



**ODISHA PUBLIC SERVICE COMMISSION
ADVERTISEMENT NO. 06 OF 2016-17**

**RECRUITMENT TO THE POST OF ASSISTANT DIRECTOR IN GROUP-B OF
ODISHA PLANNING SERVICE CADRE UNDER PLANNING AND
CONVERGENCE DEPARTMENT.**

WEBSITE: <http://opsconline.gov.in> & <http://opsc.gov.in>

- WARNING: (1) ONLINE APPLICATION FORM WILL BE AVAILABLE TILL
02.12.2016 BY 11:59 P.M.**
- (2) LAST DATE FOR RECEIPT OF APPLICATION FEE AT
ANY SBI BRANCH IS 05.12.2016**

Applications are invited Online through the proforma Application Form to be made available on the WEBSITE (<http://opsconline.gov.in>) from **02.11.2016 to 02.12.2016 (Note: 05.12.2016 is the last date for payment of examination fee)** for recruitment to the post of Assistant Director in Group-B of Odisha Planning Service Cadre under Planning & Convergence Department in the scale of pay of Rs.9300-34800/- carrying Grade Pay of Rs.4600/- with usual Dearness and other Allowances as may be sanctioned by the Government of Odisha from time to time.

At present, only the online applications are invited from candidates for admission to the written examination for recruitment to the post of Assistant Director of Odisha Planning Service Cadre. After declaration of result of written examination the candidate who qualify in the written examination will be required to furnish the printout/hard copy of online application form, along with the photocopies of the other documents as stated under the **para-9** of this advertisement, on or before the date to be notified later, for consideration of their eligibility.

2. VACANCY POSITION: As per requisition filed by the Planning & Convergence Department, Government of Odisha, the vacancy position along with reservation thereof is given below:-

Sl. No.	Category	No. of vacancy
1.	Un-reserved	06(W-02)
2.	Scheduled Caste	02(W-01)
3.	Scheduled Tribe	03(W-01)
4.	SEBC	01
	TOTAL	12 (W-04)

P.T.O.

- NOTE** (a) The exchange of reservation between SC & ST will not be considered.
- (b) The number of vacancies to be filled up on the basis of this recruitment is subject to change by the Government without notice, depending upon administrative exigencies of public service at the discretion of the State Government.
- (c) The post is temporary, but likely to be made permanent. The appointment can be terminated on one month's notice from either side without assigning any reasons thereof;
- (d) The period of probation is 2 years u/r -18(2) of OPS Rules.

3. AGE: A candidate must have attained the age of 21(twenty one) years and must not be above the age of 32(thirty two) years as on the 1st day of January, 2016. Age relaxation shall be as per Government Rules prescribed for the purpose.

Provided further that, the maximum age limit of departmental candidate shall be relaxed up to 45 years:

The departmental candidates shall be allowed three chances in the direct recruitment Examination conducted by Odisha Public Service Commission within the maximum age limit of 45 years.

NOTE

(i) A Govt. servant, whether temporary or permanent or working on probation shall be eligible to appear at the competitive examination for recruitment to the service, if he or she is within the prescribed age limit of 45 years and is otherwise eligible to compete.

(ii) Application from candidates, who are in employment under the State Govt., must be submitted through the appointing authorities.

SAVE AS PROVIDED ABOVE, THE AGE LIMITS PRESCRIBED CAN IN NO CASE BE RELAXED.

The date of birth entered in the High School Certificate or equivalent certificate issued by the concerned Board/Council will only be accepted by the Commission.

4. MAIN JOB CHART:

Duties and responsibilities of the planning cell of the District Planning & Monitoring Unit and such other functions and responsibilities as may be assigned by Govt. in P & C Department from time to time.

5. EDUCATIONAL QUALIFICATION:

A candidate must have possessed any one of the following qualifications from a recognised University or Institution in India or abroad:

(3)

Bachelor's degree with honours and Post-Graduate degree in Economics/Applied Economics/Agricultural Economics/Commerce/Mathematics/Sociology with Statistics as one of the papers/Anthropology/Demography/Geography with Cartography or Regional planning as one of the papers/Statistics/Econometrics/Regional Planning.

6. EXAMINATION FEE:

A candidate is required to pay a non-refundable and non-adjustable fee of **Rs.300/- (Rupees three hundred) only. Candidates belonging to Scheduled Caste/Scheduled Tribe of Odisha by birth and person with Disability [whose Disability is not less than 40% (forty percent)] only are exempted from payment of this fee.**

7. PLACE OF EXAMINATION:

The Written Examination will be held at Cuttack. It may also be held at Bhubaneswar/Balasore/Berhampur/Sambalpur depending on the number of candidates from the respective zone.

The candidates are to mention their choice of Examination Zone at appropriate place in the Online Application Form.

8. METHOD OF SELECTION:

(a) The selection of candidates for recruitment to the posts shall comprise a written examination (Multiple choice question) and a Viva Voce Test. The written examination shall consist of **3 (Three) Compulsory papers and 1(one) Optional paper.** The subjects of examination and the maximum marks for each subject are appended at **Annexure- 'A'.** **The compulsory papers shall be of Degree standard and the optional papers shall be of Master's Degree standard.**

(b) The syllabi are detailed at **Annexure - I (a) to XII.**

9. CERTIFICATES AND DOCUMENTS TO BE ATTACHED:

Candidates who will qualify in the written examination are required to submit printout/hardcopy of the online application form along with the true copies of the following documents duly attested by Gazetted Officer or Notary Public or self-attested. The candidates are also required to mention on each document **"submitted by me"** and put their full signature on the same. They must not attach original certificates to their applications. Only those, who are called for the viva voce test, will be required to bring with them the original mark sheet/certificates etc. of the attested copies sent earlier, for verification, failing which he/she will not be allowed to appear at the viva voce test.

If a candidate fails to furnish any of the original documents in respect of the attested copies submitted with the application for verification on the date of the viva voce test, he/she shall not be allowed to appear at the viva voce test.

- (i) H.S.C. or equivalent certificate in support of declaration of age issued by the concerned Board/Council;
- (ii) Intermediate/+2 Examination Certificate/Equivalent examination certificate issued by the concerned Board/Council;
- (iii) Bachelor's Degree with honours Certificate issued by the concerned University;
- (iv) Master's Degree certificate in the concerned discipline in respect of educational qualification prescribed for the recruitment.
- (v) (a) Two recent passport size photographs (unsigned & unattested) which has been uploaded with online application.
(b) Certificates of conduct from the Principal/Proctor/Dean or Professor in charge of a Department of Teaching of the college or University in which he/she last studied;
- (vi) Caste Certificate by birth in support of claim as S.Cs./S.Ts./S.E.B.Cs. wherever applicable (Please see Note-1);
- (vii) Required Odia pass certificate from the Board of Secondary Education, Odisha indicating Odia as a language subject equivalent to M.E. School Standard or a certificate from the Principal/Headmaster of the School indicating that the candidate has passed Odia in M.E. Standard;
- (viii) Discharge Certificate issued by the Commanding Officer of the Unit last served, wherever applicable.
- (ix) No objection Certificate issued by the competent authority, wherever applicable
- (x) If a candidate claims to possess qualification, equivalent to the prescribed qualification, the rule/authority(with number and date) under which it is so treated, must be furnished with the printout/hard copy of the online Application form.

10. OTHER ELIGIBILITY CONDITIONS:

- (i) The candidate must be a citizen of India;
- (ii) The candidate must be of sound health, good physique and active habits and free from any organic defect or bodily infirmity.
- (iii) The candidate must be able to speak, read and write Odia and has passed; at least an examination in Odia equivalent to the Middle English School standard conducted by the Board of Secondary Education; or the Matriculation or it's equivalent examination with Oriya as medium of examination in non-language subject or as a language subject in the final examination of class VII or above; or at least a test in Oriya equivalent to M.E. School standard conducted by the Education Department.

- (iv) A candidate, who has more than one spouse living will not be eligible for appointment unless the State Government has exempted his/her case from operation of this limitation for any good and sufficient reasons;
- (v) A Government servant, whether temporary or permanent, or working on probation shall be eligible to appear at the competitive examination for recruitment to the service, if he or she is within the prescribed age limit of 45 years and is otherwise eligible to compete.

Application from candidate, who is in employment under State Govt, must be submitted through authorities; who happened to be their appointing authority for the time being.

The Departmental candidates shall be allowed three chances; in the direct recruitment examination conducted by Odisha Public Service Commission within the maximum age limit of 45 years.

- (vi) If a candidate has at any time, been debarred for a certain period/chance(s) by the Odisha Public Service Commission or other State Public Service Commission or U.P.S.C. from appearing at any examination/interview, he/she will not be eligible for such recruitment for that specified period/chance(s);
- (vii) **Only those candidates, who fulfil the requisite qualification & are within the prescribed age limit etc. by the closing date of on line application, will be considered eligible;**
- (viii) Every candidate selected for appointment shall be examined by the Medical Board. A candidate, who fails to satisfy the Medical Board, shall not be appointed.

11. OTHER CONDITIONS

(i) A candidate found guilty of seeking support for his/her candidature by offering illegal gratification or applying pressure or any person connected with the conduct of the recruitment process or found indulging in any type of Malpractice in course of the selection or otherwise, shall, in addition to rendering himself/herself liable to criminal prosecution, be disqualified not only for the recruitment for which he/she is a candidate, but also may be debarred, either permanently or for a specified period, from any recruitment or selection to be conducted by the Commission.

(ii) The provisions of the Odisha Conduct of Examination Act 1988(Odisha Act-2 of 1988) are applicable to the examination conducted by the Odisha Public Service Commission. Any violation of the provision of the above Act, and violation of the instruction to candidates (as provided in the advertisement, online application form, Admission Certificate & Answer Script etc.) will be seriously viewed and disciplinary action will be taken against the concerned candidates as deemed proper.

(iii) On line Applications submitted to the OPSC, if found to be incomplete in any respect are liable to rejection without entertaining any correspondence with the applicant on that score:

(iv) Admission to Examination /Viva Voce Test will be provisional. If on verification at any stage before or after the Viva-Voce Test, it is found that a candidate does not fulfil all the eligibility conditions, his/her candidature shall be liable to rejection. Decision of the Commission in regard to the eligibility or otherwise of a candidate shall be final;

(v) This advertisement should not be construed as binding on the Government to make appointment;

(vi) Concession meant for S.Cs., S.Ts. and S.E.B.Cs. by birth are admissible to the Schedule Castes, Schedule Tribes and Socially & Educationally Backward Classes of Odisha only.

(vii) No one will be admitted to the examination unless he/she holds a certificate of admission. The eligible candidates are required to download their admission certificate from the website of the Commission & produce the same before the Centre Supervisor for admission to the examination Centre.

(viii) All persons appointed under the Government of Odisha on or after 1st January, 2005 shall not be eligible for pension as defined under sub-rule (1) of rule- 3 of the Odisha Civil Service (Pension) Rules, 1992; but shall be covered by the defined contribution Pension Scheme in accordance with the Odisha Civil Services (Pension) Amendment Rules, 2005.

(ix) Any misrepresentation or suppression of information by the candidate in the Application, will result in cancellation of his/her candidature or penalty, as may be decided by the Commission be imposed on the candidate.

(x) Mere empanelment in the select list shall not confer any right for appointment unless the Government is satisfied after making such enquiry as may be deemed necessary that the candidate is suitable in all respects for appointment to the service;

(xi) Candidates must answer the papers in their own handwriting, in no circumstances; a candidate will be allowed the help of a scribe to write the answers for him/her.

N.B -“The candidates are required to fill-up & darken Roll No., Question Booklet Series in the Answer Sheets as well as fill-up Question Booklet Series & Serial No. and Answer Sheet Serial No in the Attendance Sheets carefully. Wrongly Filed up Answer Sheets are liable for rejection”.

12. HOW TO APPLY:-

- a. Candidate must go through this detailed Long Advertisement available in the Website of OPSC before filing up online application form.

P.T.O.

- b. Candidates must apply online through the website <http://opsconline.gov.in>. Applications received through any other mode would not be accepted and summarily be rejected.
- c. **Before filling up the online applications form, the candidates must go through the following documents available at OPSC Portal.**
- i) **Instruction to fill up online application form,**
ii) **Guideline for scanning and uploading of Photograph, Full Signature & Left Hand Thumb Impression.**
- d. Candidates are requested to upload the scanned image of latest passport size photograph along with scanned image of his/her full signature and scanned image of Left hand Thumb Impression (LTI) in the online application form. The uploaded photograph, specimen (full signature and LTI) must be clearly identifiable/visible, otherwise the application of the candidate is liable to be rejected by the Commission and no representation from the candidate will be entertained.
- e. Candidates should keep at least 2 copies of the latest passport size photograph which is uploaded to the online application form for future use.
- f. The candidates are required to take a printout of the finally submitted Online Application Form for future use and take a printout of Online Challan (Pay-in-Slip) for payment of requisite fee at any branch of State Bank of India (SBI). The Fee(s) paid shall not be refunded under any circumstances nor can the fee(s) be adjusted or held in reserve for any other examination or recruitment.
- g. On successful submission of the Online Application Form, a unique Registration ID will be displayed on the screen as well as on the top of the Application Form. Candidates are requested to note down the Unique Registration ID and use it in future correspondence.
- h. At present, only the online applications are invited from candidates for admission to the written examination, candidates who will qualify in the written test are required to send the Printout/Hard copy of the Online Application Form along with specified documents/certificates etc. as provided under para-9 of the long advertisement along with OPSC copy of Challan showing payment of examination fee, by **Registered Post/Speed Post/Courier Service** to the Special Secretary, Odisha Public Service Commission, 19, Dr. P.K. Parija Road, Cuttack-753001 so as to reach the same in OPSC on or before the prescribed date, which will be declared later on (i.e. after publication of the result of written examination.) The SC/ST/PH candidates are not required to enclose the copy of challan showing payment of fee.

P.T.O.

The envelope containing the application must be super scribed "application for the post of Assistant Director in Group-B of OPS Cadre". Application received after the prescribed date shall not be entertained. The Commission will not take any responsibility if the application is not received in time.

(i) **The candidates are advised to submit the Online Application Form well in advance without waiting for the closing date to avoid last hour rush.**

(j) Admission Certificates of the eligible candidates will be uploaded in the website of the OPSC prior to the date of written examination and V.V. test which will be published in the website of OPSC and news paper. The candidates are required to download their Admission Certificate from the website. No separate correspondence will be made on this score.

13. FACILITATION COUNTER:

During filling up the online application form the candidate may contact facilitation counter of OCAC over Telephone No.18003456770 or 155335 from 10.00 A.M. to 5.00 P.M. (Except Govt. of Odisha holidays) for any technical guidance.

Regarding difficulty in payment of fee, if any, the candidates may contact to SBI over Telephone No.: 0671-2368262 & 9437039604.

In case of any guidance/information on this advertisement and recruitment, candidates may contact the O.P.S.C. Facilitation Counter over **Telephone No. 0671-2304141/2305611 & Extn.-223 & 205** on any working day between 10.30 A.M. to 1.30 P.M. & 2.00 P.M. to 5.00 P.M.

The candidates are required to visit the Website of the Commission at <http://opsc.gov.in> for detailed information about rejection notice/the programme of the examination(s) and v.v. test etc. and also keep track of publication of various notices to the effect in the leading local daily news papers for information.

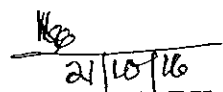
CLOSING DATES

- (a) **ON LINE APPLICATIONS SHALL BE AVAILABLE IN THE WEBSITE FROM 02.11.2016 TO 02.12.2016, TILL 11:59 P.M**
- (b) **LAST DATE FOR RECEIPT OF APPLICATION FEE AT ANY S.B.I. BRANCH IS 05.12.2016**

N.B.: THE ONLINE APPLICATION FORM IF FOUND DEFECTIVE IN ANY RESPECT ARE LIABLE TO BE SUMMARILY REJECTED.

CUTTACK

DATED: 21-10-2016


**SPECIAL SECRETARY,
ODISHA PUBLIC SERVICE COMMISSION,
CUTTACK.**

SCHEDULE

[See sub-rule (4) of rule 11]

SCHEME OF EXAMINATION, SUBJECTS AND SYLLABI**1. SCHEME OF EXAMINATION**

The competitive examination shall comprise as follows, namely:-

- (i) Written Test (Multiple choice questions) 500 marks
 (ii) Personality test or Interview 50marks

2. Subjects and Syllabi for the competitive Examination -

The written test shall consist of 3(three) compulsory papers and 1 (one) optional paper. The subjects in which the candidates shall be tested in the examination and the maximum marks for each paper is given below:-

WRITTEN TEST			
Paper (1)	Subject (2)	Duration (3)	Maximum Marks (4)
A	Compulsory Papers:		
PAPER -I	General English	2 hours	100
PAPER -II	(a) General Knowledge (Aptitude Test/Reasoning/Mathematics). (b) General Social Studies (Basic concept/knowledge on Development Economics, Geography, Sociology, Anthropology, Regional Planning and Demography).	3 hours	150
PAPER-III	Economics	2 hours	100
B	Optional Papers: Candidates shall be required to choose one subject. There shall be one paper in each subject.		
PAPER-IV	Economics/Applied Economics/Agricultural Economics/Commerce/Mathematics/ Sociology/Anthropology/Demography/ Geography/Statistics/Regional Planning/ Econometrics.	3 hours	150

3. The compulsory papers shall be of Degree standard.

4. The optional subject papers for the examination shall be of Master's Degree standard and the syllabi are detailed at Annexure - I to XII.

**SYLLABUS FOR ASSISTANT DIRECTOR IN (GROUP-B) OF
ODISHA PLANNING SERVICE CADRE**

1. Paper-I ... General English

The pattern of questions on General English will broadly include: usage & vocabulary and knowledge of Grammar.

2. Paper-II ... General Knowledge / General Studies

(a) This subject includes the following categories:

Aptitude Test, Quantitative Analysis, General Mental Ability, Basic numeracy (numbers and their relations, orders of magnitude), Data Interpretation (Charts, Graphs, Tables, Data Sufficiency, etc.), Decision making and problem solving.

(b) (1) Current Events of national and international importance

(2) History of India and Indian National Movement

(3) Indian Polity and Governance—Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues etc.

(4) General Science

(5) Knowledge on Development Economics

(6) Geography, use of maps for planning and monitoring

(7) Social Development

(8) General Anthropology

(9) Regional Planning & Demography

ANNEXURE-I (b)

3. Paper-III ... Economics(Compulsory)

- Unit-1:** Nature and scope of economics, Utility analysis: ordinal and cardinal utilities, Law of demand and Elasticity of demand: meaning and measurement, Consumer equilibrium under indifference curve analysis.
The production function: Laws of returns and returns to scale, Cost and Revenue: Average and marginal cost curves, Nature of short run and long run cost curves.
- Unit-2:** Market Equilibrium: Perfect competition, Monopoly and Monopolistic Competition.
Marginal Productivity Theories of Distribution, Wage determination, wage differential and collective bargaining, Rent: scarcity rent, differential rent and quasi-rent, Keynesian theory of interest, Innovation, risk and uncertainty theories of profit.
- Unit-3:** National Income Accounting, Concepts of GNP, GDP, NDP and National Income and measurements, Other Indicators of Development: PQLI and HDI.
Concept of Keynesian Multiplier, Balanced budget multiplier, Autonomous and Induced Investment and determination of Income.
- Unit-4:** Commercial banking: Functions and objectives: Credit creation and Investment policy commercial banks.
Central banking: Objectives and Functions, Role of Monetary policy, Credit control measures with special reference to Reserve Bank of India.
- Unit-5:** Role of fiscal policy, Sources of Public Revenue: Incidence and burden of Tax, Characteristics of a good tax system, Trends of tax revenue of the Central and the State Governments in India, Growth of Public expenditure in India, Public debt in India, Types of Budget, Components of budget and their implications.

COMMERCE

1. **Preparation of Financial Statement:** Final Accounts, Funds Flow Statement and Cash Flow Statement.
2. **Accounting issues:** Relating to Amalgamation, Absorption and Reconstruction of Companies both external and internal.
3. **Analysis of Financial Statements:** Horizontal, Vertical, Ratio Analysis, Common Size Statements, Comparative Statements, Trend Analysis.
4. **Decision making with Cost Accounting:** Cost concept, Marginal Costing, Breakeven Analysis, Budgetary Control.
5. **Planning:** Nature, Significance, Developing Planning Premises, Planning Exercise, SWOT Analysis
6. **Organizational Design:** Organizational Structure, Centralisation Vs. Decentralization of Authority, Informal Organization, Organizational Effectiveness.
7. **Business Statistics:** Data Collection Methods, Sampling Methods, Hypothesis Testing Procedure, Large Sample Test, 't' Test
8. **Financial Management:** Financial Goals. Conflict of Interest between the Stakeholders, Functions of Financial Manager, Changing Financial Environment, Computation of Cost of Equity and Cost of Debt Analysis of Operating Leverage and Financial Leverage, Capital Structure Decision and Share Holders Value Maximization, Capital Investment Decisions with time value of money.
9. **Security Analysis:** Characteristics of Security Investment, Primary and Secondary Market, Methods of Selling Securities in Primary Market and Secondary Market. Economic Analysis, Industry Analysis and Company Analysis.
10. **Marketing Practices and Marketing Strategy:** Planning and Marketing Segmentation, Marketing Research, Marketing Information System, Marketing Strategies, Rural and Agricultural Marketing, Cyber Marketing, Cooperative Marketing, Green Marketing.

SOCIOLOGY

Origin and Growth of Sociology :

Emergence of Sociology as a science contributions and seminal ideas of the founding fathers: Auguste comte, Karl Marx, Emile Dukheim, Max Weber.

Basic Elements of Social Life :

Norms and Values, Folkways and Mores Culture and Cultural Dynamics, Ethnocentrism and Cultural Relativism, Cultural Determinism, Cultural Traits. Diffusion, and Acculturation.

Kinship, Marriage, and Family: Rules of Descent, Lineage and Clan.

Rules of Mate Selection, Forms of Marriage: Polyandry and Polygyny, Sororate and Levirate Forms of Family, Functions of Family. Recent Changes in the Institutions of Marriage and Family Groups: Primary and Secondary, Community: Rural and Urban, Gemeinschaft and Gesellschaft Order and Change, Socialization and Social Control, Conformity and Deviance.

Social Stratification: Theories of Social Stratification, Closed and Open Systems of Stratification Collective Behaviour: Crowd Behaviour and Social Movements.

Religion, Polity, and Economy :

Religious beliefs and rituals, the Sacred and the Profane Fetishism, Animism and Totemism Magic, Religion and Science; Social Functions of Religion.

Power and Authority, Bureaucracy, Elitism and Democracy—Pareto, Mosca, Michels, Karl Mannheim.

The Power Structure—C. Wright Mills, Robert Lynd, Robert Dhal

Social Relations of Economic Life, Primitive, Peasant, and Modern Economic Systems, Reciprocity, Distribution, and exchange: Contributions of Bronislaw Malinowski, Marcle Mauss, Theodore Shanin, Karl Polanyi.

Economic Behaviour, Rational Action and Capitalism

Contributions of Marx, Weber, and Talcott Parsons to the study of Economy and Society

Indian Social Structure and Change

Indian Society, Unity and Diversity

The Caste System: Features and Recent Changes, Caste and Politics Great Tradition and Little Tradition.

Social Change in India: Sanskritisation, Westernisation, Secularisation, Modernisation, Globalisation and its Impact.

Status of Women

The Constitutional Provisions and the Affirmative State Actions to develop the SCs, STs, OBCs and Women Ethnicity and Cultural Identity, Civil Society and Citizenship.

Social Disorganization and Problems :

Theories of Social Disorganization, Anomie and Alienation, Family

Disorganization, Divorce, Domestic Violence

Drug Addiction, Alcoholism

Poverty and Corruption with special reference to India

Development and Displacement

Religious Fundamentalism and Communal Violence with special reference to India.

Research Methods for Social Planning :

Nature of Social Phenomena, Positivist and Constructivist Approaches

Typology of Research—Basic Research, Applied Research, Policy Research, Action Research, Evaluation Research.

Problem of Objectivity in Social Research

Information needs for planning, Sources and Types of Data, Methods of Data Collection - Quantitative, Qualitative, and Participative methods.

Ethical Issues in Social Research

Sociology of Development and Planning :

Concepts and Approaches to Development, Growth-Oriented and Equity-Oriented Development Planning, Principles of Gandhian Planning.

Multidimensionality of Development—Physical, Social, Cultural, Economic, Political, and Ecological dimensions.

Key Actors in Development—The State, the Market, and the Civil Society Organisations

History of Five-Year Plans, Decentralized Planning and Local Development—concept, Importance and Approaches Conventional, technical top-down planning Vs. Participatory bottom-up planning Institutional Framework for Integrated Development Planning, Role of PRIs, NGOs and Community Institutions Convergence of Resources and Services, Methodology for Micro Planning.

Rural Development Planning :

Objectives, Perspectives, and Approaches, Service Delivery Vs. Empowerment oriented approaches, basic Issues of Poverty and Sustainable Livelihoods, Natural Resources Management, Entrepreneurship development, Participation, Grass roots Democracy and Governance, Community Ownership and management, Public-Private Partnership for Assets-Based Community Development, Role of Social Capital, Community-Based organizations, Self-Help Groups, Cooperatives, and their Federations, their roles, coordination and linkages, Success stories and Best Practices, Major anti-poverty programmes of the Government.

MATHEMATICS

1. **Real Analysis:** Sequences and series of functions, uniform convergence, power series, Fourier series, Functions of several variables, maxima, minima, multiple integrals, line, surface and volume integrals, Green's theorem, Gauss and Stoke's theorem. Metric spaces, completeness, Weierstrass approximation theorem, compactness, Lebesgue measure, measurable functions, Lebesgue integrals, Fatou's lemma, Dominated convergence theorem.
2. **Complex Analysis:** Analytic functions, Conformal mappings, Bilinear transformations, Complex integration, Cauchy's integral formula, Cauchy's theorem, Liouville's theorem, Maximum modulus principle, Taylor and Laurent series, Residue theorem and its application for evaluating real integrals.
3. **Linear Algebra:** Finite dimensional Vector spaces, Linear transformations and their matrix representations, Rank, System of linear equations, Eigen values and eigen vectors, minimal polynomial, Caley Hamilton theorem, Diagonalization, Hermitian, Skew-Hermitian matrices, Finite dimensional inner product spaces, Self-adjoint and Normal operators, Quadratic forms, Reduction of quadratic forms.
4. **Algebra:** Groups, Normal subgroups and homomorphism theorems, Automorphisms, Symmetric groups, Alternating groups, Rings, Maximal Ideals, Prime Ideals, Integral domains, Euclidean domains, Principal Ideal domains, Unique Factorization domains, Fields, Sylow's theorems and their applications.
5. **Functional Analysis:** Banach spaces, Hahn-Banach theorem, Open mapping & Closed graph theorems, Principle of Uniform Boundedness, Boundedness & continuity of Linear transformations, Dual spaces, Embedding in the second dual, Hilbert spaces, orthonormal sets, Bessel's inequality, Parseval's identity, Riesz Representation theorem, Self-adjoint, Unitary & Normal linear operators on Hilbert spaces.
6. **Ordinary Differential Equations:** First order ordinary differential equations, Existence and uniqueness theorems, Linear ordinary differential equations of higher order with constant coefficients, Linear second order ordinary differential equations with variable coefficients, Methods of Laplace transforms for solving ordinary differential equations, Series solutions, Legendre and Bessel functions and their orthogonality, Sturm Liouville system, Green's functions.

7. **Partial Differential Equations:** Linear and quasilinear first order partial differential equations (PDE), method of characteristics, Second order linear equations in two variables & their classification, Solutions of Laplace, Wave, Heat equations in two variables, Fourier series and transform methods of solutions of the above equations and their applications to physical problems.
8. **Numerical Analysis:** Numerical solution of algebraic & transcendental equations, bisection, secant method, Newton-Raphson method, Fixed point iteration, Interpolation: Lagrange, Newton, Hermite interpolations, Numerical differentiation and integration, Trapezoidal & Simpson rules, Quadrature rules, Numerical solution of system of linear equations, direct and iterative methods, Numerical solutions of ordinary differential equations, initial value problems, Taylor series methods, Runge-Kutta methods.
9. **Mathematical Programming:** Linear programming problem & its formulation, Graphical method, Basic feasible solution, Simplex method, Big-M method & Two phase methods, Infeasible & unbounded LPP, Dual problem & Duality theorems, Dual Simplex method, sensitivity analysis & Parametric linear programming, Kuhn-Tucker conditions of optimality, Quadratic programming, Duality in quadratic programming, self duality, integer programming, transportation & assignment problems.

ANTHROPOLOGY

- Unit-I:** Meaning and Scope of Anthropology; Major areas of Anthropology, their scope and relevance: Social and cultural anthropology; Biological anthropology; Archaeological anthropology; Linguistic anthropology, Medical anthropology, Ecological anthropology, Palaeoanthropology, Forensic anthropology, Visual anthropology, Cognitive anthropology, Political anthropology, Population anthropology, Economic anthropology, Applied and action anthropology, Urban anthropology, Molecular anthropology. Relationship of anthropology with other branches of social and biological sciences; Natural Science ideas in anthropology, Humanistic Tradition in anthropology, Anthropology and History.
- Unit-II:** Organic Evolution: Lamarckism, Darwinism, Synthetic theory, Out of Africa vrs Multi-regional theory of human origins, Paleontological evidences of Human evolution: Australopithecinae, Homo-erectus, Homo-neandertalensis, Homo-sapiens, Interdependence between biological and cultural evolution, Erect posture and bi-pedalism, Concept of Race, Race and Racism, Criteria for Racial Classifications; Distribution and Characteristics of Major races of the world: Caucasoid; Negroid; Mongoloid; Racial classification of Indian Population (Risley's, Guha's Sarkar's); Role of heredity and environment in race formation.
- Unit-III:** Geological Time Scale: An outline of the Pleistocene epoch; Glacial and Interglacial periods of Europe and India, meaning and scope of prehistoric anthropology, Relative and absolute dating, Prehistoric Technologies and Tool types of Early man: Manufacturing techniques of major Palaeolithic, Mesolithic and Neolithic tool types, Evolution of Indian culture and civilisation: Palaeolithic, Mesolithic, Neolithic, Protohistoric cultures, Ethno-archaeology in India.
- Unit-IV:** Culture and society, culture and personality, patterns of culture, features of culture, culture trait and culture complex, Culture Change: Innovation, Invention, Diffusion, Acculturation, Assimilation, Attenuation, Integration Social Institutions: marriage: types, functions and regulation; family: types. Impact of urbanisation and industrialisation on family, universality of family; Kinship: principles of descent, kinship terminology, usages, Alliance Theory;

Clan and Lineage: Types and functions; Economic organisation: Primitive and peasant economy; Reciprocity and Redistribution; Usufruct Rights; Barter; Subsistence Economy; Market Economy; Political organisation: Concept Band; Stateless Society; Segmentary Society; Primitive Government: Forms and Functions; Social Control: Forms and Agencies; Religion, Magic and Science, Theories of primitive region.

Unit-V: Human Genetics: Scope and Developments; Mendel's Law of Inheritance and its application to Man; Hardy-Weinberg Law and its application in human population, Patterns of inheritance of Autosomal (dominant, recessive and co-dominant) and sex-linked traits. Methods of studying human heredity: Twin method, Pedigree method and Sib-pair method; linkage and crossing over; Polygenic Inheritance in Man, Chromosomal abnormality in Man, Blood Groups; HLA; Structure and function of DNA, RNA, Recombinant DNA technology; Genetic variation and genetic disorders in human population; Application areas of biological anthropology and human genetics for the service of mankind. Human Growth and development: Stages and factors, Ageing and senescence.

Unit-VI: Research methods in anthropology: Inductive and deductive methods, field work tradition in anthropology, Comparative methods in anthropology, Scientific methods in anthropology; Synchronic and Diachronic Approaches in anthropology; Emic and Etic Approaches; Types of Research design, Techniques of data collection: Observation, interview, questionnaire, case study, schedule. Analysis, interpretation of data, Types of Sampling. Socio-gram, projective technique, Monitoring and Evaluation; PRA and RRA Techniques.

Unit-VII: Salient features of Indian society and culture, Unity and diversity, Approaches to the study of Indian society and culture, Village studies in India, Jajmani system, Caste system in India, Dominant caste, Little Tradition and Great tradition; Universalization and Parochialization; Urban Communities: Structure and Types; Cultural Role and Functions of Cities: Folk-Urban and Tribe-Caste Contrast and Continuum, Social and Cultural Change in Modern India Sanskritization, Westernization, Urbanization and Industrialization, Modernization, Peasantization, Retribalization; Social, Cultural and Psychological Barriers and Stimulants to Change.

- Unit-VIII:** Weaker Sections in India-Scheduled Tribes, Scheduled Castes, Denotified Tribes, Nomadic and Semi-Nomadic Tribes and Castes. Their population, Distribution and Classification; Religious Minorities; Problem of Minorities, Tribes and Other Backward Castes (SEBCs); Constitutional Provisions and Safeguard Measures for SCs and STs; Unresolved issues and Problems of Development of STs (Forests, Shifting Cultivation, Land Alienation, Housing, Health and Sanitation/Nutrition, Indebtedness, Bonded Labour and Child Labour, Education and Gender Issues; Problems of Displacement due to Development Schemes, Tribal Rehabilitation), Development Strategies; Policies, Plans and Programmes for Tribal Development, Role of Anthropology in tribal and rural development. Contribution of Anthropology to the understanding of regionalism, ethnic and political movement Development Planning in India, Poverty in India, Forest and Tribal's, Forest Policy in India.
- Unit-IX:** Tribal Movements in India; Mandal Commission; Dhebar Commission, Bhuria Committee Report; Regionalism and Ethnicity; New Panchayat Raj System: PESA and Grama Sabha; Role of Voluntary Organisations in Development, Population Policy in India, Population problems in India; Problems of Food security in India, Problems of Health and Nutrition in Indian population. Problems of environment degradation and pollution in India, Environment and sustainable development. Empowerment of Women in India: Issues and challenges; Environment policy in India.
- Unit-X:** Theoretical Issues in Anthropology: Evolutionism, Diffusionism, Neo-evolutionism, Functionalism, Structure functionalism, Structuralism, Cultural materialism, Social Biology, Post- modernism, Cultural Ecology, Demographic theories: Biological and socio-cultural; Anthropology and the Concept of Race;

GEOGRAPHY**UNIT-I (Physical Geography) :**

Seismic Study and Constitution of the Earth's Interior, Continental Drift Theory and Plate Tectonics, Concept of Geosynclines and Theories of mountain building and Isostasy. Forms of Valley Development: Contribution of W.M. Davis, W. Penck & L.C. King, Quantitative analysis of Erosional Landforms: Laws of Drainage Morphometry, Insolation and Heat Budget, Monsoon and Jet Stream, Atmospheric Disturbances: Tropical and Temperate Cyclones, Surface Configuration of Ocean Floor, Currents of Atlantic, Pacific and Indian Oceans.

UNIT-II (Human and Economic Geography) :

Culture and Geography: Cultural realms of the World, Rural Settlement: Factors affecting settlement, Patterns of Rural settlement, Urban Settlement: Towns and Cities, The rank-size distribution of cities, The shape and structure of towns, Central Place Theories, The process of World Urbanization, Resource Utilization and Economic Development, Principles of Natural Resource Conservation. The Role of Transportation and Communication in Economic Development.

UNIT-III (Cartography and Statistics) :

Earth Map Relations: Spherical, Ellipsoidal and Geoidal Earth, Geographical Coordinates, Properties of Graticule, Basic Characteristics of Maps, Map Types, Map Forms, mapping Constraints, Cartographic data Analysis: Grouping Techniques and Mapping Methods, The Cartographic Communication Process, Cartographic Parameters, The Fundamental Properties of a Map projection, Measures of Dispersion and Variability, Correlation and Regression Analysis in Geography.

UNIT-IV (Environmental Geography) :

Cultural Changes and Sustainability (Agricultural Revolution, Industrial Revolution and Information/ Globalization Revolution), Poverty and Environment: Their Status, Trends and Environmental Consequences of Poverty, The Concept of Disaster and Disaster Management, The Concept of Disaster Management Cycle- Post Disaster Review Prevention, Mitigation, Preparedness, Disaster Impact, Response, Recovery, Development, **Environmental Impact Assessment:** Concept, Process and Evaluation Methods, Goals and Principles of EIA, Effects of EIA on Projects, Perennial Problems in EIA Implementation, **Social Impact Assessment:** Definition, The Steps and Guiding Principles, Methods for Preliminary and Main Phase in SIA, Problems Confronting SIA, Fundamentals Issues in SIA. Sustainable Development--Concept, Definition and Goal, Dimensions of Sustainable Development--Programme of Action for Sustainable Development in Agenda-21.

UNIT-V (Geographic Thought) :

Geographical Concepts in Ancient Period—Contributions by Indians, Greeks, Romans and Chinese, Medieval Period: Arabian Geography, Renaissance in Geography, Modern Period in Geography: Contributions of Humboldt, Ritter and Ratzel, Dualism and Dichotomy in Geography, Concept of Crude Determinism, Environmentalism, Neo-Determinism, Scientific Determinism, Stop and Go Determinism, Pragmatic Possibilism, The Quantitative and Theoretical Revolution in Geography, Paradigms—Testing of Hypothesis, Model Building, Diffusion of Innovation, Geography—A new Synthesis—Empirical Philosophy of Regional Geography, Scientific Explanations in Geography, Trends Towards a New Synthesis.

REGIONAL PLANNING**UNIT-I (Fundamental Concepts) :**

Concepts and Rationale of Planning, Concept of Region and Regional Planning, Planning, Planner and Plans. Planning Policy Making and Implementation. The History of Planning in the Third World, The Planning Agencies. The Professional Planner, The Planner in the Society.

UNIT-II (Some Theoretical Considerations) :

Economic Growth Theories: Rostow, Dualism and Theories of Modernization, dependency models, Regional Development Theories: Hirshman, Myrdal, and Perroux. Friedman, Spatial Structure of Regions: Central Place Theory (Christaller, Losch and Galpin), Growth Pole Theory.

UNIT-III (Planning Procedures and Techniques) :

Methods and techniques of Regionalization, Techniques in Preparation of Regional Plans, Choosing Planning Techniques in the Developing Countries, Appraisal Techniques, Implementation, Monitoring and Evaluation, Forecasting, modelling and plan design, The System of Rural Centres: Functions of Rural Centres and Procedures for Drawing Up a Hierarchical Rural Centre Plan.

UNIT-IV (The Operational and Spatial Level of Planning Activity) :

Operational Level: Project Planning, Sectoral Planning, Integrated Area Planning, Comprehensive National Planning. Spatial Level: The Concept Decentralization and decentralization, Decentralization in Planning, The Top-Down and Bottom Up approach, The choice of Spatial planning levels.

UNIT-V (Regional Planning in India) :

The efforts of Regional and Rural Development Planning in India, Spatial Structure Administrative Set-up for Regional and Rural Development Planning in India, Regional Imbalance and Regional-Disparity in India, Multi-Level and Decentralized Planning in India, Development of Backward Areas, Planning for Tribal Development, Multipurpose River Basin Planning.

STATISTICS

1. Statistics and its importance in planning. Descriptive statistics: Measure of central tendency, dispersion, moments, skewness and kurtosis. Linear correlation and regression analysis with applications. Multiple correlation and regression analysis. Measures of association of attributes. Time series analysis.
2. Definition and rules of probability, Marginal, conditional and joint probability, Bayes theorem and its applications, Random variables: Discrete and continuous. Mathematical (expectations. Moment generating functions, Convergence theorems, Law of large numbers, Central limit theorem. Probability distributions: Binomial, Poisson, Geometric, Normal Uniform, Exponential, Gamma, Beta distribution.
3. Parametric and non-parametric inference: sampling from normal population parameter and estimator. Properties of a good estimator: unbiasedness, consistency, efficiency and sufficiency. Point estimation: Cramer-Rao inequality, MVU Estimator, maximum likelihood method of estimation and its properties, interval estimation, Test of hypotheses: Null and alternative hypothesis, type I and II errors, Neyman-Pearson lemma, test of significance based on 'Z', 'T', 'F' and Chi-square. Non-parametric test: Sign test, signed rank test, median test, run test, Mann-Whitney U test.
4. Sampling from finite populations: population, sample, sampling units/ sampling. Census sampling and non-sampling errors, probability and non-probability sampling, sampling designs: simple random sampling WOR and WR. Method of drawing simple random sample. Determination of sample size. Stratified sampling, systematic sampling. Cluster sampling, multi-stage sampling. Estimation of population mean / total and standard error of estimates. Use of auxiliary information in sample surveys – ratio, regression and product method of estimation. Comparison of efficiency, PPS method of estimation.
5. Design and analysis of experiments, analysis of variance models – fixed and random. Analyse of one way and two way classified data, basic principles of designs, Experimental designs—CRD, RBD and Latin square designs and their analysis. Missing plot technique, factorial experiments: analysis with and without confounding.
6. Optimization techniques: linear programming problems; Graphical and simplex method of solutions, duality, transportation and assignment problems multivariate analysis: bivariate normal distribution and Multivariate normal distribution and their properties, test of significance based on multivariate normal population, Discriminant analysis.

AGRICULTURAL ECONOMICS

1. **Micro-Economics :**
Theory of Consumer Behaviour—utility approach, income effect substitution effect, indifference curve approach. Consumer surplus, derivation of demand curve, elasticity of demand, production function, theory of costs, supply, producer's surplus. Market equilibrium, perfect competition, general equilibrium theory.
2. **Macro-Economics and Policy :**
Macro-Economics-Nature and Scope, Keynesian concepts, national income—concepts and measurement, classical theory of employment, concept of multiplier and accelerator, inflation monetary policy and fiscal policy.
3. **Agricultural Production Economics :**
Nature scope and significance of agricultural production economics assumption of production functions, estimation of commonly used production function, factor-product, factor-factor and product production relationship, cost function and cost curves, return to scale, factor share, elasticity of production.
4. **Agricultural Finance :**
Role and importance of agricultural finance, financial institutions and credit flow to priority sector. Agricultural lending – direct and indirect financing. The concept of 3Rs, 3Cs and 7Ps, of credit, estimation of technical feasibility. Economic viability repaying capacity and risk bearing ability of the borrowers, balance sheet, cash flow statement and profit and loss, account, ration analysis, crop insurance programme.
5. **Natural Resource and Environmental Economics :**
Concept, classification and problems of Natural resource economics property rights, public goods, common property and open access resource management – collective action, sources and types of pollution, economics of pollution control, environmental regulation and sustainable development.
6. **Agricultural Marketing and Price Analysis :**
Characteristics of agricultural products and production problems in agricultural marketing, marketed and marketable surplus, marketing efficiency, market integration, cooperative marketing, supply chain, management agricultural price policy and economic development commodity future markets, contract farming, Role of Govt. promoting / commodity trading.

7. Commodity Features Trading :

Evolution of Commodity markets—spot, forward and future markets, risk in commodity trading, need for risk management measures, FDI in commodity markets, hedging and speculation, speculative mechanism in commodity futures. Dumping and anti dumping, WTO.

8. Farm Management :

Economic principles applied to farm management—Law of diminishing marginal return, law of equi-marginal return, law of comparative advantage, opportunity cost principle. Farm planning and budgeting, partial budgeting, complete budgeting, enterprise budgeting and cash-flow budgeting, farm records, benefits of farm records, farm efficiency measures.

9. Project Management :

Project approach in financing agricultural, financial economic and environmental appraisal of investment projects, identification, preparation, appraisal, financing and implementation of projects. Project appraisal techniques, B-C ratio, NPV and IRR.

10. Agricultural Development and Policies :

Economic development and economic growth, indicators and measurement of economic development. Theories of economic growth, role of agriculture in economic / rural development, theories of agricultural development, population and food policy, poverty, inequality, models of agricultural development.

ECONOMICS

Measurement of National income, Difficulties in measurement, GDP gap, Poverty, inequality, Lorenz curve—Gini Co-efficient, Consumer Price Index.

Monopoly, dumping, sweezy model, Baumols' model, bilateral monopoly, pareto optimality criteria, theory of second best.

Theory of income and employment, classical and Keynesian, unemployment— causes and remedies, consumption function, savings function, investment function, MEC, AD/AS framework, theory of multiplier, accelerator principle.

Role and functions of money, spectrum of money, money multiplier, banking systems, functions of commercial banks, function of Central Bank, money market and capital market, IS LM framework.

Business cycle, inflations, causes and consequences, Phillips curve, fiscal policy and monetary policy, comparative advantage theory, balance of payments, foreign exchange determination, gains from trade.

APPLIED ECONOMICS

Production function: homogeneous and non-homogeneous, short run production function.
Cost function: long run and short run, producer's equilibrium, Cobb Douglas production function, CES function, returns to scale.

Dumping, cournot model, stackelberg model, Baumols model, limit pricing, game theory, prisoners dilemma, nash equilibrium, linear programming, simplex method.

Harrod-domar model, solow model, Robiosons model, Lucas model, Kalecki model, Multiplier and accelerator model of trade cycle.

Business cycle, Kaldor model, inflations, Phillips curve, balance of payments, foreign exchange determination, gains from trade.

Pareto optihiality criteria, Kaldor hicks compensation principle, theory of second best, arrows impossibility theorem, Richardian and Marxian theory of distribution.

DEMOGRAPHY**1. Sources of Demographic Data:**

Census, registration of vital events, national sample survey and demographic surveys, socio-economic surveys, family and health surveys.

2. Methods of Demographic Analysis:

Rates, ratios, diagrams, percentages, projection, tabulation, cross tabulation, bivariate analysis and multivariate analysis.

3. Fertility:

Meaning and scope, measurements of fertility (Birth rate, general fertility rate, age specific fertility rate, total fertility rate, gross reproduction rate, net reproduction rate), factors affecting fertility, fertility trends of Odisha and India since 1951.

4. Mortality:

Meaning and scope, measurements of mortality (Death rate, age specific death rate, infant death rate, child death rate, maternal death rate), factors affecting mortality, mortality trends of Odisha and India since 1951.

5. Composition:

Population growth, density, age-sex composition (pyramid), sex ratio, child age (child population), reproductive age (reproductive population), working age (economic active population), aged population, dependency ratio.

6. Migration:

Meaning and scope, type of migration (internal and international), nature of migration (temporary, permanent), net migration, factors affecting migration, trends of migration (rural-urban, rural-rural, urban-urban, urban-rural).

7. Reproductive Health:

Meaning and scope, reproductive health situation in Odisha, reproductive morbidity (during pregnancy, child birth, neo-natal care), HIV and AIDS, causes and preventions of HIV, AIDS.

8. Human Development:

Meaning of human development, Human Development Index (HDI), Population Below Poverty Line (PBPL), Sustainable development, inter-relation between population growth and development (Education, Economy and Health).

9. Environment:

Meaning and scope, inter-relationship of population and environment. Types and causes of environmental pollution (Air, land, water, noise), deforestation and global warming, coping mechanism.

10. Theories and Policies:

Malthusian theory of growth, Malthusian theory of surplus, spencers bio-social theory, optimum theory of population. Theory of demographic transition, population plans and programmes in India. National population policy, millennium development goal.