

ट्रान्सलेशन प्रोफिसियेंसी
एड-ऑन पाठ्यक्रम
अनुवाद सामर्थ्य में सर्टिफिकेट कोर्स

उद्देश्य :-

आधुनिक युग में अनुवाद सामर्थ्य का महत्व अभिव्यक्ति-कौशल के साथ अंग्रेजी, हिंदी और आंचलिक भाषा छत्तीसगढ़ी में सक्षम होकर व्यक्तित्व-विकास करना है। केन्द्र सरकार, राज्य शासन के समानांतर अर्द्धशासकीय और निजी संस्थानों में आजीविका की दृष्टि से इस पाठ्यक्रम का महत्व अधिक है। हिंदी भाषा में पारंगत होने के साथ इस पाठ्यक्रम से अंग्रेजी और छत्तीसगढ़ी में दक्षता होने से छात्रों का सम्यक विकास संभावित है जिससे उनमें आत्मविश्वास का संचार होगा। इस पाठ्यक्रम में सर्टिफिकेट पाठ्यक्रम का विकास किया जा रहा है।

रोजगार के अवसर :-

अनुवाद, राजभाषा सहायक, हिंदी अधिकारी, ट्यूटर विक्रेता प्रतिनिधि, दूरदर्शन और आकाशवाणी के उद्घोषक व समाचार पत्रों के संवाददाता।

परीक्षा की विधि :-

डिप्लोमा पाठ्यक्रम में दो प्रश्न पत्र सैद्धांतिक और एक प्रायोगिक के होंगे। तीनों के अंक 50 पृथक-पृथक होंगे तथा सैद्धांतिक प्रश्न पत्रों की पांच इकाईयां होंगी। ग्रेडिंग-प्रणाली से परीक्षा ली जायेगी।

प्रथम प्रश्न पत्र

व्याकरण

50 अंक

1. हिंदी व्याकरण
2. अंग्रेजी व्याकरण
3. छत्तीसगढ़ी व्याकरण
4. हिंदी, अंग्रेजी, छत्तीसगढ़ी व्याकरण में समानता
5. हिंदी, अंग्रेजी, छत्तीसगढ़ी व्याकरण में असमानता

द्वितीय प्रश्न पत्र

अनुवाद सामर्थ्य

50 अंक

1. अनुवाद – परिभाषा, लक्षण, स्वरूप
2. अच्छे अनुवाद के गुण
3. स्वर – व्यंजन वाक्य शुद्धि
4. कार्यालयीन हिंदी और अनुवाद
5. अनुवाद – अंग्रेजी से हिन्दी

प्रायोगिक (व्यावहारिक) कार्य

मौखिकी+परियोजना

50+50 =100 अंक

1. स्थानीय अथवा बाहरी सरकारी, अर्द्धसरकारी संस्थानों में परिभ्रमण के आधार पर दिए गए किसी भी विषय पर परियोजना रिपोर्ट तैयार करना ।
2. सामूहिक चर्चा
3. उच्चारण – अभ्यास ।

ट्रान्सलेशन प्रोफिसियेंसी
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प्रश्न-पत्र विवरण

- प्रथम प्रश्न पत्र – प्रयोजन मूलक भाषा और अनुवाद
द्वितीय प्रश्न पत्र – हिंदी, अंग्रेजी और छत्तीसगढ़ी व्याकरण
तृतीय प्रश्न पत्र – अनुवाद विज्ञान : सिद्धांत और प्रयोग
चतुर्थ प्रश्न पत्र – प्रायोगिक (प्रोजेक्ट वर्क)

ट्रान्सलेशन प्रोफिसियेंसी
एड-ऑन पाठ्यक्रम
अनुवाद सामर्थ्य में सर्टिफिकेट कोर्स

उद्देश्य :-

कोई भी भाषा जब सांस्कृतिक वैविध्य, और उसकी बोली-बानी का सौंधी रसमयता से सिंचित हो भीगने और लहलहाने का सामर्थ्य स्वयं में पैदा कर लेती है तो उसकी समायी और सामर्थ्य की कोरव उर्वरा होने लगती है, जब वह भाषा किसी एक समुदाय, वर्ग, समाज, देश, राष्ट्र की भाषा भर नहीं रह जाती, उसका सामर्थ्यवान व्यापकत्व निरंतर फलता-फूलता अपनी सीमाओं को बांध राष्ट्रीय से अंतर्राष्ट्रीय होने लगता है । प्रगति के लिए भाषाओं को आपस में हाथ मिलाना है । भारत अनेक भाषाओं का पावन संगम स्थल है । आदान-प्रदान प्रगति का मार्ग प्रशस्त करता है । यहां आदान-प्रदान का मुख्य सहारा अनुवाद है । अनुवाद का इतिहास रिश्तों का इतिहास है । भाषा, संस्कृति साहित्य और विचारों को वह जोड़ता है । आज अनुवाद की दिशा में कई सार्थक काम चल रहे हैं । वर्तमान समय में रिश्तों को मजबूत, संस्कार के गतिशील दृष्टिकोण को विशाल और संस्कृति को सतत् समृद्ध बनाने के लिये अनुवाद का आंचल पकड़ना अनिवार्य है ।

अनुवाद सामर्थ्य का महत्व अभिव्यक्ति कौशल के साथ-साथ हिंदी, अंग्रेजी और आंचलिक छत्तीसगढ़ी भाषा में सक्षम होकर व्यक्तित्व विकास करना है। हिंदी भाषा में निपुण होने के साथ इस पाठ्यक्रम से अंग्रेजी और छत्तीसगढ़ी में दक्षता होने से छात्रों को सम्यक विकास संभावित है, जिससे उनमें आत्मविश्वास का संचार होगा । केन्द्र सरकार, राज्य शासन के समानांतर अर्द्ध शासकीय और निजी संस्थानों में आजीविका की दृष्टि से इस पाठ्यक्रम का महत्व अधिक है ।

रोजगार के अवसर –

अनुवाद, राजभाषा सहायक, हिंदी अधिकारी, ट्यूटर विक्रेता प्रतिनिधि, दूरदर्शन और आकाशवाणी के उद्घोषक व समाचार पत्रों के संवाददाता ।

परीक्षा की विधि –

स्नातकोत्तर डिप्लोमा पाठ्यक्रम में चार प्रश्न होंगे । चारों के अंक 50 पृथक-पृथक होंगे । ग्रेडिंग-प्रणाली से परीक्षा ली जायेगी ।

प्रथम प्रश्न—पत्र प्रयोजन मूलक भाषा और अनुवाद

भाषा का प्रयोजन – प्रयोजन मूलकता
प्रयोजन मूलक भाषा और अनुवाद
प्रयोजन मूलक भाषा और सरकारी अनुवाद
राजभाषा (कार्यालयीन हिंदी की प्रकृति)
कार्यालय अभिलेख में हिंदी अनुवाद की समस्या, कार्यालयी भाषा और समेकित प्रकाशनाधिकार और अनुवाद
प्रशासनिक अनुवाद – स्वरूप विश्लेषण, प्रशासनिक शब्दावली
देवनागरी तार, सरकारी उद्यमों में हिंदी का प्रयोग
कामकाजी वाक्यांशों के हिंदी अनुवाद, कार्यालयीन एवं प्रशासनिक शब्दावली
प्रशासनिक प्रयुक्तियां
वैज्ञानिक एवं प्रौद्योगिकी साहित्य के अनुवाद की समस्याएं ।
बैंकिंग हिंदी का स्वरूप और अनुवाद
विज्ञापन की भाषा और उसके साहित्य की समस्याएं
बाजार भाव की भाषा और अनुवाद
खेलकूद की भाषा और अनुवाद संसदीय साहित्य का अनुवाद ।
विधि और अनुवाद

द्वितीय प्रश्न—पत्र हिंदी, अंग्रेजी और छत्तीसगढ़ी व्याकरण

1. भाषा, भाषा का स्वरूप, उत्पत्ति, महत्व विशेषताएं
2. ध्वनि
3. वर्णमाला
4. संज्ञा
5. सर्वनाम
6. विशेषण
7. क्रिया
8. क्रिया विशेषण
9. कारक संरचना

तृतीय प्रश्न-पत्र अनुवाद विज्ञान : सिद्धांत और प्रयोग

1. अनुवाद

अनुवाद – व्युत्पत्ति, अर्थ, स्वरूप, प्रकार, पुनरीक्षण, मूल्यांकन, क्षेत्र, सिद्धांत, प्रक्रिया
अनुवाद का स्वरूप – वर्तमान परिप्रेक्ष्य में
अनुवाद के उपकरण, अच्छे अनुवाद का स्वरूप, अनुवाद की समस्या
हिंदी अनुवाद की समस्याएं (तकनीकी अनुवाद के संदर्भ में)
अनुवाद का अन्य विषयों से संबंध
अनुवाद तथा समतुल्यता
अनुवाद विान कला अथवा शिल्प
अनुवाद की इकाई
अनुवाद का भाषा शास्त्रीय चिंतन
अनुवाद के गुण एवं अनुवादक का दायित्व

2. पारिभाषिक शब्दावली, कोश और व्याकरणिक अनुवाद –

पारिभाषिक शब्द, पारिभाषिक शब्दावली, पारिभाषिक शब्दावली का अभाव,
पारिभाषिक शब्दावली समस्या ।
वैज्ञानिक साहित्य के अभाव में पारिभाषिक शब्दावली की महत्ता
पारिभाषिक शब्दावली : साहित्येत्तर अनुवाद के संदर्भ में ।
कोश एवं पारिभाषिक शब्दार्थ के निर्माण की समस्याएं ।
कोश विज्ञान
अच्छे कोश की विशेषताएं ।

3. जनसंचार माध्यम और अनुवाद

जनसंचार माध्यम और देवनागरी, हिंदी वर्तनी का मानकीकरण
जनसंचार और विज्ञान,
जनसंचार माध्यम और अंतरिक्ष पत्रकारिता
विदेशों में हिंदी पत्रकारिता
सूचना माध्यम और अनुवाद
मुद्रण माध्यम समाचार पत्र-पत्रिकाएं
मशीनी अनुवाद
प्रुफ रीडिंग
आकाशवाणी का विकास, भाषा, और अनुवाद, दूरदर्शन की भाषा और अनुवाद,
कम्प्यूटर साधित अनुवाद ।

4. साहित्य में अनुवाद
काव्यानुवाद के परिप्रेक्ष्य में अनुवाद की सार्थकता
श्रुतलिखित अनुवाद की समस्याएं
अनुवाद में संस्थाओं और पत्रिकाओं का योगदान
दर्शनशास्त्र और मनोविज्ञान के संदर्भ में अनुवाद की समस्याएं ।
सर्जनात्मक एवं साहित्यिक अनुवाद की समस्याएं ।
अनुवाद का महत्व वर्तमान परिप्रेक्ष्य में
प्रशासनिक शब्दावली
मानक हिंदी वर्णमाला

चतुर्थ प्रश्न पत्र

प्रायोगिक (प्रोजेक्ट वर्क)

कार्यक्षेत्र का भ्रमण

मौखिक+परियोजना (50+50)

संदर्भ ग्रंथ

अनुवाद विज्ञान – सिद्धांत और प्रयोग
लेखक – डॉ. जयश्री शुक्ल
वैभव प्रकाशन, रायपुर (छ.ग.)

Certificate Course in Rural Sociology

Note : There will be three papers of 100 Marks. Third paper consist project works of 100 Marks.

Paper – I Rural Sociology

M.M. : 50

Rural Society-meaning, Structure, Characteristics, Caste in rural society, family, marriage Joint family and religion, relationship. Rural leadership, rural unemployment, rural poverty, rural in debtness, irrigation and landless labour, social changes planning for rural society, Panchayati Raj, Local bodies.

Farmer society – characteristic, laws regarding agriculture, major farmer movements, globbelization & its impact on agriculture. Water and Irrigation management.

Paper – II
Sociology of Religion

M.M. : 50

Religion – meaning, importance of religion, different theories, nature of religion, importance of religion, Utility and need, thoughts of Max weber, Durkhiem & Ganghiji regarding religion, religion & Magic. Basic concepts of main Religion in Indian Society.

Paper – III
Project works

M.M. : 50

Project work on Rural leadership, casteism, relationship, joint family in debtness, migration, rural unemployment and related problems.

Inter diciplinary & group discussion method has been used for the study of rural problems & factors of rural culture.

क्षेत्रीय अध्ययन में विषय की आवश्यकता के अनुसार अनुसंधान की पद्धति का प्रयोग किया जावेगा ।

Diploma in Industrial Sociology

Note : There will be three papers of 50 Marks. Third paper consist project works of 50 Marks.

Paper – I Industrial Socioloy

M.M. : 50

Industrial Sociology – Meaning definition, scope and importance, Human relationship in work, management, principles of managements, formal & non formal structure of Industries and participations of labour in management, labour union, Collective bargaining, Child labour, female labour and their problems.

Paper – II
Environment

M.M. : 50

Environment – meaning definition, characteristics, Environmental pollution and their classification, Industrial pollution and problems regarding it, preventive measures of Industrial pollution, pollution control laws.

Paper – III
Field Work

M.M. : 50

Study of slums in Industrial area, Industrial unemployment, Industrial dissatisfaction, prostitution, drinking and narcotic addiction crime, crimes, study of crimes against women project work an environment & related problems.

क्षेत्रीय अध्ययन के विषय की आवश्यकता के अनुरूप अनुसंधान की पद्धति एवं प्राविधि का प्रयोग किया जायेगा।

Advance Diploma Course in Tribal Sociology

Note : There will be three papers of 100 Marks. Third paper consist project works of 100 Marks.

Paper – I Project works

M.M. : 50

Tribal : Meaning, definition, major tribes of Chhattisgarh, Geographical distribution of tribal population, tribal culture, Tribal religious restrictions, Tribal economy.

Paper – II
Tribal Development & Mobility

M.M. : 50

Marriages in tribals, family relationship, religious faith and customs, tribal development & tribal development programme. Social changes in tribal culture, Adoption, change of religious, problems of tribals : Health & Nutrition, poverty, illiteracy, debtness, exploitation and market problems, drinking & drug addiction.

Paper – III
Field work

M.M. : 50

Problems, Study of culture and social structure of major tribes – Baiga, Gond, Kaver, Urao, Bingawar, Sahariys etc. Use of audio visual methods, observation, field survey of tribal area & group discussion & inter disciplinary approach has been used for the study.

POST P.G. DIPLOMA IN CLINICAL PSYCHOLOGY

(Under Self – financing scheme)

Introduction :

Psychosocial problems associated with a variety of mental/physical illness and disability ranging from mild to severe is continuously on the rise. Owing to several reasons there is acute shortage of manpower to cater to the needs of people suffering from a variety of psychological ailments. Clinical and counselling psychology are emerging as important disciplines in the area of prevention and promotion of health care. Trained counsellors apply knowledge and methods derived from all substantive fields of bio-psycho-social sciences to the promotion and maintenance of mental and physical health of the individuals. Thus, they are considered as indispensable agents of optimizing health care delivery in our country. However, only very few centres in our country methodically train individuals to function effectively assuming a responsible identity in this area.

Aim :

The aims of this course is to prepare the student to function as a professional clinical counsellor in the areas of mental health by offering assessment, counselling and rehabilitation services.

Objectives :

The course is organized as a one-year program with extensive theoretical inputs and supervised clinical experience. On completion of the course the student is expected to :

- (a) Maintain a feeling of responsibility for the client and sensitivity to the counsellor-client relationship.
- (b) Work with the psychosocial dimensions of mental and physical diseases and formulate/undertake well-targeted psychosocial counselling.
- (c) Integrate the course contents with the clinical viewpoint in a service setting.

- (d) Introduce the interdisciplinary approach to clinical problems and learn to cooperate with colleagues of other disciplines.
- (e) Communicate by writing case reports for clinical use.
- (f) Teach about the nature and meaning of clinical services.
- (g) Apply professional ethics.

REGULATIONS OF THE COURSE :

Intake :

Since this is a supervised clinical training course, the number of students taken in an academic year depends on the qualified clinical psychologists working in the parent department on permanent status, and access to clinical facilities. In order to make the training effective, therefore, the intake of students in an academic year shall not exceed the following ratio and is limited to 10 in any case.

Entry Requirement :

Minimum educational requirement for admission to this course shall be full time, regular M.A. degree with psychology. A minimum of 45% marks in aggregate is required to apply for the course.

Admission:

A selection committee that includes a clinical psychology faculty shall make admissions on the basis of an interview.

Duration :

This is a full time course with extensive clinical training and apprenticeship experiences for one academic year.

Attendance :

Course of study must, unless special exemption is obtained, continuously be pursued. Any interruption in a student's attendance during the course of the study, due to illness or other extraordinary circumstances, must be notified to the concerned university authority and permission should be obtained.

A minimum attendance of 75% (in the academic term) shall be necessary for taking the respective examination.

CONTENT OF THE COURSE

Each of the theory paper shall be taught for 6 hrs per week. The practicum experience shall be for 12 hrs per week under the supervision of a clinical psychology faculty.

Theory :

Paper – I : Perspective on Human Behaviour and its measurement.

Papter – II : Psychopathology

Paper – III : Clinical Counselling

Paper – IV : Psychology of Normal Adaptation and Behaviour modification.

Practical : (i) Interviewing skills, Menal Status Examination, Assessing Primary Mental Functions clinically.
(ii) Detailed case work up (formulating the clinical problem and diagnosis)
(iii) Psycho-diagnostic including viva voce.
(iv) Case work up (formulating the clinical problem and targeted psychosocial interventions) including viva voce.
(v) Assessment of the quality of overall clinical work (includes clinical interviews detailed work ups. Psycho-diagnostics and counselling)

Minimum Prescribed Clinical Work :

(1) Clinical Interviews	10
(2) Detailed case studies	10
(3) Psychological testing	20
(4) Counselling	10

Different diagnostic categories of clients shall be taken for counselling.

Submission :

One month prior to the annual examination every candidate should submit the clinical assignments (types and bound) as prescribed in the syllabus, in duplicate.

Internal Assessment :

In each subject (theory, submission practical) end of the session 20% marks shall be allotted for internal assessment. In case of “clinical work”, the allocated marks will be determined internally, bases on the competence and responsibility the candidate has shown in fulfilling the clinical requirement. The detailed guidelines for allotting the internal marks may be prepared y the institution concerned.

Examination :

The theory and practical examinations will be held at the end of the session.

The prescribed tuition/examination fee as laid down from time to time of college authority shall be paid by the students.

SCHEME OF EXAMINATION

Papers	Title	Duration	Examination (Maximum)	Marks Internal Assessment (Maximum)	Total
Paper I	On	3 hrs.	80	20	100
Paper II	Of	3 hrs.	80	20	100
Paper III		3hrs.	80	20	100
Paper IV		3 hrs.	80	20	100
Practical and Viva voce			80	20	100
Total					500

Examinations :

The Chairman of the board of examiners shall be clinical psychologist. Two examiners, one internal and one external clinical psychology faculty shall conduct clinical and viva voce examinations, and evaluate each of the submissions. Other examiners appointed for this purpose shall evaluate the theory papers.

Minimum Marks for Passing :

1. No candidate shall be declared to have passed in any of the semester exams unless he/she obtains not less than 48% of the marks in :
 - (i) Each of the theory papers
 - (ii) Each of the clinical and viva-voce examinations
 - (iii) Each of the submissions

PAPER – I
PERSPECTIVE ON HUMAN BEHAVIOUR AND ITS
MEASUREMENT

- UNIT-I** Introduction : Understanding Psychology, Goals and areas of Psychology, Psychology in our day to day life. Perspectives on Behaviour, Structuralism and Functionalism, psychoanalytic, Gestalt, Behaviouristic, Humanistic, Cognitive, Psychobiology, Cultural and Evolutionary view points.
- UNIT-II** Development Aspects : Physical, language, social-emotional, cognitive, moral and personality development, Influences of the family and early experience, Adjustment in old age, Attitudes toward death and dying, death anxiety.
- UNIT-III** Nature of Psychological Test : Nature and definition, Settings and purpose of test, Characteristics of examinee, Effects of examiner, Standardization, Reliability, Validity, Types of tests, Administering, Types of scoring. Individual versus Group Test, verbal and non-verbal.
- UNIT-IV** Personality Assessment : Materials, Administration and scoring, Interpretation, evaluation of frequently used personality inventories/questionnaires, and projective tests such as Inkblot tests, TAT and CAT, Draw-a-person test, Sentence completion test etc. Tests for infants, motor and speech handicaps, learning disability, mental sub-normality, visual and hearing handicapped.
- UNIT-V** for recognition : Nature and types of Diagnostic Intelligence tests, Attention/concentration tests, Memory Test, Text for infants, motor speech handicaps, learning disabilities, mental sub-normality, visual & hearing handicapped.

PAPER – II
PSYCHOPATHOLOGY

- UNIT- I** Introduction to Psychopathology : Etiology of mental disorders and mental health Psychosocial models. Medical model, Moral model. Behavioural model, Dynamic model, clinical model, community model, social model.
- UNIT-II** Psychopathology of Neurotic, Stress-related and Somatoform Disorders : Anxiety disorders, Dissociative (conversion) disorders, Obsessive and compulsive disorder, Phobic anxiety disorders, Somatoform disorders, adjustment disorders and behavioural syndromes associated with psycho-physiological disturbances. Psychopathology of Psychotic Disorders : Schizophrenia, Delusional disorders, mood (affective) disorders, and other psychotic disorders.
- UNIT-III** Psychopathology of Personality and Behaviour Disorders : Specific personality disorders, Habit and impulse disorders, Mental and behavioural disorders due to psychoactive substance use, Sexual dysfunction and disorders, psychoactive substance use disorders. Psychopathology of Childhood and Adolescence Disorders Psychopathology of emotional, behavioural and developmental disorders of childhood and adolescence.
- UNIT-IV** Psychotherapy-Introduction : Definitions, objective, training, professional and ethical issues, planning and recording of therapy. Human-Existential Therapies : Historical context and philosophical basis, principles and types of therapy, current status.
- UNIT-V** Cognitive Therapies : Basic principles and assumptions, therapy techniques, application issues. Supportive Psychotherapy : Goal, Indications, techniques and application issues. Therapy with Special Conditions : Such as therapies with children, family therapy, marital therapy and sex therapy.

PAPER – III
CLINICAL COUNSELLING

- UNIT- I** Clinical Counselling : Definition, nature, goals and types of counselling, group vs. individual counselling, types of clients, nature of analysis, methods of securing client information confidentiality, ethics and professional issues in counselling, counsellor and client characteristics.
- Concept and Process** : Casual and regulatory processes, therapeutic ingredients of counselling behaviour change through counselling, process and procedures for counselling, behavioural, cognitive and humanistic approaches.
- UNIT-II** Disability and Rehabilitation – Definition, nature, types, characteristics, incidence, prevalence, causes (biological) bases and social correlates) of various disabilities (Mental retardation, learning disabilities, visual disability, hearing disability, speech disabilities, autism, chronic mental illness, orthopaedic and neuromuscular disability and multiple disabilities) concepts of impairment, disability, handicap habilitation, rehabilitation, integration.
- UNIT-III** Application of clinical counselling : Problems Identification, definition and analysis of the problems, specification of change goals, relationship establishment, implementing techniques/procedures for change, recording, termination, evaluation of counselling outcomes, counsellor Responses that help exploration, understanding and problems solving.
- UNIT-IV** Assessment : Basic principles of assessment and evaluation : types (norm based, criterion based, function based), the role of psychological testing, the use of psychological tests in screening, diagnosis and assessment of behavioural characteristics of people with disabilities; ethical issues in psychological assessments, limitations of psychological tests.
- UNIT-V** Critical Issues in Clinical Counselling : With reference to elderly patients with chronic medical illness, terminally ill, patients with HIV/AIDS, school drop-outs, children with learning disabilities, children with behavioural and emotional/conduct problems, mentally subnormal group individuals, with motor's sensory disabilities, people with chronic mental disorders, people having marital discord, sexual dysfunction and disorders, problems of adolescence, people with alcohol/substance abuse disorders.

PAPER – IV

PSYCHOLOGY OF NORMAL ADAPTATION AND BEHAVIOUR MODIFICATION

- UNIT- I** Normality : Concept of normality, Medical, Statistical, Utopian. Subjective, Social, Ideal and Process perspective, Features of normal adaptation, Normal adjustment changes with age. Normal Personality Styles : What is personality style ? Classifying personality, Measurement of personality, Description of historical and contemporary personality styles.
- UNIT-II** Stress and Adaptation to Stress : Nature of stress : Types of Stress. Sources of stress, Effects of stress on psychological functioning, Effects of stress on physical health, Responding to Stress, Measurement of Stress. Theories of stress emotion, Types of adaptive responses (Self-protective, Direct Control, Direct Action responses to stress) Factors moderating the impact of stress, Examples of overload (stressful) condition, features of overload condition, helping others and ourselves in this state, practical approaches to overcome stress.
- UNIT-III** Life Cycle : Stages of the life cycle, Models of life cycle development, periods of stability and instability, differences in the life cycle of men and women. Improving Adaptation : Balance of work, love and play, maintaining resources, managing stress, other guidelines for maintaining effectiveness through life cycle.
- UNIT-IV** Behaviour Modification : Learning, biological and cognitive foundations, behavioural assessment, analysis and formulations. Techniques : Operant procedures, counter-conditioning procedures, aversive conditioning procedures, self-control procedures and cognitive procedures.
- UNIT-V** Application of Behavioural Modifications : Clinical applications in the management of stress-related disorders, anxiety disorders, speech and psychomotor disorders, sexual dysfunction and deviation, childhood disorders and psychotic disorders.

P.G. DIPLOMA PRACTICALS

I. List of Psychological Tests (any 15)

1. Stanford Binet
2. W.A.I.S. – Ramalingaswami
3. W.I.S.C. – Mallen
4. Bhatia's Battery of Performance Tests
5. Standard Progressive Matrices
6. Senguin Goddard Form Board
7. Vineland Social Maturity Scale
8. Knox Cube limitation Test
9. Draw a Person Test
10. Roschach Ink Blot Test
11. Thematic Apperception Test (TAT)
12. Children's Apperception Test (CAT)
13. Word Association Test (WAT)
14. Sentence Completion Test (SCT)
15. 16 P.G. /HSPQ
16. MMPI
17. Adjustment Inventory
18. Stress Scale
19. Depression Scale
20. KNPI
21. Differential Aptitude Test
22. Chatterjee's Non-language Preference
23. Self concept Scale _ Mukta Rani Rastogi
24. Bender Gestalt Test
25. Clinical Analysis Questionnaire – Kapoor
26. Emotional Maturity Scale
27. Memory Test – PGI
28. Memory Test – PGI
29. Brain Damage Test

II. Case Study : Do any 5 normal and any 5 clinical

III. Visit to mental hospitals

IV. Psychological Intervention in abnormal cases

V. Counselling interview

VI. Report writing.

CERTIFICATE COURSE IN TOURISM

Tourism can be a very promising profession. The course in Tourism and Regional Development will provide career in this newly developing state of Chhattisgarh. The course is framed for the student, to make them understand the nature and principles of tourism. Also it will give insight of future prospects of tourism in Chhattisgarh State. Also, it will give opportunity to the students to get job in tourism Industry outside the state too.

The certificate course will consist of two papers each paper will be of marks 50.

- Paper – I Principles and Practices of Tourism
Paper – II Tourism Production
Paper –III Practical work/Excursion Report and Viva-Voce

Paper - I

Tourism Principles : Introduction, Tourism Principles, concepts of tourist, Components of Tourism Diverse nature of Tourism, Motivations for Tourism, Tourism importance, Measurement of Tourism.

Evolution of Tourism – origin of Tourism, Growth and development of Tourism, Organised Tourism, Tourism as a profession Tourism in India and world.

Socio-Economic Facets of Tourism : Social Aspects of Tourism, Infrastructural Developments, Economic Aspects, Employment Benefits, Multiplier effect.

Types of Tourism – Pleasure Tourism, Cultural Tourism, Business Tourism, Religious –Tourism, Adventure tourism Eco tourism, Educational Tourism, Modern tourism (package tours, sponsored tours) Introduction to Ecology Environment wildlife and pollution.

Travel Industry and Travel Marketing :

The Travel markets, Travel agencies, Tour operators, Travel guide, Tourism marketing Tourism marketing channel.

Session 2006-07

Paper – II

Tourism Production

Maximum Marks 50

Ancient Religious of India – Introduction, Vedic Religion, Budhhism, Jainism, Hinduism, _____ vaishnavism.

Major Gods and Goddesses of Hindustan and other religions and sects, Hindu Trinity, Indian Spirituality.

Pilgrimage Tourism, Indian Culture & Traditions, Sect and Festivals, Contribution of Ideology in making India as the tourist Designation.

Nature based tourism, wild life & sanctuaries, National Parks and Gardens, Beach Tourism, Island Tourism, Mountain Tourism and Desert Tourism.

Adventure Tourism :Safari Mountaineering, Trekking, Risk Based activities.

Other tourism product –souvenir Industry, Duty free shop, Them parks, specialized fairs, Entertainment and Night life, conference, Handicrafts, Crafts Medes, performing Arts of India, Classical and Folk Dances.

Paper – III

Practical Work/Excursion Report and Viva-voce

Maximum Marks 50

From the above mentioned two papers student would select any one topic for the detailed study and coverage with the consent of the co-ordinate. It would be presented either in Dissertation form or vedio C.G. Programme from which would carry 35 marks along with 15 marks for the viva-voce.

This paper may also include photography and Vedio shooting (still, digital, photo making, types of camera, Basics of Videography, Camera handling, Shooting, Editing, mixing and special effects.)

Govt. P.G. Arts & Commerce College, Bilaspur (C.G.)

**UGC Add on Course Syllabus
Tourism Advance Diploma Course.**

OBJECTIVES

The objective of the career oriented skill enhancing Add –on course is to introduce education that have utility for job, self employment and empowerment students in the field of Tourism. The Advance Diploma in the field would satisfy the aspirations and job requirements of students of this region.

Scheme of Examination :

Advance Diploma Course :-

The Course will be of 20 credits of one year having 3 papers each one carrying 50 marks. For the 2 theory papers students would have to write any five question of conventional type. For the One practical paper, which would carry 50 marks, Dissertation/C.D. Programme From/Written Test/Viva voce method would be adopted. For award of the Certificate, the letter Grade system of UGC would be followed after computing the total marks in all the three papers.

Eligibility for Admission :-

All those students who pass the Diploma examination in the same course would be eligible for admission. The exam date would be scheduled in a manner which would avoid any clash with other examination of the University and would provide enough time for preparation.

Paper-I

Tourism in Chhattisgarh

Max Marks : 50

UNIT-I Chhattisgarh State – Introduction origin, Geographical Structure, Brief Historical Accounts (ancient to modern)

UNIT-II Culture and civilization, Social life main caste groups, Folk songs and Dance, Ornaments, Economic Conditions, Chief religions and Panths.

UNIT-III Importance of Chhattisgarh Tourism from Tourist point of view. Ministry of Tourism and State Tourism Board (aim, structure, plans and work method).

UNIT-IV Main Historical and Archaeological Tourist Places –

Raipur, Rajim, Sirpur, Arang, Champaran, Girodhपुर, Damakera, Khallari, Turturia, Patan, Nagpura, Dhamdha, Bharamdeo, Ratanpur, Malhar, Janjgir, Kharod, Arbhar, Shivrinarayan, Akaltara, Kudurmali, Gunji, Pali, Talagaon, Tummad, Lafagarh, Aamod, Kotgarh, Kirari, Semarsal, Barsur, Dantewara, Jatanpal and Kuruspal, Dipadiee, Ramgarh, Mainpat, Pujariplai, Natnagar, Singhanpur, Kabra, Basanajhar, Bamhandei, Gatadih, Ongana, Karmagarh, Tipakhol, Botalda etc.

UNIT-V Rock painting and Architecture of Chhattisgarh Rare forest animals of C.G., Herbal Medicinal Plants.

State Awards in honour of the names of Great Persons –

Shahid Vir Narayan Singh, Yati Yatan Lal, Gundadhur, Mini Mata, Guru Ghasidas, Thakur Pyarelal Singh, Haji Hasan Ali,

Maharaja Pravin Chandha Bhangdeo, Pt. Ravishankar Shukla,
Pt. Suder Lal Sharma, Raja Chakradhar Singh, Dau Mandra Ji,
Dr. Khubchand Baghel, Maharaja Agrasen, Chandulal
Chandrakar.

संदर्भ ग्रंथ :-

1. छत्तीसगढ़ समग्र – बिलासा कला मंच बिलासपुर
2. गोड़ जनजाति – शोभानाथ पाठक
3. बस्तर का इतिहास एवं संस्कृति लाला जगदलपुरी
4. बस्तर एक अध्ययन – डॉ. रामकुमार बेहार
5. छत्तीसगढ़ का राजनीतिक एवं सांस्कृतिक इतिहास – डॉ. रमेन्द्र नाथ मिश्र
6. छत्तीसगढ़ का समग्र इतिहास – डॉ. सुरेशचन्द्र शुक्ल
7. आदिवासी अस्मिता और विकास – प्रो. हीरालाल शुक्ला
8. छत्तीसगढ़ राज्य सम्मान प्रेरक विभूतियां – संस्कृति विभाग छ.ग. शासन

Paper-II

Perspective in Environmental Studies

Max Marks : 50

UNIT- I The Multidisciplinary Nature of Environmental Studies

Definition, scope and importance

Need for public awareness.

UNIT-II Natural Resources

Renewable and non-renewable resources :

Natural resources and associated problems.

a. Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effect on forests and tribal people.

b. Food resources : World food problems, changes caused by agriculture and over-grazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

c. Energy resources : Growing energy need, renewable and non-renewable energy sources , use of alternate energy sources, Case studies.

UNIT-III Ecosystem

a. Concept of an ecosystem

b. Producers, consumers and decomposers

c. Food chains, food webs and ecological pyramids.

d. Forest ecosystem.

UNIT-IV Bio-diversity and its Conservation

- a. Introduction –Definition : genetic, species and ecosystem diversity.
- b. Endangered and endemic species of India.
- c. Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

UNIT-V Environmental Pollution Definition

Causes, effects and control measures of :

- a. Air pollution
- b. Water pollution
- c. Soil Pollution
- d. Thermal pollution

Reference Book

Agrawal, S.K. and Dubey, P.S., - Environmental Controversies.

Chary, S.N. and Vyasulu, V. (Eds) – Environmental Management

Kumar, H.D. – Forest Resources

Varshney, C.K. and ? Sardesai, D.R. (Eds.) – Environmental Challenges Monga, G.S. – Environment and Development.

N.C.E.R.T. – Journal of Value Education : Special Issue on Environmental Values

Miller, G. Tyler, - Living in the Environment

Paper-III

Practical Work/Excursion Report and Viva-Voce

Max Marks : 50

From the above mentioned two paper student would select any one topic for detailed study with the consent of the Co-ordinator. It would be presented either in dissertation form or in Video C.D. which would carry 35 marks along with 15 marks for the viva-voce.

(Dr. D.K. Pandey)

Course Co-ordinator

(Dr. B.L.Goyal)

Govt. P.G. Art & Commerce
College, Bilaspur (C.G.)

Session : 2019-20
Diploma Course in Tourism

Tourism can be very promising profession. The course in Tourism and Regional Development will provide career in developing State of Chhattisgarh. The course is framed for the student, to make them understand the nature and principle of tourism. Also it will give insight of future prospects of tourism in Chhattisgarh state. It will give opportunity to the students to get job in tourism Industry outside the state too.

In the Diploma course all those students who have certificate in Tourism under Add on Course scheme would be entitled for admission. The Diploma course will consist of two theory papers and one practical paper. Each paper will be of 50 marks.

Paper I - Indian History, Geography and Tourism

Paper II - Travel Agency and Tour Business

Paper III - Public Relations in Tourism

Paper-I

Indian History, Geography and Tourism

Max Marks : 50

- UNIT-I** Brief Understanding of History of India – Ancient Medieval & Modern History as a tourism product. Monument major and minor. General and Religious Historical sites and cities.
- UNIT-II** Historical sites of Northern India – Agra, Delhi
Historical sites of Rajasthan – Jaipur, Udaipur
Historical sites of Madhya Pradesh – Mandu, Bhopal, Sanchi
Historical sites of Chhattisgarh – Surguja, Sirpur, Bastar
Historical sites of South Western India – Aurangabad, Bijapur, Golunda, Hyderabad
Historical sites of Eastern India – Patna, Kolkata, Murshidaba
Historical Forts – Chittod, Aamer, Delhi, Agra, Asirgadh, Daultabad, Golkunda
- UNIT-III** Brief understanding of Geography of India climate Rainfall. Hill Stations, Forests and wildlife, Deserts, River system Coasts.
- UNIT-IV** Hill Stations of India – Manali, Darjeeling, Mount Abu, Ootakmand, Vaishnav Devi A General Introduction.
- UNIT-V** General Introduction to Main Indian Natural and wildlife tourism spots.
Valley of flower, Corbet tiger reserve, Kaziranga sanctuary, Naha, Bandhavgarh, Neelgiri Biosphere.

Paper-II

Travel Agency, Tour Business

Max Marks : 50

- UNIT-I** International Travel organisation.
Introduction, world Tourism organisation
World Travel congress, National Tourism Organisation
- UNIT-II** International Tourism – Functions and Role, The seven components of the Travel Industry.
- UNIT-III** Introduction to Travel Guide and Travel Formalities, Types of Travel Guides Travel Formalities. Documents used for Travel, Coach Tours and Tour Brochures.
- UNIT-IV** Operation of Travel Agency – Travel agency in India, Travel agent, Functions of a travel agent, travel agency relationship, the growth of travel agency.
- UNIT-V** International Travel and Tourism brief introduction to marketing and Public Relations in Tourism. Travel and Tourism in the coming decades.

Paper-III

Practical Work/Excursion Report and Viva-Voce

From the above mentioned two paper student would select any topic for the detailed study and Coverage with the consent of the co-ordinator. It would be presented either in Dissertation form or C.G. which would carry 35 marks along with 15 marks for the viva-voce.

This paper may also include photography and Video Shooting (Still, digital, Photo making, types of camera, Basics of Videography, Camera Handling, Shooting).

Principal
Govt. P.G. Art & Commerce
College, Bilaspur (C.G.)

Session : 2007-08
UG-Part I
Certificate Course in Fashion Designing
(Add on Course)
Paper – I
Fashion Illustration

UNIT- I Introduction

1. Importance of cloths
2. Introduction and electrification of fabric
3. Selection of Fabric for dresses according to climate, age, occupation and personlity occasion figure types and fashion etc. Wardrobe planning.
4. Elements of Designing, Principles of Designing.

UNIT-II 1. Sketching lines, shapes and forms

2. Enlargment
3. Different types of Textures
4. Sketching authers, pleats, folds friles

UNIT-III 1. Sewing Maching – Introduction types, parts, function and operation of each part, Machine maintenance, Time rawing divides.

2. Principles of Tailoring – Measurement, drafting, pattern making, layout, fundamental method of cutting, stiching and finishing.

UNIT-IV 1. Technical Terms (Fashion words) : Measuring, Marking, Cutting and Sewing tools, finishing tools.

2. Dart, tucks, pleath, gethers, frill, piping, placket, fasterness.

UNIT-V 1. Design : Geometrical shapes, composition of geometrical shapes.

2. Colour whell, tints – shades, hua-natural, cool and warm colours, various colour schemes, psychological aspects of colour.

3. Different types of textures.

4. Enlargement of Prints.

Paper – II

Drafting and Computer Designing

M.M. : 50

- UNIT-I** 1. Sketching :
- Block and flash figure (front, side and $\frac{3}{4}$ view)
 - Different posters
 - Different position of arms and legs
 - Face, Headgares
 - Child figures
- UNIT-II** Fashion detail file : different neck liner, collers, sleeves, pockets, skirts, style line.
- UNIT-III** 1. Drafting : Jhabla, Basic bodies flock for child.
2. Sleeves : Plain sleeves, puff sleeves, maggar, let'o mitton sleeve, fell sleeves, fell sleeves.
3. Collar : Baby collar, cape collar, chiness bond, fisshop collar, chalsea collar.
4. Skirts : Gathered skirt, flared skirts, Aline skirt, Circular skirt, Tube skirt, yoked skiny.
- UNIT-IV** 1. Basic bodies flock for adult.
2. Suit – Salwar – Kameeg
3. Night gown
4. Lay out file
- UNIT-V** 1. Computer fundamentals
2. Print and Brush – Tools Bar, Menu
3. Corel Draw, Screen, Menu

Practical

M.M. : 50

1. Different colour schemes listed under theory paper.
2. Enlargement of print.
3. Enlargement stitches : stem stitch, fack stitch chain

Session : 2007-08 (UG-Part II)
Diploma Course in Fashion Designing (Add on Course)

Paper – I

Design idea and Fashion Illustration

M.M. : 50

UNIT- I Design of Jewellery, hand bags, shoes, Jackets.

UNIT – II Design dresses on theme -

1. A day on beach
2. Marriage bride
3. Inspirations
4. Formal wear
5. Casual wear
6. Sports wear

UNIT – III 1. Design dresses on theme :

- a. Summer wear
- b. Winter wear
- c. Different textures of _____

2. Stylized figure – wax colour, pencil colour, water colour

UNIT – IV Drafting

1. Dart relocation
2. Princess line
3. Empire Line
4. Shawl collar, coat collar, stand collar
5. Juliet sleeve, Tired sleeve, Batwing Sleeve, churidar sleeve, Dallman, _____.
6. Body Block and sleeve Block for ladies.

Paper – II

Fashion and Textile

M.M. : 50

- UNIT- I** History of Fashion
Harrpa and Mohan Jodaro age, Vedic age Muuryan and Sungs period, Kushan Period, Gupta Period, Mughal Period, British Peried, Present Period.
- UNIT- II** Fashion Marchandising :
Introduction, Carrier opportunities in fashion industry. The real Fashion Designer, Various factors influencing fashion.
- UNIT- III** Importance of fashion, How to select fashion for your self, fashion cycle, types of designers.
- UNIT- IV** Importance of studing textile theory in fashion Designing.
Introduction and classification of fibers, types of various. Fabric identification.
- UNIT-V** Weaving typesof weaving finishing types and aims.
Loom – type and parts of looms.
Stain new oval techniques.

Practical

M.M. : 50

1. Traditional embroidery of different states. Make two garments using traditional embroidery of any state
2. Shirt top (child)
3. Blouse (all type)
4. House coat
5. Formal suit
6. Traditional wear
7. Men's Kurta Pyjama
8. Frock - _____ Yoke, "A" line
9. Chudidhar
10. Portfolio and viva.

Add on Course - Industrial Chemistry

Certificate Course

Paper-1

1. Nomenclature : Generic name , trade name. method for purification of organic components, separation techniques, solvent extraction, chromatography, numerical problem related to these.
2. Raw material for organic compounds : petroleum, natural gas, Fractionation of crude oil.
3. Synthetic petrol : Fractionation of crude Oil, cracking reforming, hydro forming, isomerism, Octan number, cetane number.

Unit-II

1. Petroleum: Cracking, reforming, hydro forming, summarization.
2. Fuel : Types of fuel their calorific values.
3. Coal: Types Structure, properties, distillation of coal, chemicals derived from coal, coal analysis, numerical based on these.

Unit-III

1. Basic Metallurgical operation: Pulverization, Calcination, roasting, Refining of ores and minerals, different types of ores, pulverization, methods of concentration of ores, calcination , roasting, smelting.
2. Physicochemical principles of extraction of Fe, Cu, Al, Zn & Cr, metallurgical operations, refining of metal and properties of metals.
3. Inorganic Material of industrial importance, their valuability forms structure & Modification silicon, silicate cages, carbon & Zeolite, Ozone depletion, acid rain photochemical smog.
4. Corrosion : Theory, Preventive methods.

Unit-IV

1. Distillation- Introduction batch & continuous distillation, separation of plate column and pack column.

2. Absorption – Introduction equipment packet column spray column, packed bubble columns, mechanically agitated contractors.

Unit- V

1. Evaporation : Introduction, equipment, short tube(standard) evaporation by falling, evaporators, climbing film(upward flow) evaporation (agitated) film evaporator.
2. Filtration : Introduction, filter media and filter aids, equipment plate frame nutsche filter rotator drum filter, sparkler filter, candle filter.
3. Drying :Introduction , free moisture, humid moisture drying curve, equipment, rotatory dryer, flash dryer, fluid bed dryer, drum dryer, spray dryer.

Cerificate Course

Paper II

Unit-1

Dimension and Unit – Basic chemical calculation, atomic weight, molecular weight, equivalent weight, mole composition of liquid mixture, gaseous mixture, mineral balance involving, chemical reaction concept of limiting reactant conversion of solid, liquid phase reaction, gas phase reaction without recycle of phase.

Unit-2

1. Entropy Balance: heat capacity of pure gases and gaseous mixture at constant pressure and temperature.
2. Heat capacity of solid, enthalpy change, energy balance, numerical based on energy balance.

Unit-3

1. Surface chemistry and interfacial phenomenon , adsorption isotherm soils , effect of surfactant, hydro tropes

Unit-4

Boilers -Types of boilers and their functioning

Water -Specification for industrial use, various water treatment methods.

Steam -Generation and uses, specification for industrial use, processing air.

Water analysis and treatment of water for domestic use, hardness of water, analysis of free chloride, alkalinity, acidity free CO₂, BOD, COD, D.O.

Unit-5

Introduction of chemical engineering- water pollution.

Fluid flow – fans , blowers, compressors, vacuum pump selector.

Pumps - Reciprocating pump, gear pumps, centrifugal pumps, air nitrogen cycle.

Atmosphere, pollution unit, pollutant, types of pollution statutory units pollution evaluation methods.

Certificate course

INDUSTRIAL CHEMISTRY PRACTICAL

Practical Examination

Distribution of marks -	Experiment	-	30	Section – A 20 B-
10	Viva	-	05	
	Sessional	-	05	
	Project	-	10	
	Total	-	50	

Section- A

1. Extraction Processes – Phase diagram, partition coefficient.
2. Chromatography – column, paper, thin layer.

3. Ore analysis – Dolomite, limestone, calcite, analysis of alloys as cupro- nikel.
4. Determination of physical constant, refractive index, surface tension, effect of surfactants on surface tension, viscosity fluids , polymer solution , effect of additive on viscosity, optical rotation.

Section – B

1. Simple laboratory Techniques – Crystallization, Fractional crystallization, Distillation, fractional distillation, B. pt. diagram.
2. Preparation of standard solution.
3. Calibration of thermometer
4. Acquaintances with safety measures in laboratory hazards chemicals.
5. Depression and elevation in M. Pt./B.Pt. of solids and liquids.

Diploma Course

Industrial Chemistry

Paper-I

Unit I

Material Science: Mechanical properties of material and change with respect to temperature.

Material of construction used in industry:

Metal and alloys: Important metals and alloys, iron, copper aluminum, lead, nickel, titanium, and their alloys, mechanical and chemical properties and their applications.

Cements: Types of cement, composition, manufacturing process, setting of cement,

Ceramics: Introduction, types, manufacturing process, application, refractories.

Unit-II

Polymeric Materials: Industrial Polymer and composite material their constitution, chemical and physical properties, industrial application.

Glass: types, Comparison, manufacture chemical and physical properties, application.

Corrosion: Various types of corrosion relevant to chemical industry-mechanism, preventative methods.

Unit- III

Pollution: Air oxygen, nitrogen cycle, water, biosphere, flora and fauna, energy, soil, pollutant and their statutory limits, pollution and evaluation methods.

Air Pollution – Various pollutants , water pollution- organic / inorganic pollutants, noise pollution, sewage analysis, , pesticides pollution, radiation pollution green house effect, future.

Unit –IV

Effluent treatment and waste management : Principles and equipment for aerobics anaerobic treatment, adsorption, filtration, sedimentation, Bag filters, Electrostatic precipitators,

mist eliminators, wet scrubbers, absorber , solid waste management, industrial safety.

Unit -V

Process instrumentation: Concepts of measurement and accuracy, principle, construction and working and following measuring instruments.

Temperature: Glass thermometers, Bimetallic thermometers, pressure spring thermometer, vapor filled thermometer, Resistance thermometer, radiation pyrometers.

Pressure: Manometers, Barometers, Bourdon pressure gauge, bellow type Diaphragm type pressure gauge, Macleod gauges, pirani gauges etc.

Liquid Level : Direct- Indirect liquid level measurement , float, type, liquid level gauge, ultrasonic level gauges, Bubbler system , Density measurement, viscosity measurement.

Books Recommended:

1. Pollution control in chemical and Allied industries ; S.P. Mahajan
2. Pollution control in industries; A. series of books b.Jones H.P.
3. Air Pollution- Volume 1 to 4 ; Editors, STERN . A.C.; Academic press
4. Environmental engineering: G N Pandey , Tata MacGraw Hill
5. Handbook of air pollution ; A. Parker, , Tata MacGraw Hill
6. Science of ceramics Chemical Processing ; Hench LL
7. Science of ceramics ; Stewart G.H
8. Chemistry of cement
9. Properties of Glass, morey G.w. Chemistry of glasses; Paul A.
10. Corrosion, causes & prevention : Spellur F. n.
11. Effluent Treatment in process Industries; inst. Of Chemical engg.
12. Effluent Treatment and waste disposal ; inst. Of chemical engg.
13. Effluent Treatment and disposal; inst. Of Chemical Engg.\
14. Industrial Instrumentation ; Eckmen D.P. Johe Welly
15. Applied Instrumentation in process industry Vol I , II, & III; Andwres W. G. Gulf Publication
16. Instrumentation and control for the process industries ; Borer S. Elsevier; Applied Science Publisher

DIPLOMA COURSE
Industrial Chemistry
Paper -II

M.M. 50

UNIT -I

Unit Processes in organic chemicals manufacture:

Nitration Introduction –Nitrating agents, kinetics and mechanism of nitration processes such as nitration of –

- (a) Paraffinic Hydrocarbons
- (b) Benzene to nitrobenzene and m-dinitrobenzene
- (c) Chlorobenzene to o and p- nitrochloro benzene
- (d) Acetanilide to p-nitro acetanilide
- (e) Toluene

Continuous Vs. batch nitration

UNIT-II

Halogenation:

Introduction- Kinetic of halogenations reaction, Reagents for halogenations, Halogenations of aromatics-side chain and nuclear halogenations, commercial manufacture of chlorobenzene, Chloral, Mono chloracetic acid and chloromethane.

UNIT-III

Sulphonation :

Introduction , Sulphonating agents, chemical and physical factors in sulphonation, kinetics and mechanism of sulphonation reaction,commercial sulphonation of benzene,

naphthalene , Alkyl benzene, Batch Vs Continuous Sulphonation.

UNIT -IV

Oxidation :

Introduction , Types of oxidation reaction reactions ,Oxidizing agents , kinetics and mechanism of oxidation of organic compounds ,liquid phase oxidation , vapor phase Oxidation, commercial manufacture of benzoic acid ,maleic anhydride, Phthalic anhydride , acroleins ,Acetaldehyde ,acetic acid.

Hydrogenation :

Introduction, Types of Alkylation, Alkylating agents ,Thermodynamics and mechanism of Alkylation reaction ,Manufacture of Alkylbenzenes(for detergent manufacture),Ethyl benzene,Phenyl ethyl alcohol , N- alkyl anilines (Mono and Di- methyl anilines)

UNIT-V

Esterification :

Introduction, Hydrodynamics and kinetics of esterification reaction Esterification by organic acidby addition of unsaturated compounds, Esterification of carboxy acid derivatives ,commercial manufacture of ethyl acetate ,dioctylphthalate ,vinylacetate ,cellulose acetate.

Amination :

(A) By Reduction :

Introduction ,methods of reduction-metal and acid ,catalytic ,sulfide electrolytic ,metal and alkali sulphites , metal hydrides ,sodium metal concentrated caustic ,oxidation ,Reduction

,Commercial manufacture of Aniline ,m-nitro aniline ,p- amino phenol.

(B) By Aminolysis :

Intoduction , Aminating agents, Factors affecting.

Hydrolysis :

Introduction , Hydrolyzing agents ,kinetics ,thermodynamics and mechanismof hydrolysis.

Books Recommended :

1. Unit process in organic synthesis ; P. M. Groggins; Mc Graw Hill.
2. Chemicals Engineer's Handbook;Perry J. H. and green D; Mcgraw Hill

Diploma Course

M. M. 50

Industrial Chemistry Practical

Duration of Examination : 04 Hours

Distribution of marks : Experiments -30 [Section A -
15

Section B-

15]

Viva	-05
Sessional	-05
Project	-10
Total	-50

Section -A (Any one)

1. Unit process : one to two examples of each of the
 - a. following unit processes.
2. Nitration, Sulphonation , Friedel- Craft reaction,
 - a. Esterification , Hydrolysis ,Oxidation, Halogenation ,Chloro-Sulphonation,reduction,polymerization ,reaction of diazonium salts.
3. Material testing : Testing of Alloys
Identification of plastics/Rubbers,Estimation of Tield point, Young's Modulus,Flaredness, Optical, Thermal ,Mehanical and Electrical Properties.
4. Process Instrumentation : Transducer of different types ,Use of transducer for measuring flow control ,determination of flash point and ignition points of liquids.

Section- B

1. Instrumental methods of analysis : Use of colourimeter , pH meter , Potentiometer, Conductometer , Refractometer , polarimeter.
2. Water Analysis : Solid content , Hardness, COD and other tests as per industrial specifications
3. Flow measuring devices : Floats , Monograph of representatives raw material such s sulphuric acid , toluene sodium carbonate , sodium hydroxide, carbon tetrachloride , Benzoic

acid(5-6 compounds) Limit tests for heavy metals Pb , As ,Hg ,Fe and ash content

ADVANCED DIPLOMA COURSE

Paper -I

Pharmaceuticals & Industrial Organization

UNIT -I

1. Historical Background and Development of Pharmaceutical Industry in India in brief.
2. Pharmacopoeias : Development of pharmacopoeia and Introduction of B. P., U. S. P., E. P., N. F. and other important pharmacopoeias.
- 3. Introduction to various types of formulation and routes of administration.**

UNIT II

- 1. Pharmaceutical packaging – Introduction , package selection, packaging materials , ancillary materials, packaging machinery,quality control of packaging materials.**
- 2. F.D.A. Important Schedules & some legal aspects of drugs.**
- 3. Pharmaceuticals quality control (other than the analytical methods covered under core subject) Sterility testing pyrogenic testing , glass testing bulk density of powder etc.**

UNIT III

Instrumentation :

- 1. UV- visible spectroscopy**
- 2. IR- spectroscopy non dispersive IR.**
- 3. NMR Spectroscopy.**
- 4. Atomic Absorption and Flame Photometry**
- 5. Neutron diffraction.**
- 6. X-ray fluorescence.**
- 7. Ion Selective Electrodes**

UNIT -IV

- 1. Concept of Scientific Management in Industry.**
- 2. Function of management decision making planning ,organizing directing & control.**
- 3. Location of Industry.**

UNIT V

- 1. Materials Management.**
- 2. Inventory Control.**

3. Management of human resources –selection , incentives , welfare safety.

Books-

- 1. Economics of chemicals industry. Hempel,E. H.**
- 2. Plant Design and Economics for chemical engineers, Peter Time-Rhaus,McGraw Hill.**
- 3. I.C.M.A. Booklets-9&10.**
- 4. Industrial Organization & Management,Bethel,L.L.**
- 5. Industrial Organization & Management,Tarachand,Vol.I & II.**
- 6. Books on Management, O.P. Khandelwal.**
- 7. Rheology theory & application,Vol.-5,Elrich R.F.**
- 8. Instrmental Methods of Analysis ,Willard,merit,dean.**
- 9. Introduction to Instrumental methods of analysis,Braun,R.D.McGraw Hill.**
- 10. Analytical chemistry,J.B. Dick, McGraw Hill**
- 11. Quantitative Inorganic analysis,A.Vogel.**
- 12. Instrumental methods of analysis,Skoog & West.**
- 13. Instrumental methods of analysis,B.K.Sharma.**

ADVANCED DIPLOMA COURSE

PAPER -II

DRUGS

UNIT-I

1. Phyto - chemical - introduction to plant classification and crude drugs, , Cultivation, collection, preparation for the market & storage of medicinal plants.
2. Classification of various types of drugs with example.
3. Raw material process of manufacture effluent handling etc.of the following bulk drugs.
(i) Sulpha drugs Sulphaguanidine (ii) Sulphamethoxazole.

UNIT II

1. Chemical constitution of plants including carbohydrates , amino acids , proteins , fats waxes volatile oils turpenoids ,steroids , saponins ,flavonoids , tannins ,glycoside alkaloids

2. Various isolation procedures for active ingredients with examples for alkaloids reserpine one for steroids sapognin , diosegnin, diogron.

UNIT III

1. Antimicrobial :Chloramphenicol, Furazolidine Mercurochrome ionized , Na PAS.
2. Analgesic – Antiflammatory : salicylic acid and its derivatives ,Ibuprofen , Mefenamic acid.

3. Steroidal hormones – Progesterone, Testosterone, methyl testosterone.

UNIT IV

1. Vitamins – Vit- A, Vit-B6, Vit-C
2. Barbiturates – Pentobarbital
3. Blockers, Propranolol, Atenolol
4. Cardiovascular agent – Methyldopa
5. Antihistamines :- Chlorpheniramine Maleate.

UNIT V

Product based Fermentation processes :- Brief idea of micro- organism, their structure, growth & usefulness - Enzyme system useful for transformation microbial products.

1. General [rinciples of fermentation processes and Product processing.
2. Manufacture of antibiotics – penicillin- G & semi synthetic penicillins, Rifamycin, Vitamin B12.
3. Bio – transformation process for prednisolone, 11 hydroxylation in steroids.
4. Enzyme- catalysed Transformation, Manufacture of ephedrine.

Books-

1. Practical Pharmacognosy, T.B. Wills.
2. Practical Pharmacognosy, T.N. Vasudevan.
3. Modern Pharmacognosy, Ramstad, McGraw Hill.
4. Indian Pharmacopoea, 1985.
5. British Pharmacopoea, 1990.
6. Hand Book of Drugs & Cosmetics Act, Mehrotra.
7. Pharmaceutical excipients.
8. Pharmaceutical Dosage Forms.
9. Principles of Medical Chemistry, W.O. Foye, Lea & Febigen Publication Philadelphia.
10. Text Book of organic medicinal and Pharmaceuticals chemistry, Willson, Gisvold, de Reger, Lippincott, Toppan.
11. Essential of medicinal chemistry, Korolkovas, Burkhalter, Wiley Interscience.

ADVANCED DIPLOMA COURSE

Industrial Chemistry

Practical

M.M. 50

The practical examination will be of 08 Hrs. duration spread over two days carrying 50 marks.

Two experiments have to be performed:

1. Synthesis of common industrial compounds involving two step reaction :- 4- Bromoaniline , 3- Nitroaniline, Sulphanilamide, 4- Aminobenzoic acid, 4- Nitrobenzoic acid, Dihalobenzenes, Nitrohalobenzenes.
2. Industrial Analysis of common raw materials as per industrial specification :- phenol aniline formaldehyde, hydrogen per oxide, acetone , epoxide ,olefins , oil etc.
3. Demonstration of various pharmaceutical packaging materials quality control tests of some material –A1 Strips, Cartons , glass, bottles.
4. Limit tests for chlorine heavy metals arsenic etc. of two representatives bulk drugs.
5. Demonstration of various Pharmaceutical product.
6. Active ingredients analysis of few types of formulation representating different methods of analysis :- acidmetry, alkalimetry,non aqueous
7. Determination of sulphate :-ash less of drying and other tests of bulk drugs complete L. P. Monograph of three drugs representing variety of testing methods.
8. Evaluation of crude drugs:- macroscopic examination determination and Identification of starch granules, calcium oxalate.
9. Palisate ratio Stomatal Index Determination and Identification of few drugs TLC method for Identification.
10. Microbiological testing determination of MIC of some antibacterial drugs by zone/cup plate methods.

Distribution of marks-

1. Experiment No.1	-	20
2. Experiment No.2	-	10
3. Viva	-	05
4. Sessional	-	05
5. Project Work	-	10

Total 50