

**OFFICE OF THE COLLECTOR & DISTRICT MAGISTRATE, JAJPUR**  
(ST & SC DEV. SECTION)  
**\*ADVERTISEMENT\***

No. 312 / SSD. Dt. 07.01.22

Applications in prescribed form are invited from the deserving candidates from native of Odisha for engagement as **Initial Appointee** through **WRITTEN EXAMINATION** in the following categories of posts in ST & SC Development Department Educational institutions run in Jajpur district . Preference will be given to the candidates belonging to the own District.

Sl. No.	Name of the Post	Category wise position.								
		ST	ST(W)	SC	SC(W)	SEBC	SEBC(W)	UR	UR(W)	Total
1	2	3	4	5	6	7	8	9	10	11
1	BA. BED	1	0	1	0	0	0	0	0	2
2	BSc, BEd. (PCM)	0	0	0	0	0	0	0	0	0
3	BSc, BEd. (CBZ)	1	0	1	0	0	0	0	0	2
4	Hindi	1	0	1	0	1	0	1	0	4
5	Sanskrit	1	0	0	0	0	0	0	0	1
6	ISC, CT	1	0	0	0	1	0	1	1	4
7	PET	1	0	0	0	1	0	1	0	3

**1. GENERAL ELIGIBILITY:**

- i. He / She must be a citizen of India.
- ii. He / She must be able to speak, read and write Odia and must have passed the High School Certificate Examination or equivalent with Odia as principal subject or passed Odia test equivalent to M.E. School standard conducted by the School & Mass Education Department of Odisha.
- iii. Candidates having Bachelor Degree in Arts / Commerce / Science with Bachelor Degree in Education from any University of the State or its equivalency are eligible to apply. Regarding Universities / Institutions of outside State, the candidates shall only be eligible for engagement after verification of genuineness of their educational / training qualification from concerned University / Institution from which they have obtained the Degree.
- iv. Such outside University / Institution pass out candidates shall have to produce the authenticated proof of equivalency and NCTE recognition in support of their qualification at the time of verification failing which their case will not be considered.
- v. He / She must not have more than one spouse living.
- vi. He/she must have passed OTET examination conducted by Board of Secondary Education (BSE), Odisha, Cuttack for the post of Elementary Teachers
- vii. He/she must have passed OSSTET examination conducted by Board of Secondary Education (BSE), Odisha, Cuttack for the post of TGTs.
- viii. Candidate must have registered himself/herself in Employment Exchange.

2. **Age. :-**

He / She must be below 32 Yrs. and above 21 Yrs. of age as on 30-November-2021 provided that maximum age limit shall be relaxed by 5 Years in case of candidates belonging to the ST, SC, SEBC, OBC & Woman categories. Age shall be relaxed for Ex-Serviceman as per Odisha Ex-Service Man Rule – 1989. In case of Physically Handicapped candidates the upper age shall be relaxed by 10 years.

3. **Educational Qualification. :**

Post	MINIMUM ACADEMIC AND PROFESSIONAL QUALIFICATION
TGT Arts	<p>1. Bachelor Degree in Arts/Commerce or a Shastri(Sanskrit)Degree from a recognized university with two school subjects (school subjects as defined in the proviso here under) from a recognized university having 50% marks in aggregate(45% for SC/ST/PWD/SEBC candidates) and Bachelor in Education (B. Ed)/3-year integrated B.Ed.-M.Ed.from a NCTE recognized Institution</p> <p style="text-align: center;">OR</p> <p>2. Four-year Integrated B.A. B.Ed. from a NCTE recognized Institution with two school subjects (school subjects as defined in the proviso here under) having 50% marks in aggregate(45%for SC/ST/PWD/SEBC candidates)</p> <p>Provided that: In any case the candidate must have passed the Bachelor Degree with any two school subjects offered as Pass/Hons/Elective/optional/Compulsory subject out of the following:</p> <p>English, Odia, Hindi, Sanskrit, History, Geography, Economics, Political Science, Indian Economy, Landmarks in Indian History, Indian Geography, Indian Polity</p>
TGT Science (PCM) &TGT Science (CBZ)	<p>1. Bachelor Degree in Science/B.Tech/B.E. with two school subjects (school subjects as defined in the proviso here under) from a recognized university having 50% marks in aggregate(45% for SC/ST/PWD/SEBC candidates) and Bachelor in Education (B. Ed)/3-year integrated B.Ed.-M.Ed. from a NCTE recognized Institution</p> <p style="text-align: center;">OR</p> <p>2. Four-year Integrated B. Sc. B.Ed. from a NCTE recognized Institution with two school subjects (school subjects as defined in the proviso here under) having 50% marks in aggregate(45% for SC/ST/PWD/SEBC candidates)</p> <p>Provided that: In any case the candidate must have passed the Bachelor Degree with any two school subjects offered as Pass/Hons/Elective/optional subject out of the following:</p> <p>a) For Trained Graduate Teacher-Science(PCM): Physics, Chemistry, Mathematics, b) For Trained Graduate Teacher- Science(CBZ): Chemistry, Botany, Zoology, Biology, Biotechnology</p>

Classical Teacher (Sanskrit)	<p>1. Bachelor's Degree with Sanskrit as one of the electives /optional/Honours /pass subjects from a recognized university with minimum 50% marks in aggregate(45% for SC/ST/PWD/SEBC candidates) and Shiksha Shastri (Sanskrit) a course prescribed by NCTE, from a recognized University/Institution</p> <p style="text-align: center;">OR</p> <p>2. Shastri (Sanskrit) with minimum 50% marks in aggregate (45% for SC/ST/PWD/SEBC candidates) from a recognized university and Shiksha Shastri (Sanskrit), a course prescribed by NCTE, from a recognized University institution.</p>
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Hindi Teacher	<p>1. Bachelor's degree from a recognized University with Hindi as one of the electives /Optional/Pass/ Honours subject with minimum 50% marks in aggregate (45% for SC/ST/PWD/SEBC candidates)</p> <p style="text-align: center;">and</p> <p style="text-align: center;">one of the following Training qualifications</p> <p>a) Hindi Shikshan Parangat from Kendriya Hindi Sansthan, Agra</p> <p>b) B.H.Ed., a course prescribed by NCTE, from a recognized University/ Institution</p> <p>c) B.Ed in Hindi, a course prescribed by NCTE, from Dakshin Bharat Hindi Prachar Sabha, Madras.</p> <p style="text-align: center;">OR</p> <p>2. Bachelor's degree from a recognized University with minimum 50% marks in aggregate (45% for SC/ST/PWD /SEBC candidates) with one of the following qualifications;</p> <p>a) RastrabhasaRatna from RastrabhasaPracharSamiti, Wardha.</p> <p>b) Shastri (Hindi) from Orissa Rastrabhasa Parishad, Puri.</p> <p>c) Snataka (Acquired by June- 2005, the date up to which the temporary recognition has been granted) from Hindi Shiksha Samiti, Orissa, Cuttack</p> <p style="text-align: center;">and</p> <p style="text-align: center;">one of the following Training qualifications:</p> <p>a) Hindi Shikshan Parangat from Kendriya Hindi Sansthan, Agra</p> <p>b) B.H.Ed, a course prescribed by NCTE, from a recognized University/Institution</p> <p>c) B.Ed in Hindi, a course prescribed by NCTE, from Daksh in Bharat Hindi Prachar Sabha, Madras.</p>
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Physical Education Teacher	<p>+2 or its equivalent examination from a recognized institution with minimum 50% marks in aggregate (45% or SC/ST/PH/SEBC candidates)</p> <p>And C.P.Ed./B.P.Ed./M.P.Ed from a recognized Board/University.</p>
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I.Sc., CT	He / She must have passed C.T. / D.I.E.T. with Intermediate / + 2 Science from a recognized Council with OTET.
I.A., CT	She must have passed C.T. / D.I.E.T. with Intermediate / + 2 Arts from a recognized Council with OTET.

**(For the post of BA,B.Ed. / B.Sc.B.Ed. / Sanskrit / Hindi / PET the candidates must have passed OSSTET and for the post of IA CT and ISC CT candidates must have passed OTET conducted by BSE, Odisha within the prescribed timeline)**

#### 4. **Reservation.** :

The Odisha Reservation of Vacancies (In posts and service for ST & SC) Act. 1975 and the Odisha Reservation of Posts & Services for Socially & Educationally Backward Classes Act.2008 and the rules made there under and such other principles of the post based reservation as prescribed by the State Government on the land mark judgement of Hon'ble High Court / Supreme Court from time to time shall be followed.

One third of the notified vacancies will be reserved for Woman Candidates of respective categories. Similarly 3% will be reserved for Physically Handicapped as per the provision of Section – 33 of the “persons with disabilities” (Equal Opportunities, Protection of Rights and Full Participation Act). 1% for eminent sports personnel (having represented stated and country and State in Govt. recognised sporting events) and 3% for Ex – Serviceman.

Instructions contained in SSPED Deptt. Resolution No. 7140 / Dtd. 05.09.2017 shall be adhered to for (PwDs). Candidates.

The PH candidates shall be referred to the Appellate Medical Board constituted by W & CD Department vide Notification No. - 16430 / WCD / Dt. 06.09.2011 for Re-examination. Engagement order shall be issued if such candidates found genuine and eligible by the Board.

#### 5. **Service Condition, Emoluments & Remuneration :**

The emoluments and service conditions shall be guided as per the provisions of G.A. Deptt. Notification No. – 32010 / Gen. Dt. 12.11.2013 & No. – 19569 / Gen Dt. 12.09.2017 & No. – 19574 / Gen Dt. 12.09.2017. The Contractual Teaching staff will be paid following consolidated remuneration as per Govt. in Finance Deptt. Letter No. - 28090 / F Dt. 22.09.2017.

Sl. No.	Category of Posts	Consolidated Remuneration per month
1.	Trained Graduate Teachers (Science / Arts)	25,300 /-
2.	Hindi / Sanskrit Teacher	25,300 /-
3.	I.A. / I.Sc., CT	15,000 /-
4.	P.E.T.	13,800 /-

#### 6. **Selection Procedure.** :

All selection of teaching staffs shall be done through written examination (Multiple Choice Question) comprising of 100 marks **based on OMR**. Eligible candidates who meet all the requisite qualification and criteria shall be shortlisted for appearing in the written examination. The Selection will be made by the District Selection Committee headed by the District Collector, Jajpur with Inspector of Schools (SSD) and District Welfare Officer (Member Convenor) as members of the Committee as per Notification No. – S.R.O. No. - 1169 / 93 / Dt. 13.12.1993 of ST & SC Development Department. The Selection Committee shall prepare the list of suitable candidates on the basis of the results of written examination. The names of the candidates shall be arranged according to the marks secured in the written examination. Minimum cut-off mark for UR category is 35 and for Reserved Category is 30 out of the total 100 marks. Preference will be given to the candidates belonging to the same district.

- (i) In case of two or more candidates secured the same marks the candidate older in age will be placed above in the rank.
- (ii) If there is further tie, the higher percentage of marks secured in training qualification will be taken in to account.
- (iii) Higher Education will not be given any weightage during preparation of merit list in all categories.

**7. ENCLOSURES TO BE ATTACHED WITH THE APPLICATION FORM :-**

- (i) Self Attested photo copies of certificates showing Academic Qualifications with Mark sheets.
- (ii) Self Attested photo copy of NCTE / RCI approval to be attached in case of candidates who have passed B.Ed. / CT from outside Odisha.
- (iii) Self Attested photo copies of OSSTET & OTET pass certificate.
- (iv) Self Attested photo copy of Caste Certificate issued by the concerned Tahasildar. (in case of ST / SC / SEBC / OBC candidates.) In case of SEBC candidates the caste certificate should have been issued within one year.
- (v) Self Attested photo copy of Resident Certificate issued by the concerned Tahasildar. The Residential Certificate should have been issued by the competent authority within one year.
- (vi) Self Attested photo copy of valid Employment Registration Card.
- (vii) Self Attested photo copy of certificates for Physically Handicapped Persons / Ex-servicemen and sports person certificate.
- (viii) 3 nos. of self-attested recent passport size colour photographs with white background signed by the candidate in the front side out of which one has to pasted in the appropriate space provided in the application form and other two should be firmly tagged with the application form.

**8. Mode of application. :**

Complete application in all respect along with above enclosures should be sent in a closed cover addressed to the District Welfare Officer, Jajpur by Registered post / Speed Post only so as to reach on or before **28.01.2022** up to **5.00 PM**. Applications received after due date shall not be considered. Applications received through Courier Service / By Hand shall not be accepted. Incomplete applications shall not be considered.

9. Category & name of the post applied for and this office **Notification No. & Date** should be superscripted in bold capital letters on the cover containing the application form.
10. No TA / DA will be paid to the candidates for their travel in connection with the recruitment and any time in course of verification of original certificates or interview.
11. The Collector, Jajpur reserves the right for cancellation / modification of this advertisement and increase or decrease of posts without assigning any reason thereof.

Memo No. 313 / SSD Dt. 07.02.22

**COLLECTOR, JAJPUR**

Copy forwarded to the District Informatics Officers, NIC, Jajpur for kind information and necessary action. He is requested to display the Advertisement in the District Website for wide publications.

Copy submitted to the Sub Collector, Jajpur for kind information and necessary action. They are requested to display the Advertisement in their Office Notice Board for wide publications.

Copy forwarded to the Employment Office, Jajpur for kind information and necessary action. He is requested to display the Advertisement in his Office Notice Board for wide publications.

Copy submitted to all Block Development Officers of Jajpur district for kind information and necessary action. They are requested to display the Advertisement in their Office Notice Board for wide publications.

Copy to Notice Board of Collectorate, Jajpur / District Welfare Office, Jajpur.

District Welfare Officer  
Jajpur

**APPLICATION FORM.**

Affix passport  
Size

To

The District Welfare Officer,  
\_\_\_\_\_

**CATEGORY OF POST APPLIED FOR** \_\_\_\_\_  
(Notification No \_\_\_\_\_ / Dt \_\_\_\_\_)

1. Full name of the candidate. : \_\_\_\_\_  
(in Block Capital Letters)
2. Father's / Husband's name. : \_\_\_\_\_
3. Permanent Address. : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Present Address. : \_\_\_\_\_  
(for correspondence) \_\_\_\_\_  
\_\_\_\_\_
5. Whether SC / ST / SEBC / OBC / PH / Ex - Serviceman. : \_\_\_\_\_  
(xerox copy of the certificates to be attached in support of the claim)
6. Gender. (Male / Female) : \_\_\_\_\_
7. Date of Birth as recorded in the Matriculation certificate. : \_\_\_\_\_
8. Age as on **30.11.2021** Years th
9. Name of the Employment Exchange and Registration No. : \_\_\_\_\_
10. Educational Qualification. : \_\_\_\_\_  
(Attach self-attested xerox copy of certificates and mark sheets)

Name of the Examination	Year of Passing	Board/ University	Full Marks (without extra optional)	Marks secured. (without extra optional)	Percentage of marks secured
1	2	3	4	5	6

**N.B.: Marks secured in Extra optional / Ancillary / Foundation subject should not be included for calculation.**

11. List of enclosures. :

**DECLARATION**

I do hereby declare that all the statements made in this application are true, complete and correct to the best of my knowledge and belief. I have read the details in the advertisement notice and do hereby declare that I fulfil all the conditions of eligibility prescribed. In case of any of the statement / particulars is /are found to be given wrong during or after the selection, my candidature for the said post will be cancelled / forfeited by the authority.

Place :  
Date :

Signature of the candidate.



**Scheme & Syllabus**

**For**

**Recruitment of Trained Graduate Teachers (Initial  
Appointee) in SSD Schools.**

**2021-22**

**ST & Sc Development, M&B C Welfare  
Department, Govt of Odisha**

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**Scheme for Written Examination for Recruitment of Trained Graduate Teachers (Initial Appointee) in SSD Schools.**

Test Duration	90 Minutes
Total Questions	100 Objective Type Multiple Choice Questions
Total Marks	100 marks*

\*Each question will carry one mark each and there will be Negative marking @0.25marks for each wrong response.

Category	Part	Type of Questions	Number of Questions	Full Marks	Level	Language s	Subjects
Common Paper for TGT Science / Arts	I	MCQ	70	70	-NA-	English	a)General Knowledge & Current Affairs, b)Reasoning Ability, c)Computer Literacy, d)Pedagogy, Educational Management and Policy & Evaluation.
TGT Science PCM	II	MCQ	30	30	Graduation	English	a)Physics, b)Chemistry, c)Mathematics
TGT Science CBZ	II	MCQ	30	30	Graduation	English	a)Chemistry, b)Botany, c)Zoology
TGT Arts	II	MCQ	30	30	Graduation	English	a) History+ Political Science, b) Geography+ Economics, c) English
						Odia	d)Odia

**Part-I**

1. General Knowledge and Current Affairs (20 Marks)
2. Reasoning Ability (20 Marks)
3. Computer Literacy (10 Marks)
4. Pedagogy, Educational Management, Policies & Evaluation (20 Marks)

**Part-II**

5. Subject (30 Marks)

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**Total Marks**

**(100 Marks)**

**Syllabus for Written Examination for Recruitment of Trained  
Graduate Teachers (Initial Appointee) in SSD Schools.**

**Part -1  
(Total 70 marks)**

[General Knowledge and Current Affairs, Reasoning Ability, Computer Literacy, Pedagogy, Educational Management, Policy and Evaluation]

**Section-I**

**1. General Knowledge and Current Affairs (20 Marks)**

- i. Current events of State (Odisha), National and International Importance
- ii. History of Odisha / India and Indian National Movement
- iii. Indian and World Geography
- iv. Indian Polity
- v. Economic and Social Development
- vi. Everyday Science

**Section-II**

**2. Reasoning Ability (20 Marks)**

- i. General mental ability,
- ii. Logical reasoning and analytic ability
- iii. Decision making and problem solving
- iv. Basic numeracy
- v. Data interpretation

**Section-III**

**3. Computer Literacy (10 Marks)**

- i. Basic computer literacy skills for use of ICT in classrooms
- ii. Concepts, terminology and operations that relate to general computer usage.
- iii. Basic Hardware of Computer
- iv. Common Applications,
- v. Networking and Internet
- vi. Social Networking
- vii. Digital Citizenship

**Section-IV**

**4. Pedagogy, Educational Management, Policies & Evaluation (20 Marks)**

**A. Child Development (Process of Growing Up)**

1. Growth and Development

- Concept, Difference & Principles of Development
  - Factors affecting Development (Nutrition, Intelligence, Psycho-social, Diseases, Injury etc.)
  - Growth and development during Adolescence
  - Counseling services for Adolescents
2. Factors Affecting Different Developmental Aspects
    - Cognitive
    - Social(Erikson's Theory)
    - Emotional
    - Moral(Kohlberg theory)
    - Language Development
    - Needs and problems at childhood and Adolescence
  3. Approaches to Understanding the Nature of Intelligence
    - Psychometric approach (Thurstone, Guilford ,Gardener)
    - Information Processing Approach-Sternberg
    - Cognitive Development Approach-Piaget
    - Social Constructive Approach-Vygotsky

### **B. Learning Process / Pedagogy**

1. Understanding the Learning Process
  - Learning as a process and an outcome
  - Approaches – Humanistic (Karl Rogers)
  - Constructivist (Piaget and Vygotsky)
  - Basic conditions of learning: Readiness, Maturation, Motivation, Task and Methods
2. Organizing Learning
  - Teacher-Centric, Learner –Centric, Learning-Centric
  - Characteristics and Process
3. Critical Pedagogy
  - Concept, Characteristics, Process, Stages
  - Approaches
4. Addressing Classroom Diversity
  - Using varieties of TLMs and AV Aids
  - Using context of the learner
  - Using variety of activities while group learning, small group learning and self learning
  - Learner in the context of Inclusive Education

### **C. Educational Management**

- Educational Management: Concept, Importance and Scope, Types of Management, Democratic and Autocratic, Centralized and Decentralized
- Management Structure at different levels, National/State/District/Sub-district (BRCs, CRCs, SMCs, SMDC)
- School Development Plan (SDP): Concept, purpose, Key action by Headmaster, students, Parents and SMDC
- Steps in planning for school development
- Annual and prospective plan
- School Management: Role of Headmasters, Teachers, Community

### **E. Educational Policies and Programmes**

- Kothari Commission 1968
- National Educational Policy 1986
- RTE Act, 2009

- National Curriculum Framework, 2005
- National Education Policy 2020
- SSA, RMSA and Samagra Shiksha

## **F. ASSESING THE LEARNER / PERFORMANCE (EVALUATION)**

1. Assessment and Evaluation
  - Assessment and evaluation in constructive perspective
  - Concept, Continuous and Comprehensive Evaluation , Formative, Summative and Diagnostic Assessment
2. Assessment and Learning
  - Assessment of Learning, Assessment for learning, Assessment as Learning
  - Subject-based learning in a constructivist perspective
  - Assessment tools and techniques –Projects, Assignments, Observation, Teacher made Tests
  - Self-assessment, Peer-assessment
  - Portfolios, rubrics
3. Test Construction
  - Steps and Principles of Test Construction
  - Development of blue print
  - Preparation of test items
  - Standardized and Teacher made Test
4. Recent Developments in Assessment
  - Grading
  - Assessment in co-scholastic area
  - Implementation strategy of Continuous and Comprehensive Evaluation
  - Recommendations of NCF-2005

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**Part -2**  
**(Total 30 Marks)**

**TGT Science: (PCM)**

(This section shall carry equal marks from Physics, Chemistry and Mathematics subjects with equal proportion of marks)

**Section I**

**PHYSICS**

[10 questions are to be asked. Each question carries 01 mark]

**Unit-1 Motion**

Newton's laws of motion, Kinematic Equations of motions with acceleration, Graphical representation of Kinematics Equations of motion, Relative velocity and relative acceleration, work energy and power, conservation of energy, collision problem and conservation of linear momentum, forces of nature, friction force.

Circular motion, Rotational Kinematics, Conservation of angular momentum, Moment of Inertia.

Motion under Gravity, project motion, Simple harmonic motion, and Kinematics of simple harmonic motion, simple pendulum.

**Unit-2 Gravitation**

Kepler's law of planetary motion, Newton's law of gravitation, Acceleration due to gravity, Gravitational field and potential, Escape velocity and satellite motion, Geo stationary Satellites.

**Unit-3 Properties of Matter**

Inter- atomic and intermolecular force, Elasticity, Stress, Strain and Hook's law , Elastic module

Kinetic theory of gases, concept of heat, pressure and temperature, specific heat, law of equi-partition of energy, Universal Gas laws, measurement of Pressure

Surface tension, surface energy, angle of contact, excess pressure, capillarity, viscosity, Poiseuille's law, Stokes's Law, Bernoulli's Equation of fluid motion.  
Hydrostatics, Buoyancy, Archimedes Principle, Laws of flotation.

**Unit-4 Sound**

Waves, Progressive and stationary waves, mechanical waves, equation of a progressive wave, transverse vibration of a string, speed of sound waves, Newton's formula, Super-position of sound waves, Beats, Echo, Doppler's effect, Musical sound and its characteristics.

**Unit-5 Optics**

Laws of reflection and refraction in transparent medium, total internal reflection, refraction through prisms, Dispersion, Reflection and image formation plan and spherical mirrors, equation for object and image distances for spherical mirrors, image formation in convex and concave lenses, lens equation for convex and concave lenses, power of single and combination of two lenses. Image formation in the eye and defects of vision, microscope and astronomical telescope.

Wave optics, Huygens's principle, Coherent sources and interference, Young's double slit, Bi-prism, Newton's ring experiments, Diffraction of light through single slit and plane transmission grating.

#### **Unit-6 Electrostatics**

Coulomb's law and unit of charge, force on charge due to discrete and continuous charge distributions, lines of force and electric field, field due to a point charge and a dipole, electrostatic potential, potential due to a point charge and an electric dipole, electric potential energy of a group of point charges, electric flux, Gauss law and applications, Capacitor, capacitance of parallel plate and spherical capacitors, combinations of capacitors in series and parallel.

#### **Unit-7 Current Electricity**

Ohm's law, current and voltage measurements, resistance and Resistivity, combination of resistances in series and parallel, electromotive force, grouping of resistors and cells. Kirchhoff's laws and their applications.

Electric energy and power, heating effect of electric current, Faraday's law of electrolysis.

Magnetic field and magnetic induction, Biot-Savart law, magnetic field due to a straight conductor, a circular coil and a solenoid carrying current. Ampere's circuital law, Lorentz force on a charge particle in uniform electric and magnetic fields. Force between two parallel conductors' carrying current.

#### **Unit-8 Electromagnetic induction**

Faraday's law of electromagnetic induction, Lenz's law, eddy current, self and mutual induction, emf induced in a rotating coil. Alternating current, average and RMS values of alternating currents, simple AC circuits (RC, RL and RLC), concept of admittance and impedance. Transformers and simple AC devices (motor, dynamo).

### **Section-II**

#### **CHEMISTRY**

10 questions are to be asked. Each question carries 01 mark

#### **Unit-1 Basic Concepts**

Atomic, molecular and equivalent masses, mole concept, types of chemical reactions, calculations based on stoichiometry. Equivalent mass of acid, salt, oxidant and reductant.

#### **Unit-2 States of Matter**

Gas laws- Boyle's law, Charles' law, combined gas equation, ideal gas equation, Graham's law of diffusion/ effusion, Dalton's law of partial pressure.

Characteristics of Liquids: Vapour pressure, viscosity and surface tension. Colligative properties of solutions (solute and solvent forming binary solution).

### Unit-3 Structure of Atom

Bohr's model and its limitations, concept of shells and sub-shells, dual nature of matter and light. De Broglie's relationship, Heisenberg uncertainty principles, concepts of orbital's, quantum numbers, shape of s, p and d orbital, rules of filling electrons in orbitals- Aufbau principle and Hund's rule, electronic configuration of atoms, stability of half filled and completely filled orbitals.

### Unit-4 Classification and elements and periodicity in properties

Modern periodic law and the present form of periodic table, periodic trends in properties of elements- atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electro negativity, valency.

### Unit-5 Chemical bonding and molecular Structure

Ionic bond, covalent bond, polar character of covalent bond, covalent character of ionic bond, concept of hybridization, VSEPR Theory and shapes of some simple molecules, hydrogen bond and metallic bond.

### Unit-6 Chemical reactions

Types of chemical reactions, redox reaction, Oxidation number calculations, balancing of redox equations by oxidation number and ion electron methods, neutralization reactions and volumetric analysis.

### Unit-7 Chemical Equilibria and Ionic Equilibria

Equilibrium in physical and chemical processes, law of mass action, equilibrium constants ( $K_c$ ,  $K_p$ ,  $K_x$ ) relation among them, the reaction quotient and its relation with equilibrium. Le-Chateliers principle and its applications.

Theories of acids and bases, ionization of weak acids and bases, ionic product of water pH and other logarithmic terms, common-ion effect, solubility product and its application in salt analysis.

### Unit- 8. General Principles of extraction of metals

Occurrence of metals, ores and minerals, concentration, calcinations, roasting, smelting, reduction methods (carbon reduction, aluminothermic process, electrolytic and self- reductions) and metal extraction, flux and slag refining of metal. Reactions involved in the Blast furnace for extraction of iron.

### Unit-9 Some basic principles of organic chemistry

- Classification and IUPAC nomenclature of organic compounds
- Electronic displacement in covalent bond: inductive effect, electronic effect, resonance and hyper conjugation
- Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.

### Unit-10 Hydrocarbons

Classification of Hydrocarbons.

- a. Aliphatic Hydrocarbons: general methods of preparation, properties and uses of alkanes, alkenes and alkynes.
- b. Aromatic Hydrocarbons: benzene, resonance aromaticity, chemical properties, directive influence of functional group in mono-substituted benzene.

## **Section-III**

### **MATHEMATICS**

[10 questions are to be asked. Each question carries 01 mark]

- 1. Set Theory and its Application**
  - Union, intersection, difference, complement, power set, number of elements in union and intersection of finite sets.
- 2. Relations and Functions**
  - Reflexive, Symmetric, transitive and equivalence relations, injective, surjective and bijective functions, inverse of a function.
- 3. Number System**
  - Natural numbers, integers, rational numbers, irrational number, real number, absolute values of numbers, triangle inequality.
- 4. Quadratic & Linear Equations**
  - Fundamental theorem of Algebra, roots, discriminates, nature of the roots, relation between the roots and coefficients.
- 5. Calculus of One Variable**
  - Limit, continuity, derivative, tangent, normal, increasing and decreasing functions.
- 6. Sequence and Series**
  - Arithmetic and Geometric progressions, monotonic sequence, exponential series, logarithmic series, Taylor's series, Maclaurin's series.
- 7. Coordinate geometry**
  - Distance formula, section formula, area of a triangle, locus and its equation, straight line, circle, conic section.
- 8. Analytical Solid Geometry**
  - Plane, straight line, Sphere
- 9. Probability**
  - Trial, Sample point, Sample Space, Event, Addition Theorem, Binomial Distribution.
- 10. Statistics**
  - Mean, Mode, Median, Mean Deviation, Standard Deviation, Variance
- 11. Trigonometry**
  - Angles associated with 90, 180, 270, 360 compounded angle formula, sub-multiple angle formula, Trigonometry Equations, Inverse trigonometric functions, Height and Distance.
- 12. Mensuration**
  - Circumference of a circle, length of the arc of a circle, area of a circle, sector and segment, area of a circle annulus, area of a sectional region, area of segment, surface area and volume of a prism, right circular cylinder, cone and sphere.

012

## **TGT Science: (CBZ)**

(This section shall carry equal marks from Chemistry Botany and Zoology subjects with equal proportion of marks)

### **Section I**

#### **Chemistry**

[10 questions are to be asked. Each question carries 01 mark]  
**(Same as in TGT PCM Syllabus)**

### **Section II**

#### **BOTANY**

[20 questions are to be asked. Each question carries 01 mark]

#### **1. Plant Diversity and Conservation**

- Nomenclature and classification of plant kingdom, plant divisions- Thallophyta, Bryophyte, Pteridophyta, Gymnosperms and Angiosperms, their habitat and complexity in their structural organization. Endangered plant species and their conservation measure.

#### **2. Tissue System**

- Meristematic and permanent tissues: their types, organization and functions.
- Tissue System: Epidermal, ground and vascular tissue system, internal structure of dicot and monocot stems and roots secondary growth in plants.

#### **3. Photosynthesis**

- Structure and photosynthetic pigments, Light reaction: light absorption, electron transport and photophosphorylation, Dark reaction- CO<sub>2</sub> fixation by C<sub>3</sub>, C<sub>4</sub> and CAM plants, photorespiration.

#### **4. Growth Regulators in Plants**

- Auxins, Gibberellins, Cytokinins, Ethylene and Abscissic acid, their role in plant growth regulation.

#### **5. Reproduction in plants**

- Vegetative reproduction: Fission, budding and cutting(grafting) and propagation in angiosperms.
- Asexual Reproduction: Sporulation, Conidia formation and other special structure formation.
- Sexual Reproduction: Isogamy, Anisogamy and Oogamy, double fertilization and triple fusion in angiosperms.
- Parthenogenesis: Tissue culture and micro propagation

#### **6. Mendelism**

- Mendelian factors, Monohybrid cross and principles of dominance and segregation.
- Di hybrid cross: Laws of independent assortment.
- Deviations from Mendelian principles

#### **7. Plant Diseases and Control Measures**

- Causal Organisms, symptoms, life cycle and control measures of following diseases: Late blight of potato, powdery mildew, Rust and Smut of Wheat, Leaf Spot and blast disease of rice.

**Section III**  
**ZOOLOGY**

[10 questions are to be asked. Each question carries 01 mark]

**1. Taxonomy**

- Five kingdom classification, Characteristics and Examples of each animal phylum (in case of phylum Chordate up to Classes)

**2. Cytology**

- Cell structure and cell division (mitosis and meiosis), DNA and RNA

**3. Genetics**

- Linkage, Crossing over, Mutation, Chromosomal aberration and chromosomal mechanism of sex determination

**4. Evolution**

- Darwinism, Modern Synthetic theory of evolution ( variation, selection and isolation)

**5. Ecology**

- Eco-system, Food Chain and Food Web, Energy Flow, Ecological Pyramids, Renewable and Non-renewable energy resources, Biodiversity (meaning and conservation), Causes, Effects and Control of Air pollution.

**6. Nutrition**

- Types of food and types of nutrition,

**7. Respiration**

- Types of respiration (aerobic and anaerobic) Glycolysis and Krebs Cycle

**8. Circulation**

- Blood (Composition and function) in man, structure and working of human heart

**9. Excretion**

- Human Kidney (structural details), mechanism of urine formation

**10. Control and Coordination**

- Structure of neuron, synaptic transmission, structure of human brain and function of its different parts, names of endocrine glands and secreted hormones with their specific functions

**11. Reproduction and Development**

- Structure of Gonads (ovary and testes) and Gametes in man, Fertilization. Types of cleavage.

(11)

**TGT Arts (Social Studies)**  
**(30 Marks)**

(This section shall carry the questions from History & Political Science (05 Marks), Geography & Economics (05 Marks), English (10 Marks) & Odia (10 Marks) each.)

**Section- I**  
**HISTORY + POLITICAL SCIENCE (05 MARKS)**

**HISTORY**

1. Great Rulers of Ancient India
  - Ashoka – Conquests, administration and missionary activities
  - Kharavela – Achievements as mentioned in Hatigumpha inscription
  - Samudragupta – Conquests
  - Harshavardhana – Conquests, administration and religious activities
2. Development of Art and Architecture during Maurya Age, Gupta Age and Kushana Age
3. Development of Literature and Science in Ancient India
4. Administration during Delhi Sultanate with special reference to Balban, Alauddin Khilji and Feroze Shah Tughlaq.
5. Mughal architecture and painting during the reign of Akbar, Jahangir and Shahjahan
6. Rise of British power in India from 1757 to 1856
  - Robert Clive and foundation of British Power
  - Administrative and judicial reforms of Warren Hastings
  - Revenue reforms of Lord Cornwallis
  - Subsidiary alliance
  - Reforms of Lord William Bentinck
  - Doctrine of Lapse
7. Growth of India Nationalism, 1857-1905
  - Revolt of 1857
  - Development of press and literature
  - Education
  - Formation of Political associations
8. Indian National Movement, 1905-1947
  - Swadeshi movement
  - Non-cooperation movement
  - Civil Disobedience movement
  - Quit India movement
  - Indian National Army
  - Partition and Independence
9. First World War and Russian Revolution
  - Causes and consequences of First World War
  - Causes Progress and Effects of Russian Revolution
10. Second World War- Causes and Consequences

**POLITICAL SCIENCE**

1. Salient features of Indian Constitution
2. Preamble, Fundamental Rights, Directive Principles of State Policy, Fundamental Duties
3. Union Government – President, Prime Minister, Council of Ministers, Parliament and Supreme Court

4. State Government – Governor, Chief Minister, Council of Ministers, Legislative Assembly and High Court.
5. Local Governance – Urban and Rural
6. Electoral Process and Election Commission
7. India's Foreign Policy and its relation with neighbours
8. United Nations – General Assembly, Security Council Human Rights
9. Socialism, Liberalism, Democracy, Authoritarianism, Welfare State and Globalization
10. Kautilya, Raja Ram Mohan Roy, Bal Gangadhar Tilak, Swami Vivekananda, Mahatma Gandhi, Nehru, B.R. Ambedkar

## Section- II

### GEOGRAPHY + ECONOMICS (05 MARKS)

#### GEOGRAPHY

1. Physical Geography of India
  - Physiography
  - Drainage
  - Climate
2. Resources with Special Reference to India
  - Types and Classification, Land Resources; Biotic Resources
  - Mineral, Energy, Water Resources
  - Agriculture and Industrial Resources
3. Physical Geography
  - First, Second and third order land forms; Development of land forms – work of rivers, wind and glaciers. Interior of the earth, rocks and their types
  - Structure and composition of the atmosphere, insolation and temperature; Pressure and Winds; Humidity and Rainfall
  - General relief of ocean floor: Salinity and temperature of the ocean water. Oceanic circulation – waves, tides currents
4. Globe and Maps
  - Basic features; types of maps; map scale; contours of relief features
  - Concept of latitude and longitude; International dateline Time Zones; Local and Standard Time.

#### ECONOMICS

1. Indian Economy
  - Features and broad demographic characteristics; Need and Policies for facing the challenges of over population
2. Current Challenges of Indian Economy
  - Poverty – Measures of poverty; causes, consequences, policy and programmes adopted for poverty eradication; Remedies.
  - Unemployment – Types and measures of unemployment; Causes, consequences and programmes adopted for reducing unemployment.
  - Inflation – Meaning and types; Demand pull and cost push inflation; Causes and consequences and measures taken to control inflation.
3. Economic Development

110

**ANNEXURE -IV**

**Scheme & Syllabus**

**For**

**Recruitment of Hindi, Sanskrit and Physical Education Teachers  
(Initial appointees) in SSD Schools.**

**ST & SC Development and M& BC Welfare Department,  
Govt. Of Odisha**

**2021**

**Scheme for Written Test for Recruitment of Initial appointees in Hindi ,Sanskrit and Physical Education Teachers in Govt. SSD School**

Test Duration	90 Minutes
Total Questions	100 Objective Type Multiple Choice Questions
Total Marks	100 marks*

\* Every question will carry one mark each and there will be negative marking @0.25 marks for each wrong response.

Category	Paper	Type of Questions	Number of Questions	Full Marks	Level	Language s	Subjects
All Posts	I	MCQ	70	70	-NA-	English/Odia	a)General Knowledge & Current Affairs, b)Reasoning Ability, c)Computer Literacy, d)Pedagogy, Educational Management and Policy& Evaluation.
TGT Hindi	II	MCQ	30	30	Graduation	Hindi	a) Hindi
TGT Sanskrit	II	MCQ	30	30	Graduation	Devnagari	a) Sanskrit
Physical Education Teacher	II	MCQ	30	30	Graduation	English/Odia	a)Physical Education

**Paper-I**

1. General Knowledge and Current Affairs (20 Marks)
2. Reasoning Ability (20 Marks)
3. Computer Literacy (10 Marks)
4. Pedagogy, Educational Management, Policies& Evaluation (20 Marks)

**Paper-II**

5. Subject (30 Marks)

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**Total Marks**

**(100 Marks)**

19

**Syllabus for Written Examination for Recruitment of Initial  
appointees in Govt. SSD Schools**

**Paper -1  
(Total 70 marks)**

[General Knowledge and Current Affairs, Reasoning Ability, Computer Literacy, Pedagogy, Educational Management, Policy and Evaluation]

**Section-I**

- 1. General Knowledge and Current Affairs (20 Marks)**
- i. Current events of State (Odisha), National and International Importance
  - ii. History of Odisha / India and Indian National Movement
  - iii. Indian and World Geography
  - iv. Indian Polity
  - v. Economic and Social Development
  - vi. Everyday Science

**Section-II**

- 2. Reasoning Ability (20 Marks)**
- i. General mental ability,
  - ii. Logical reasoning and analytic ability
  - iii. Decision making and problem solving
  - iv. Basic numeracy
  - v. Data interpretation

**Section-III**

- 3. Computer Literacy (10 Marks)**
- i. Basic computer literacy skills for use of ICT in classrooms
  - ii. Concepts, terminology and operations that relate to general computer usage.
  - iii. Basic Hardware of Computer
  - iv. Common Applications,
  - v. Networking and Internet
  - vi. Social Networking
  - vii. Digital Citizenship

## Section-IV

(For the Post of Hindi Teacher & Sanskrit Teacher)

Child Development, Pedagogy, Education Management, Policies & Evaluation-(20 Marks)

### A. Child Development (Process of Growing Up)

1. Growth and Development
  - Concept, Difference & Principles of Development
  - Growth and development during Adolescence
  - Counseling services for Adolescents
2. Factors Affecting Different Developmental Aspects
  - Cognitive
  - Social (Erikson's Theory)
  - Emotional
  - Moral (Kohlberg theory)
  - Language Development
  - Needs and problems at childhood and Adolescence

### B. Learning Process / Pedagogy

1. Understanding the Learning Process
  - Learning as a process and an outcome
  - Approaches – Humanistic (Karl Rogers)
  - Constructivist (Piaget and Vygotsky)
  - Basic conditions of learning: Readiness, Maturation, Motivation, Task and Methods
2. Organizing Learning
  - Teacher-Centric, Learner –Centric, Learning-Centric
  - Characteristics and Process
3. Addressing Classroom Diversity
  - Using varieties of TLMs and AV Aids
  - Using context of the learner
  - Using variety of activities while group learning, small group learning and self learning
  - Learner in the context of Inclusive Education

### C. Educational Management

- Educational Management: Concept, Importance and Scope, Types of Management, Democratic and Autocratic, Centralized and Decentralized
- Management Structure at different levels, National/State/District/Sub-district (BRCs, CRCs, SMCs, SMDC)
- School Development Plan (SDP): Concept, purpose, Key action by Headmaster, students, Parents and SMDC

### E. Educational Policies and Programmes

- National Educational Policy 2020
- RTE Act, 2009
- National Curriculum Framework, 2005
- SSA, RMSA and Samagra Shiksha

### F. ASSESING THE LEARNER / PERFORMANCE (EVALUATION)

1. Assessment and Evaluation
  - Assessment and evaluation in constructive perspective
  - Concept, Continuous and Comprehensive Evaluation, Formative, Summative and Diagnostic Assessment

- 2. Assessment and Learning
  - Assessment of Learning, Assessment for learning, Assessment as Learning
  - Subject-based learning in a constructivist perspective
  - Assessment tools and techniques –Projects, Assignments, Observation, Teacher made Tests
  - Self-assessment, Peer-assessment
  - Portfolios, rubrics
- 3. Test Construction
  - Steps and Principles of Test Construction
  - Preparation of test items
  - Standardized and Teacher made Test
- 4. Recent Developments in Assessment
  - Grading
  - Assessment in co-scholastic area
  - Implementation strategy of Continuous and Comprehensive Evaluation

**Section-IV**  
**(For the Post of PET)**

**Pedagogy, Education Management, Policies & Evaluation-(20 Marks)**

**A. Child Development (Process of Growing Up)**

**1. Growth and Development**

- Meaning of Growth & Development
- Difference Stages of Development
- Physical, Mental, Emotional and Social Development of a child
- General Characteristics of Various stages of growth and development of a child

**B. Pedagogy**

- Teaching Techniques (Lecture method, Demonstration method, Discussion method and project method etc)
- Important device and methods of teaching
- Teaching Procedure-Whole method, part method, Whole and Part method
- Difference between teaching methods and Teaching Aids

**C. School Management & Evaluation**

- School Management
- Programme planning, principles of programme planning in physical Education
- Function of planning- organization of school sports, coordination and contracting of physical Education activities
- Evaluation of School Physical Education activities and School Health Education Programme.

## Paper –II

(Total 30 Marks)

### For Hindi Teacher Post

[ 30 questions are to be asked. Each question carries 01 mark]

### Hindi ( 30 Marks)

30 Marks

इस विभाग में कुल अंक 60 हैं । अतएव 1 अंकवाले 60 प्रश्नों के उत्तर देना है । प्रत्येक प्रश्न के चार विकल्प होंगे । सही विकल्प चुनना होगा । प्रश्न ज्ञान के स्तर की परीक्षा करने के अनुकूल होंगे ।

### UNIT- I (हिन्दी गद्य साहित्य)

- (i) निबंध - निम्नलिखित पाठ्य विषयों से प्रश्न किए जायेंगे ।
- बालमुकुंद गुप्त - बनाम लार्ड कर्जन
  - रामचन्द्र शुक्ल- क्रोध
  - हजारी प्रसाद द्विवेदी - अशोक के फूल
  - हरिशंकर परसाई - भोलाराम का जीव
- (ii) उपन्यास -
- प्रेमचन्द - कर्मभूमि
  - भगवती चरण वर्मा - चित्रलेखा
  - मन्नू भण्डारी - आपका बंटी
- (iii) कहानी -
- प्रेमचन्द - कफन, 'पूस की रात
  - प्रसाद - पुरस्कार, आकाशदीप
  - अज्ञेय - तत्सत्
  - भगवती चरण वर्मा - प्रायश्चित्त
  - कमलेश्वर - गर्मी के दिन
  - जैनेन्द्र कुमार - पत्नी

- उषा पियम्बदा - वापसी
- भीष्म साहनी - चीक की दावत
- (iv) नाटक -
  - जय शंकर प्रसाद - चन्द्रगुप्त
  - लक्ष्मीनारायण मिश्र - सिंदूर की होली
  - मोहन राकेश - आषाढ़ का एक दिन
- (v) संस्मरण / रेखाचित्र
  - महादेवी वर्मा - गौरा
  - रामवृक्ष बेनीपुरी - रज़िया
  - विष्णु प्रभाकर - अंटावक्र

#### UNIT- II (पद्य विभाग)

- (i) कबीर दास - दोहे - गुरु गोविन्द दोउ खड़े, पानी केरा बुद बुदा, माटी कहै कुम्भारसे, जलमें कुंभ, कस्तूरी कुंडल बसै, माली आपन, कल करै सो आज कर, साधु ऐसा चाहिए... । पद - माया महा ठमिनौ ।
- (ii) सूरदास - बाल वर्णन - मैया मैं नहीं माखन, मैया मोहि दाऊ बहुत खिझायौ, जगुमति हरि पालनै, मैया कबहुँ बड़ेगी चोटी ।  
भ्रमर गीत - अंधो मन मानेकी बात, ऊधो मन जहिं दस बीस, निर्गुन कौन देसकौ, अधा मोहि ब्रज विसरत नहिं ।
- (iii) तुलसी दास - केवट प्रसंग, भरत-महिमा
- (iv) बिहारी - मेरी सब बाधा हरौ, कनक कनक तैं, बतरस लालच, कहत नटत रीझत.. ।
- (v) मेथिलीशरण गुप्त - यशोधर।
- (vi) दिनकर - कुरुक्षेत्र (प्रथम तीन वर्ष)
- (vii) बच्चन - पथकी पहचान, जुगनू
- (viii) सुभद्राकुमारी - झाँसी की रानी

- (ix) प्रसाद - भारतवर्ष, हिमाद्रि तुंग...
- (x) पंत - प्रथम रश्मि, ताज
- (xi) निराला - संध्यासुंदरी, तोड़ती पत्थर
- (xii) केदारनाथ सिंह - अकाल में दूब
- (xiii) नागार्जुन - बहुत दिनों के बाद

UNIT- III (प्रत्येक पाठ्य - बिन्दु से दो प्रश्न)

भाषा अध्ययन :

- i) हिन्दी और ओड़िआ ध्वनियाँ (व्यतिरेकी ज्ञान)
- ii) शब्द निर्माण - प्रचलित उपसर्ग और प्रत्यय
- iii) संधि तथा समास
- iv) विलोम और पर्यायवाची शब्द
- v) शब्दों की सही वर्तनी और उच्चारण
- vi) संज्ञा : लिंग, वचन
- vii) कारक विभक्ति और विशेषण के मुख्य प्रकार
- viii) क्रिया : (क) भेद (सकर्मक, अकर्मक, सरल, मिश्र, यौगिक, प्रेरणार्थक)  
(ख) काल - तीन कालों का मुख्य भेद
- ix) वाक्य : मुख्य भेद और परिवर्तन
- x) अति प्रचलित मुहावरे और कहावतें

UNIT-IV (भाषा प्रयोग)

- i) गद्य पाठ विधि - परिचयात्मक प्रश्न, वाचन, लेखन, बोध प्रश्न, ज्ञान, और चिन्तामूलक प्रश्न ।

- ii) पद्य पाठ विधि - सामान्य परिचयात्मक प्रश्न, व्याख्या की पद्धति, आत्मीकरण, काव्यानन्दका स्वाद ।
- iii) व्याकरण पाठ विधि - आगमन / निगमन प्रणाली
- iv) अनुवाद - ओडिआ से हिन्दी पाँच सरल वाक्य या वाक्यांश
- v) अपठित गद्य/पद्यांश - (छोटे-छोटे दो अंश)

उसमें से बोध / ज्ञान मूलक प्रश्न होंगे

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## Paper –II

(Total 30 Marks)

### For Sanskrit Teacher Post

[ 30 questions are to be asked. Each question carries 01 mark]

शिक्षादान पद्धतिः

UNIT- 1 : Learning Sanskrit संस्कृतशिक्षणम्

- संस्कृतशिक्षणस्य सामान्यम् उद्देश्यं महत्त्वं च
- माध्यमिकस्तरे संस्कृत शिक्षायाः महत्त्वम्
- संस्कृतशिक्षायाः सुगमं कौशलम्
- श्रवणम् पाठनम्, वाचनम्, पठनकौशलम् लेखनकौशलम्

UNIT 2 : भाषाप्रशिक्ष

- व्याकरणानुवाद पद्धति : (Formal Grammar, Functional Grammar)
  - प्रत्यक्षपद्धतिः (Preparation, Presentation, Comparison, Assimilation, (Directmethod) Application)
  - परोक्षपद्धति : (Indirect Method) - अन्वय पद्धति Teaching Poetry,
  - आरोह पद्धति : अस्या पद्धतेः गुणाः दोषाः च
- Indirective Method - From Example to approach the sutra method in grammar.
- अवरोह पद्धति : (deductive method) Interpretation of the sutra and justification through the examples.

UNIT- 3 : भाषासाहित्यशिक्षण पद्धति :

Method of assessment learning sanskrit language and literature.

गद्य-पद्य प्रशिक्षण परीक्षण योजना

Planning of assessment of teaching prose and poetry.

परीक्षणस्य योजना साफल्यं च परीक्षणस्य अन्तर् साधनानि

श्रवणम्, भाषणम् पठनम्, वाचनम्, लेखनम्

Group-B (CONTENT)

UNIT- 4 : Elements of Sanskrit Language

संस्कृतभाषायाः मौलिकं ज्ञानम्

(अदृष्ट सन्दर्भगीताः ग्रन्थाः (Comprehension to unseen passage)

One Passage from Prose (within 150 words)

गद्यभागस्य एकः सन्दर्भः (१५० शब्दमध्ये)

पञ्चतन्त्रतः हितोपदेशतः (From Panchatantra and Hitopadesha)

One verse from Purvamegha or Abhijnana sakuntalam

Word meaning, Sandhi, Karaka Vibhukti Samasa, Prakriti Pratyaya.

UNIT- 5 : Language Item, भाषागता विषयाः

Parts of Speech - भाषा विभाग

शब्दरूपम्, धातुरूपम्, विशेषणम्, सर्वनाम, संख्यावाचक विशेषणम्

शब्दरूपम् - बालक, फल, लता, मुनि, पति, मति, वारि, नदी, भानु, धेनु, मधु, वधु, पितृ, नातृ, गो, गुणिन् राजन्, गच्छत्

विशेषण सर्वनाम - सर्व, तद्, यद्, किम्, इदम्, अस्मद्, युष्मद्

संख्यावाचक - एक, द्वित्रि, चतुर, पञ्च, षट्

पूषवाचक - प्रथम, द्वितीय इत्यादि

शब्द निर्माणम् - उपसर्गः, कृदन्तः स्त्रीप्रत्ययः

शब्दज्ञानम् - व्याकरणगताः पारिभाषिकाः शब्दाः

सन्धिः, णत्वविधिः, षत्वविधिः

शब्दरूपधातुरूपगतवर्णशुद्धिः :

Unit - 6 : Contributions of famous poet and authors to Sanskrit literature  
(Prose, Poetry, Drama and composition.

Bhasa, Kalidas, Bhababiti, Dandin : Banabhatta

Bhartrihari - Jayadev Trivikrambhatta Sriharsa

**Physical Education Teacher**

**(30 questions are to be asked, Each question carried 01 mark)**

**PHYSICAL EDUCATION**

1. **Principle and History of Physical Education**
  - Meaning, objectives, Aims of Physical Education
  - Relationship of Physical Education to General Education, Health Education and Recreation
  - Importance of Physical Exercise, Physical Training and Physical Culture
  - Physical Education as a Socialization agencies
  - Leadership and its importance, qualification and qualities of a Physical Education Teacher
  - Contribution of Physical Education Teachers to General Education
  - Scout and Guides, NCC, JRC, SGFI, NFC and its contribution
  - Olympics and Asian Games
  - Teachers Training and Professional preparation in Physical Education
2. **Sports Psychology**
  - Meaning and importance in Physical Education
  - Mental Process- Body, Mind, Relationship and Neuro-muscular coordination
  - Transfer of training, Theories of Play, Learning processes and play way in Education
  - Individual differences as personality, mental hygiene and child guidance
  - Discipline and behaviour: Nature and Development
3. **Organisation, Administration and Recreation**
  - Importance, Objectives and guiding principle.
  - Construction and care of gymnasium and swimming pools
  - Preparation of different playground
  - Need, purchase and maintenance of sports equipments and maintenance of different registers and records.
  - Preparing time table and factor affecting time table in Physical Education and Sports.
  - Scheduling school sports, Problem in school sports, Intramural and extramural competitions
  - Preparation of Budget, accounting and auditing
  - Importance of Recreation in Human Life
4. **Anatomy Physiology and Health Education**
  - Joints structure, Types and Movements of the Joints, Importance of Good Posture and Remedies of Bad Posture
  - Effect of regular activities on muscles, heart and respiratory system

- Fatigue, its causes and remedies
  - Blood pressure, oxygen debt second wind
  - Importance of health education and the role of Physical Education Teachers in School Health Programme
  - Medical Examination, effects of narcotics and drugs
  - Nutrition and importance of diet for players and athletes
  - Different diseases and their symptoms, detection care and prevention of diseases like Cholera, Diarrhea, Chiken Pox, measles, Tetanus, Diphtheria and Malaria
5. **Methods of Physical Education**
- Meaning, Scope and Importance of Methods in Physical Education
  - Drill and Marching Commands, Teaching aids, various methods of teaching physical activities, Games, Sports and Indigenous activities.
  - Various Tournaments and Competitions
  - Test, Measurement and Evaluation in Physical Education, National Physical Efficiency Test
  - Layout of the track and field events and different play grounds
  - Demonstration and Exhibitions, Awards and Incentives
  - Lesson Planning- General and Specific
6. **Officiating and Coaching**
- The qualities of good officials, relation of official with management, coaches, players and spectators
  - Duties of the officials
  - Promoting and maintaining different games, publicity, arrangement of training camps and schedules
  - Conditioning of players and teams- General, Fundamental, Workload
  - Warming up- Types and Values
  - Various training methods- Isometric and Isotonic exercises, Circuit training, Weight Training, Fartlek Training and Interval Training
  - Play of various positions in Games
  - Officiating of different games and track and field events-its rules, signals and positional play
  - Track and Field events, Major games like Kho-Kho, Kabadi, Volleyball, Football, Basket ball, Soft ball, Cricket, Hockey and Badminton.

**Scheme & Syllabus**

**For**

**Recruitment of I.A CT and I.Sc CT  
Teachers (Initial Appointee) in SSD  
Schools.**

**2021-22**

**ST & Sc Development, M&BC  
Welfare Department, Govt of  
Odisha**

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**Syllabus for Written Examination for Recruitment  
of IA CT and ISC CT Teachers (Initial Appointee) in  
SSD Schools.**

**Part -1**

(Total 70 marks)

[General Knowledge and Current Affairs, Reasoning Ability,  
Computer Literacy, Pedagogy, Educational Management,  
Policy and Evaluation]

**Section-I**

**1. General Knowledge and Current Affairs (20 Marks)**

- i. Current events of State (Odisha), National and International Importance
- ii. History of Odisha / India and Indian National Movement
- iii. Indian and World Geography
- iv. Indian Polity
- v. Economic and Social Development
- vi. Everyday Science

**Section-II**

**2. Reasoning Ability (20 Marks)**

- i. General mental ability,
- ii. Logical reasoning and analytic ability
- iii. Decision making and problem solving
- iv. Basic numeracy
- v. Data interpretation

**Section-III**

**3. Computer Literacy (10 Marks)**

- i. Basic computer literacy skills for use of ICT in classrooms
- ii. Concepts, terminology and operations that relate to general computer usage.
- iii. Basic Hardware of Computer
- iv. Common Applications,
- v. Networking and Internet
- vi. Social Networking
- vii. Digital Citizenship

**Section-IV**

**4. : CHILD DEVELOPMENT AND PEDAGOGY (20 Marks)**

**A. Understanding Child Development during Childhood  
(focus on children at primary level)**

- i. Concept, principles and stages of child development
- ii. Characteristics of physical, cognitive, social, emotional and moral development in childhood

iii. Influence of heredity and environment in understanding the child

### **B. Understanding Learning Process and Learners**

- i. Learning – concept, nature and individual differences in learning
- ii. Understanding how child learns – learning through observation, limitation
- iii. Understanding how child learns – various methods of learning
- iv. Basic conditions of learning and promotion of learning through motivation, classroom learning environment and teacher behaviour
- v. Development of creative thinking

### **C. Concept of Inclusive Education and Understanding Children with special needs**

- i. Concept of inclusive education
- ii. Addressing the needs of diverse group of learning in inclusive classroom (CWSN, girls, SC / ST)
- iii. Addressing the talented, creative learning

### **D. Approaches to teaching and learning**

- i. Teacher-centred, learner-centred and learning-centred approach
- ii. Competency-based and activity-based approach
- iii. TLM – its importance, use and preparation for classroom transaction
- iv. Teaching competency to handle mono-grade and multi-grade situation

### **E. Assessment**

- i. Continuous and comprehensive assessment
- ii. Purpose of assessment
- iii. Assessing scholastic and other scholastic areas
- iv. Sharing of assessment outcomes and follow up

## **PART-II**

### **SECTION A : LANGUAGE (ENGLISH)**

#### **GROUP – A : (PEDAGOGY)**

**Unit – 1 :-** Learning English at the Elementary Level

- Importance of learning English
- Objectives of learning English (in terms of content and competencespecifications)

**Unit – 2 :-** Language Learning

- Principles of language teaching
- Challenges of teaching language in a diverse classroom

**Unit – 3 :-** Skills in learning English

- Four-fold basic skills of learning viz., listening, speaking, reading

and writing :interdependence of skills

- Techniques and activities for developing listening and speaking skills(recitation, story telling, dialogue)
- Development of reading skills : reading for comprehension, techniques and strategies for teaching, reading (phonic, alphabet, word, sentence and story)
- Development of writing skill – teaching composition

**Unit – 4 :-** Assessment of English

- Assessing language comprehension and proficiency : listening, speaking, reading, writing

**GROUP – B : (CONTENT)**

**Unit – 5 :-** Comprehension

- Two unseen prose passage (discursive or literary or narrative or scientific)with questions on comprehension, grammar and verbal ability

**Unit – 6 :-** Language items

- Nouns, Adverbs, Verbs, Tense and Time, Preposition, Articles, Adjectives, Prepositions, Punctuation

**Section B : Mathematics**

**GROUP – A : (PEDAGOGY)**

**Unit – 1 :-** Mathematics Education in Schools

- Nature of Mathematics (exactness, systematic, patterns, preciseness)
- Aims and objectives of teaching Mathematics
- Specific objectives of teaching Mathematics

**Unit – 2 :-** Methods and Approaches to Teaching-Learning

Mathematics

- Methods : Inductive, deductive, analysis, synthesis, play-way
- Approaches : Constructivist and Activity-based

**Unit – 3 :-** Assessment in Mathematics

- Assessment in Mathematics
- Formal and informal assessment
- Different types of test items
- Planning for remedial and enrichment programme in Mathematics

**GROUP – B : (CONTENT)**

**Unit – 4 :-** Number System and Operation in Numbers

- Number system (natural, whole, rational, real)
- Fundamental operation on numbers
- Fractional numbers and decimals – operations in fractional numbers and decimals
- Factors and multiples – HCF and LCM
- Percentage and its application

**Unit – 5 :-** Measurement

- Measurement of length, weight, capacity
- Measurement of area and perimeter of rectangle and square
- Measurement of time (concept of am, pm and time interval)

**Unit – 6 :-** Shapes and spatial Relationship

- Basic geometrical concepts (point, line segment, ray, straight line, angles)
- Geometry of triangles, quadrilaterals and circles
- Symmetry
- Geometrical solids (cube, cuboid, sphere, cylinder cone)

**Unit – 7 :-** Data Handling and Patterns

- Pictography, bar graph, histogram, pie chart Interpretation of these graphs
- Patterns in numbers and figures

**SECTION C : ENVIRONMENTAL STUDIES (EVS)**

**GROUP – A : (PEDAGOGY)**

**Unit – 1 :-** Concept

- Concept and Significance
- Integration of Science and Social Science
- Aims and objectives of teaching and learning EVS

**Unit – 2 :-** Methods and Approaches

- Basic principles of teaching EVS
- Methods : Survey, Practical Work, discussion, observation, project
- Approaches : Activity-based, theme-based

**Unit – 3 :-** Evaluation in EVS

- Tools and techniques for evaluation learning in EVS
- Diagnostic assessment in EVS

**GROUP - B : (CONTENT)**

**Unit – 4 :-** Governance

- Local-self, Government – State and Central

- Judiciary

**Unit – 5 :-** Physical Features of Odisha and India

- Landscape
- Climate
- Natural resources
- Agriculture and industry

**Unit – 6 :-** History of Freedom Struggle in India and Odisha

**Unit – 7 :-** Health and Diseases

- Nutritional, elements, balanced diet
- Nutritional, deficiency and diseases
- Waste materials and disposal
- First-aid
- Air and water pollution

**Unit – 8 :-** Internal Systems of Human Body

- Respiratory, circulatory, digestive and excretory system – structure and partsof plant – structure and function

**Unit – 9 :-** Matter, Force and Energy

- Matter and its properties
- Earth and sky, effect of rotation and revolution of earth
- Work and energy