphology and

ZOOLOGY**B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18****SEMESTER-III****PAPER I : ENVIRONMENTAL BIOLOGY-I**

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Environment** : Introduction and components.
1. **Ecological Concepts** : Ecosystem: Types food chains, food web, energy flow.

UNIT-II

3. **Biogeochemical cycles**
4. **Ecological succession**

UNIT-III

5. **Pollution: Types** - Air, water, land, thermal and noise pollution.

Suggested Readings :

1. Odum, E.P. :

UNIT-IV

6. **Nucleic Acids** : DNA. What genes are made of ? Detailed structure of DNA Molecule, replication, RNA - various types, transcription, translation and involvement of RNAs in protein synthesis.

Books Recommended :

- 1 Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D. : *Molecular Biology of the Cell* Garland Publications, New York,1983.
- 2 DeRobertis, E.M.F. Jr. : *Essentials of Cell and Molecular Biology* Holt-Saunders, Japan, 1981.

7. Analysis of the variations in protein contents in different organs of an animal procured from slaughter house.
8. Analysis of the species variations in amino acids requirements.
9. Demonstration of carbohydrate and proteins in a cell (Cytochemically).
10. Prepare a Project on national parks/sanctuaries/biosphere reserves.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) III Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks

- I. Analyze the variations in protein contents in the organs of a given specimen. Write the procedure and show the reading to the examiner. (3)
- II. Determine the physico-chemical factors (A) in given water sample from a lake. Write the procedures followed. (3)
- III. Demonstrate cytochemically carbohydrates/protein in an eukaryotic cell. Write the procedure and show the preparation to the examiner. (3)
- IV. Write a note on the project..... (2)
- V. Viva-Voce. (3)
- VI. Note Book and Charts. (4)

ZOOLOGY**B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18****SEMESTER-IV****PAPER I : ENVIRONMENTAL BIOLOGY-II****PAPER II: MOLECULAR BIOLOGY-II**

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

PAPER I : ENVIRONMENTAL BIOLOGY-II**UNIT-I**

1. **Biodiversity Conservation** : (In-situ, Ex-situ)

(2.m .rE2tuEx ton)

Suggested Readings :

1. Odum, E.P. : *Fundamentals of Ecology* W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : *The Biology of Population Studies in Biology* No. 38, Edward

Books Recommended :

- 1 Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D. : *Molecular Biology of the Cell* Garland Publications, New York, 1983.
- 2 DeRobertis, E.M.F. Jr. : *Essentials of Cell and Molecular Biology* Halt-Saunders, Japan, 1981.
- 3 DeRobertis, E.D.P. and DeRobertis, E.M.F. : *Cell and Molecular Biology* 8th Edition, Halt Saunders, Tokyo, 1987.
- 4 Gardner, E.J., Simmons, M.J. and Snustad, D.P. : *Principles of Genetics* John Wiley and Sons, New York, 2004.
- 5 Power, C.B. : *Cell Biology* Himalayan Publishing House, Bombay, 1981.
- 6 Schleif, R. : *Genetics and Molecular Biology* Addison-Wesley, Reading U.K., 1986.
- 7 Villee, C.A., Selomon, E.P. and Davis, P.W. : *Biology* Saunders College Publishing, New York, 1985.
- 8 Watson, J.D. : *Molecular Biology of the Gene* 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
- 9 Barry, J.M. : *Molecular Biology Genes and Cells: A Control of Life Cells* Prentice Hall Inc., New Jersey, 1964.

PRACTICALS**SEMESTER-IV****Practical's based on both theory papers.**

1. Biota of pond water and sewage/industrial effluent.
2. Effect of light and gravity on organism.
3. Study of littoral, limnetic, profundal communities.
4. Study of nucleic acids in tissues (Cytochemically).
5. Idea about viruses and bacteria through charts etc.
6. Preparation and study of onion root tip chromosomes.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) IV Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2marks

- I. Record biota in the given sewage samples. Draw labeled sketches & demonstrate these to the examiner. (3)
- II. Examine water sample for biotic communities from particular zone of lake, sketch and demonstrate. (3)
- III. Identify the given chart/diagram. Write a brief note on it. (2)
- IV. Study the effect of on the given animal. Write the procedure followed. (2)
- V. Make a chromosomes preparations of the onion root tip. Draw a label diagram of any stage of mitosis and show it to the Examiner. (3)
- VI. Viva-Voce. (2)
- VII. Note Book and Charts. (3)
