



**ODISHA STAFF SELECTION COMMISSION**  
**Unit – II, Bhubaneswar – 751009**

Notice No. 23 /OSSC;

Date: 02/01/2024

**Sub: Revised programme for live of online application form for the post of Statistical Assistant, 2023 (Advertisement No.5038/OSSC; dated 26.12.2023)**

Pursuant to **Advertisement No.5038/OSSC; dated 26.12.2023**, it is informed to all concerned that the ONLINE APPLICATION FORM for recruitment to **35 posts of Statistical Assistant** under Directorate of Agriculture & Food Production, Govt. of Odisha shall be made available on the official website of the Commission "[www.osscc.gov.in](http://www.osscc.gov.in)" as per programme revised as follows due to unavoidable circumstances:-

	Starting Date	Closing Date
Online Registration	10.01.2024	09.02.2024
Submission of Online Application Form	10.01.2024	12.02.2024
Date of Editing of Online Application Form	10.01.2024	14.02.2024
Mode of apply	Online Mode only through the website <a href="http://www.osscc.gov.in">www.osscc.gov.in</a> . No Physical copy/Hard copy of the online application form needs to be submitted by the applicant.	

The candidates may go through the detailed advertisement available in the "What's New" section of the above website and apply for the post online mode only within the above stipulated time by clicking on the "Apply online" tab available on the Home page.

Clause-1 of the advertisement is amended as such keeping all other terms and conditions of the advertisement unaltered.

*By order of the Commission*

*Secretary*  
02.01.2024





**ODISHA STAFF SELECTION COMMISSION**  
Unit - II, Bhubaneswar - 751001

**Advertisement No. 5038/OSSC;**

**Date: 26.12.2023**

**DETAILED ADVERTISEMENT FOR RECRUITMENT TO THE POST OF STATISTICAL ASSISTANTS UNDER DIRECTORATE OF AGRICULTURE & FOOD PRODUCTION, GOVT. OF ODISHA**

**(POST CODE: 29)**

**(WEBSITE: [www.osscc.gov.in](http://www.osscc.gov.in))**

**1. Application Invited:**

	<b>Start Date</b>	<b>End Date</b>
Online Registration	03.01.2024	02.02.2024
Submission of Online Application Form	03.01.2024	05.02.2024
Date of Editing of Online Application Form	03.01.2024	07.02.2024
Mode of Application	Online Mode only through the website " <a href="http://www.osscc.gov.in">www.osscc.gov.in</a> ". No Physical copy/Hard copy of the Online Application Form needs to be submitted by the applicant.	

- a. Applications are invited through online mode only through the website "[www.osscc.gov.in](http://www.osscc.gov.in)" for recruitment to fill up the vacancies reported by the Requisitioning Authority is as follows.

<b>Sl. No</b>	<b>Name of the Post/ Services</b>	<b>Name of the Department/ Heads of Department in which vacancy exists for this recruitment</b>	<b>Total No. of Vacancy</b>	<b>Classification of Posts</b>	<b>Pay Matrix Level &amp; Scale of Pay (as per 7<sup>th</sup> Pay Commission)</b>
1	Statistical Assistant	Directorate of Agriculture & Food Production	35	Group-B	Level-9 of ORSP, 2017

- b. Candidates must possess a valid e-Mail Id and Mobile number while applying for the post and keep the same active till the completion of this recruitment process, to receive important messages from the Commission.
- c. The examination fee has been exempted for all categories of candidates as per G.A. & P.G. Department Notification No.9897/Gen, dtd.11.04.2022.
- d. Appointments shall be on regular basis carrying the level of Pay as mentioned in the table above. The appointment shall be guided by "Odisha Group-'B', 'C' and Group-'D' Posts (Repeal and Special Provisions) Rules, 2022 notified vide Govt. in GA and PG Department Notification No. 29076 dated 16<sup>th</sup> October 2022.



*Signature*

- e. Candidates should ensure that they fulfil all the eligibility criteria prescribed for the post as laid down in the advertisement. Admission of a candidate to the written examination & other tests shall be provisional and on the basis of information furnished by her/him in the Online Application Form.
- f. Online applications submitted to OSSC found to be incomplete in any respect are liable for rejection without entertaining any correspondence with the applicants on that matter.
- g. If at any stage of recruitment or thereafter, it is found that any information furnished by the candidate in her/his Online Application Form is false/incorrect or the candidate has suppressed any relevant information or the candidate otherwise does not satisfy the eligibility criteria prescribed for the post, her/his candidature for the posts shall be cancelled. She/ He may further be debarred either temporarily or permanently from the recruitment examination(s) conducted by the Commission.
- h. No Admission Letter for recruitment at any stage shall be sent by post. The candidates are therefore advised to be in touch with the Commission's website [www.osscc.gov.in](http://www.osscc.gov.in) regularly to know updates regarding the date of examination, downloading of Admission Letter and to know the status of their applications etc.
- i. The candidates are advised to submit the Online Application Form well in advance without waiting for the closing date to avoid the last-hour rush.

**NOTE: Important instructions to candidates about filling up of Online Application and "How to Apply" is enclosed as Annexure-A to this advertisement.**

**2. a. Category-wise break -up of vacancy positions along with reservation thereof:**

Sl. No	Name of the Posts/ Services	Name of the Department	Category wise Vacancy				
			UR (Out of which women)	SEBC (Out of which women)	SC (Out of which women)	ST (Out of which women)	Total (Out of which women)
1	Statistical Assistant	Directorate of Agriculture & Food Production	17 (w-06)	04 (w-01)	06 (W-02)	08 (w-03)	35 (w-12)

**NOTE: 1 Candidates belonging to the Transgender community are also eligible to apply.**

UR: Unreserved

SEBC: Socially and Educationally Backward Class

SC: Scheduled Caste

ST: Scheduled Tribe

W: Women



**b. Special Category vacancies reserved for the following posts only:**

Name of the Posts/ Services	Special Category				
	Ex- Servicemen (ESM)	Sports Person	Persons with Disability (PwD)		
			Total PwD Vacancy	Category of PwD and Nos. of Vacancies	Benchmark Disability
Statistical Assistant under Directorate of Agriculture & Food Production	01	01	01	Cat-II	Hard of Hearing with Suitable Aid (HI)

**NOTE:**

- I. As per the Social Security & Empowerment of Persons with Disabilities Department, Govt. of Odisha Resolution No.1843/SSEPD Dtd.25.02.2021, the PwD candidates having the above Benchmark Disability of permanent nature and having Disability not below 40% in the above categories shown in the table shall be eligible to apply for the above post.
- II. **Physical Requirement & Functional Classification of PwD eligible for the post:-**

Physical Requirements	Functional Classification
S-work performed by sitting (on Bench or Chair) R & W-Work performed by reading/writing SE-Work performed by seeing MF-Work Performed by Manipulation of Fingers	BA- Both Arms affected- having finger dexterity and Writing ability, OL,BL(MNR) HI-Hearing Impaired (With suitable Aid)

**c. Provision for assistance of Scribe**

PwD candidates with disabilities not less than 40% of permanent nature and limitations in writing have the option to use her/his own scribe with due permission of the Commission. The intending candidates must give option for scribe in the appropriate place while filling up the Online Application Form and should have to submit the required certificate/ documents prescribed in the Advisory Notice No.3453/OSSC dated 24.10.2019 published by the Commission which is available in the website of the Commission "[www.osscc.gov.in](http://www.osscc.gov.in)".

- d. PwD candidates must ensure that they possess a permanent disability certificate and must upload the scanned copy of the original (not photocopy) UDID card issued by the competent authority.
- e. In case of non-availability of eligible/ suitable Women candidates belonging to the respective categories the unfilled vacancies of that category shall be filled up by eligible suitable male candidate(s) of the same category.
- f. The number of vacancies and reservation of Vacancies to be filled up on the basis of this recruitment are subject to change without any prior notice as per the discretion of the Commission/ the Requisitioning Authorities/ the Government.



### 3. Eligibility:

#### a. General criteria of eligibility: -

Candidates applying for the above post should be

- a citizen of India,
- of good character,
- of sound health, good physique and free from organic defects or bodily infirmity
- If married, must not have more than one spouse living
- Must be able to read, write and speak Odia fluently and:-
  - i. Must have passed Middle School Examination with Odia as language subject, or
  - ii. Must have passed HSC Examination or equivalent examination with Odia as Medium of examination in non-language subject, or
  - iii. Must have passed in Odia as language subject in the final examination of Class-VII or above from a school or educational institution recognised by the Govt. of Odisha or the Central Govt., or
  - iv. Must have passed a test in Odia in Middle English School standard conducted by the School and Mass Education Department, Govt. of Odisha.

#### b. Minimum Educational Qualification:

Candidates must have passed Degree in Arts or Science or Commerce or equivalent degree having Mathematics or Business mathematics or Statistics or Computer Application or Physics or Economics or Applied Economics or Agriculture Economics or Agriculture Statistics as one of the main Subject from any of the recognized University.

#### c. Age:

Sl. No.	Name of the post	Minimum Age as on 01.01.2023	Maximum Age as on 01.01.2023
1	Statistical Assistant	21 Years	38 Years

However, the upper age limit is relaxable by 5 years for candidates belonging to SEBC, SC, ST & all Women candidates, 10 years for candidates belonging to PwD category & the total period of service rendered in defence service in case of Ex-servicemen. PwD candidates in the ST & SC category shall be entitled to cumulative age relaxation of ten years over & above the normal relaxation specified for the category. However, a candidate who comes under more than one category shall be eligible for only one benefit of age relaxation as per rule which will be more beneficial to her/him. To be eligible, candidates not enjoying any relaxation of upper age limit must not have been born earlier than **2<sup>nd</sup> January 1985** and not later than **1<sup>st</sup> January 2002**.

- #### d. Note for Ex-Servicemen-
- Once an Ex-Serviceman has joined the Govt. Service in civil side after availing the benefit as an Ex-Serviceman for his re-employment, his ex-serviceman status for the purpose of re-employment in Govt. Jobs shall cease to exist. He can avail age relaxation only. However as per clause-4 of the O.M. No. 36034/2014-Estt. (Res) dt.14 August 2014 of Ministry of Personnel, Public Grievances and Pensions, Department of Personnel & Training,

Government of India, if an Ex-Serviceman applies for various posts before joining any civil employment, he/she can avail of the benefit of reservation as ex-serviceman for any subsequent employment, provided the applicant as soon as joins any civil employment, should give self-declaration/ undertaking to the concerned employer about the date-wise details of application for various posts for which he/ she had applied for before joining. The applicant should furnish the copy of above declaration duly endorsed by the employer on the date of Document Verification for consideration of the claim under Ex-Serviceman category.

(NOTE: Border Security Force, Indian Coast Guard, CRPF and other Para Military Forces are not within the definition of Ex-Servicemen.)

- e. The persons in Defence Forces who are to retire within six months from the last date of Online Application form are eligible to apply on obtaining NOC from the Appropriate Authority indicating there in the date of enrolment and expected date of discharge and year of service rendered in Defence Forces. They should note that they must submit the discharge certificate on the date of certificate verification.
- f. Sports person candidates claiming reservation must submit sports ID Card issued by Director of Sports & Youth Service Department, Government of Odisha.
- g. Date of Birth entered in the High School Certificate Examination by the Board of Secondary Education, Odisha or equivalent Certificate issued by the recognised Board/Council/ by an Indian University as equivalent there to shall be acceptable by the Commission.
- h. A candidate who claims change in her/his name after having passed the High School Certificate Examination is required to furnish copy of publication of the changed name in local leading daily newspaper as well as copy of notification in the Odisha Gazette in support of her/his change of name.

**4. a. Plan and Pattern of Examination:**

The Recruitment process for the posts consists of the following stages:-

If the number of valid applications is more than **9000(Nine thousand)**, a **Preliminary Examination** shall be conducted which will be Multiple Choice questions (MCQ) to be held either through OMR Mode or CBRE Mode. Details about duration of the examination and number of questions for the Preliminary Examination will be shared in due course on the website through Notice. Syllabus of the Preliminary Examination (if conducted) is annexed at Annexure-‘C’.





**Main Written Examination:-**

The Main Written Examination will be of objective type /MCQ Type as detailed in the table below. The detail syllabus of Main Written Examination is annexed herewith in Annexure-‘C’.

Papers	Subject	Marks	No. of Questions (MCQ)	Duration
I	<b>Language</b>			
	A) English	25	25	1 hr.
	B) Odia	25	25	
II	<b>General Studies</b>			
	A) General Awareness	50	50	2hrs.
	B) Quantitative Aptitude & Reasoning	50	50	
III	<b>Technical:</b> Statistics/Economics/Mathematics	150	150	3hrs.
IV	<b>Basic Computer Education</b>	50	50	1 hr.

Details about the type of questions, mode of examination, duration of the examination, number of questions etc. will be shared in due course on the website through Notice.

**Certificate Verification:-**

Candidates numbering two (2) times of the vacancies advertised (Post Wise & Category-wise) shall be shortlisted for Certificate Verification basing on the marks secured in the Main Written Examination.

**NOTE:** In pursuance of GA & PG Department Notification No-29246, dated 18th October 2022, the Preliminary and Main Written Examination, shall be conducted both in Odia and English medium except for the language subject. The Candidate who desires to answer the paper in English shall exercise his option in the application form. All may note that the option once given cannot be changed. Options are available in the online application form.

(I) There shall be no provision for re-evaluation/ re-checking of the scores. No correspondence in this regard shall be entertained.

(II) The Commission may conduct the Preliminary examination(if conducted) and the Main Written examination with objective papers through CBRE (Computer Based Recruitment Examination) Mode. In case of CBRE mode of examination is conducted in more than one session/sitting Commission will adopt the normalization process as per the advisory Notice No.2444/OSSC dated 02.09.2021(available on the website of the Commission i.e. [www.osscc.gov.in](http://www.osscc.gov.in)) for processing the result so as to offset the difficulty level that may arise in such use of multiple set of question papers in the said examination.

(III) There will be a penalty (Negative marking) for wrong answers marked by the candidate in examinations consisting of Multiple Choice Questions. The Quantum of penalty/ negative marking will be **1/4 of total** mark for each wrong answer if four options are there, 1/3 of the total marks if three options are there and so forth.



(IV) The Commission shall prepare a list of candidates who obtain minimum qualifying marks in the Preliminary examination (if any) as fixed by this Commission in their discretion, for the next stage of the main written examination. The commission may fix different minimum qualifying marks for different category candidates (UR, SC, ST, SEBC etc.).

**The candidature of the candidates will be rejected /not considered for selection if she/he fails to attend any of the tests/examinations/Certificate Verification.**

- b. The candidates who fail to appear at any stage of the recruitment process will not be considered for final selection and their names will be deleted from the merit list.
- c. Any complaint on the conduct of the examination must be sent to the commission by email "[support.osscc@gov.in](mailto:support.osscc@gov.in)" within 05(five) days of completion of examination.

**5. Place and Date of written examination:**

- a. Tentative date for Preliminary examination (if conducted) will be in between the month of February-April, 2024. The exact Date, Time and Venue will be conveyed in due course through a Notice and/ or Admission Letter.
- b. The Date, Time and Venue of the Main written examination, CST, Certificate Verification will be conveyed to the candidates by Notice and Admission Letter(s) in due course. The Admission Letters can be downloaded by the eligible candidates by accessing the Commission's website from time to time.

**6. Certificate verification and submission of Detailed Application Form (DAF):**

Candidates numbering approximately two(2) times of the vacancies advertised (Category-wise) shall be shortlisted for Certificate Verification based on the marks secured in the Main Written Examination.

The candidates will be required to produce their Original Academic Certificates, Mark sheets, caste certificates, special category certificates, NOC in case of Govt. servants and other documents as intimated in the admission letter for verification along with a set of self-attested photocopies of the same and OSSC copy of the online application form duly signed by the applicant. **(Details are enclosed in Annexure-B).**

In case, during the stage of Certificate Verification, the Commission observes that the vacancy (ies) for a particular category of post(s) is/are not getting filled up completely, an additional number of candidates who have qualified in the order of merit shall be called **only for one more time, at the discretion of the commission** for filling up the number of vacancies not getting filled up.

**NOTE: Candidates who fail to appear for Certificate verification will not be considered for final selection.**

**7. Admission Letter:**

- a. The Commission shall upload the admission letter on its website [www.osscc.gov.in](http://www.osscc.gov.in) for the convenience of the candidates.
- b. Admission of a candidate for the written examination & other tests shall be provisional and shall be on the basis of the information furnished by her/him in the online application form.



- c. The admitted candidates will have to produce the print out of the admission letter at the venue allotted for appearing in the examination/test.
- d. The admission letter contains issue date, time and venue of the examination, and bears the photo and signature of the candidate and facsimile signature of the Secretary of Commission.

#### **8. Merit List :**

The Merit list of the candidates who are found suitable in certificate verification shall be prepared in order of merit, category-wise equal to the vacancies advertised, based on their marks secured in the Main Written Examination.

**Resolution of Tie Cases:** If two or more candidates have obtained equal marks in the aggregate, as per the OSSC Rules, 1993 the order of merit shall be determined in accordance with the marks secured by such candidates in their respective academic career and if the marks thus secured are equal then the merit shall be decided according to their seniority in age.

#### **Action against candidates found guilty of misconduct/ malpractice:**

- a. If a candidate is found to indulge at any stage in any of the malpractices/ misconduct listed below, before during or after the conduct of the examination, her/ his candidature for this examination will be cancelled and they will be debarred from the examinations of the Commission for a specified period or permanently.
  - Taking away any Examination related material such as OMR sheets, Rough Sheets, Answer Sheets etc. from the examination hall or passing it on to unauthorized persons during the conduct of examination.
  - Leaving the Examination Venue uninformed during the Examination.
  - Misbehaving, intimidating or threatening in any manner the examination functionaries i.e. Supervisor, Invigilator, Security Guard or Commission's representatives etc or any of the functionaries of the Commission (OSSC).
  - Obstruct the conduct of examination/ instigate other candidates not to take the examination.
  - Making statements which are incorrect or false, suppressing material information, submitting fabricated documents, etc.
  - Obtaining support/ influence for his candidature by any irregular or improper means.
  - Possession of Mobile Phone in either 'switched 'on' or 'switched 'off' mode during examination.
  - Appearing in the same examination more than once in contravention of the rules.
  - A candidate who is working on examination-related matters in the same examination.
  - Damaging examination-related infrastructure/ equipment.





- Appearing in the Exam with a forged Admit Card, identity proof, etc.
  - Possession of firearms/ weapons during the examination.
  - Submitting more than one application for any recruitment examination.
  - Assault, use of force, causing bodily harm in any manner Threatening/ intimidating to the examination functionaries i.e. Supervisor, Invigilator, Security Guard or Commission's functionaries or representatives.
  - Using unfair means in the examination hall like copying from unauthorized sources such as written material on any paper or body parts, etc.
  - Possession of Bluetooth Devices, spy cameras, and any other electronic gadgets in the examination hall.
  - Impersonation/ Procuring impersonation by any person.
  - Taking snapshots, making videos of question papers or examination material, labs, etc.
  - Sharing examination terminal through remote desktop software/ Apps/ LAN/ VAN, etc. or attempting the same.
  - Attempt to hack or manipulate examination servers, data and examination systems at any point before, during or after the examination.
- b. The Commission may also report the matter to Police/ Investigating Agencies, as deemed fit and the Commission may also take appropriate action to get the matter examined by the authorities/ forensic experts concerned.

**9. Commission's Decision Final:**

The decision of the Commission in all matters relating to eligibility, acceptance or rejection of the applications, penalty for false information, mode of selection, conduct of examination(s), allotment of examination centres and preparation of merit list & post allocation, debarment for indulging in malpractices will be final and binding on the candidates and no enquiry/ correspondence will be entertained in this regard.

**10. Important Instruction/Information to the Candidates: -**

- a. The candidate has to fill in the OMR answer sheet or CBRE screen correctly mentioning the Roll Number and other data as required in the place(s) indicated therein and darken the appropriate circles in Blue or Black Ball Point Pen only properly in case of OMR based Examination. If the information so furnished is incomplete or different from the application form or not darken the appropriate circle properly then ZERO mark will be awarded.
- b. In Descriptive Paper, candidate must write her/ his correct Roll Number at the prescribed place on the cover page of the Answer Book. Candidates must also affix their signature in





the relevant columns of Attendance Sheet. Answer Books not bearing Roll Number will not be evaluated and such candidates shall be awarded zero marks.

- c. Candidates shall not write any identity particulars e.g., name, Roll number, Mobile number, address, etc. inside the Descriptive Answer Book. Candidates who fail to adhere to these instructions will be awarded zero marks.
- d. There shall be no provision for re-evaluation/ re-checking of scores in the Examination. No correspondence in this regard shall be entertained.
- e. Sharing of marks with the candidate: Marks obtained by an applicant in Preliminary Examination if any and Main Examination and Computer Skill Test are proposed to be shared with him/ her after final merit list is published.
- f. This is a State Cadre post. The candidate, on selection, may be asked to serve anywhere in Odisha.
- g. If a candidate scoring more than cut-off marks at any Tier/ stage of the examination is not qualified for the subsequent stage/ final selection due to any reason, he must represent to the Commission within one month of the declaration of the result.
- h. **Applicants who are Odisha Government servant should obtain a “No Objection Certificate” from their controlling authority and upload the same with the Online Application failing which their candidature for the post will be rejected. At the certificate verification stage they must produce the original “No Objection certificate”. Those who were not Odisha Government Servants at the time of submission of application but became Government Servants subsequently during the recruitment process, must submit No Objection Certificate at the stage of certificate verification. Those Odisha Govt. servants who are unable to produce the No Objection Certificate during the Certificate Verification, will not be included in the merit list. Similarly, if any candidate hides her/ his Odisha Govt. servant status, and found to be an Odisha Govt. servant on the day of Certificate Verification or before, will not be included in the Merit List.**

By Order of the Commission

Secretary



### Annexure-A

#### **Important Instructions to Candidates about filling up Online Application:**

- Before applying, candidates must go through the instructions given in the notice of examination very carefully.
- Candidates in their own interest should submit online applications much before the closing date and not to wait till the last date to avoid the possibility of disconnection/ inability or failure to login to the OSSC website on account of heavy load on the website during the closing days or for any other reason.
- The Commission is not like to undertake detailed scrutiny of applications for the eligibility and other aspects at the time of written examination and, therefore, candidature will be accepted only provisionally. Candidates must go through the requirements of educational qualification, age, physical and medical standards etc. and satisfy themselves that they are eligible for the post(s). Copies of supporting documents will be sought at the time of Certificate Verification. When scrutiny is undertaken, if any claim made in the application is not found substantiated, the candidature will be cancelled and the Commission's decision shall be final.
- Candidates seeking reservation benefits available for SC/ ST/ SEBC/ PwD/ ESM/ Sports Person must ensure that they are entitled to such reservation as per eligibility prescribed in the Notice. They should also be in possession of the certificates in the prescribed format in support of their claim.
- Candidates with only **benchmark physical disability** mentioned in Clause-2 of the Advertisement will be considered as Persons with Disabilities (PwD) and entitled to age-relaxation/ reservation for Persons with Disabilities.
- When application is successfully submitted, it will be accepted 'Provisionally'. Candidates should take printout of the online Application Form for their own records.
- Only one online application is allowed to be submitted by a candidate for any recruitment Examination, Therefore, the candidates must exercise due diligence at the time of filling

their online Application Forms. In case, more than one application of a candidate with different registration numbers is detected, all the applications will be rejected by the Commission and his candidature for the examination will be cancelled. If a candidate submits multiple applications and appears in the examination (at any stage) more than once, his candidature will be cancelled and he may be debarred from all the examinations of the Commission.

- Before submission of the online application, candidates must check that they have filled correct details in each field of the form. After submission of the corrected/ final online application, no change/ correction/ modification will be allowed under any circumstances. Requests received in this regard in any form like Post, Fax, Email, by hand, etc. shall not be entertained by the Commission and will be summarily rejected.
- The candidates must write their name, Date of Birth, father's name and mother's name as given in the Matriculation Certificate otherwise their candidature may be cancelled at the time of Certificate Verification or as and when it comes into the notice of the Commission.
- Applications with blurred/ illegible Photograph/ Signature will be rejected.
- Candidates must fill their correct and active e-mail addresses and mobile number in the online application as correspondence may be made by the Commission through e-mail/ SMS.
- Candidates may fill their correct Aadhaar number.
- Candidates must carry two passport size recent colour photographs and one original valid Photo ID Proof such as Aadhaar Card/ printout of E-Aadhaar, Driving License, Voter Card, PAN Card, Identity Card issued by University/ College/ Government, Employer ID Card, ESM Discharge Book issued by Ministry of Defence or any photo-bearing ID card issued by Central/ State Government to the Examination Venue, failing which they will not be allowed to appear for the same. If Photo Identity Card does not have the Date of Birth printed in it, then the candidate must carry an additional original certificate in proof of her/ his Date of Birth. In case of mismatch in the date of birth mentioned in the Admission Certificate and Photo ID/ Certificate brought in support of date of birth, the candidate will not be allowed to appear in the examination. PwD candidates availing the facility of scribes shall also be required to carry required Medical Certificate/ Undertaking/ Photocopy of the Scribe's Photo ID Proof, as specified in advisory Notice No.3453/OSSC dated 24.10.2019 available in the website of the Commission.
- In case of fake/ fabricated application/ registration by misusing any dignitaries name/ photo, such candidate/ cyber cafe will be held responsible for the same and liable for suitable legal action under Cyber/ IT act.

**How to Apply:**





- The applicants should go through this detail advertisement before filling up the online application form.
- The candidate may apply for the post as per her/his eligibility as per terms of the advertisement.
- All eligible candidates have to register themselves by clicking on “APPLY ONLINE” button on the home page of the Commission’s website [www.osscc.gov.in](http://www.osscc.gov.in).
- Those candidates who are applying for the first time have to register for the post by clicking on “NEW USER” button shown on the screen. On submitting the registration form a User Id and Password will be generated.
- On clicking “New user” or “Registered User”, instruction for filling up the Online Registration/ Re-registration and Application Forms shall appear on the computer screen. These instructions should be read carefully before proceeding with filling up the Application Form.
- Step-by-step procedure for registration/ re-registration can be viewed by clicking on “Instruction to fill up Online Application Form”.

**Pre-requisites for filling up Online Application Form:**

- Applicants should possess and maintain a valid e-Mail Id and Mobile Number for accessing the OSSC web portal and to make Online Registration/ Re-Registration and Application Form. Candidates should keep that e-mail Id and Mobile Number (used by them during registration) active so as to receive all important communication from the Commission till publication of the final result of this recruitment examination.
- Recent Passport size Colour Photograph of the Applicant, scanned in “jpg/jpeg” format with file size range of 20 kb to 100kb may be kept handy for uploading during Registration.
- Full Specimen Signature & Left /Right Thumb Impression of the Applicant, scanned in “jpg/ jpeg” format ranges up to 20 kb shall be kept handy for uploading during Registration.
- Scanned document must be in “Pdf” format between ranges of 100kb to 500 kb.
- Applicants may keep their required Certificates, Mark sheets, Aadhaar Number & other documents ready while filling up the details of the educational qualification & other fields of Online Application Form.
- SC/ ST/ SEBC category candidates need to submit detail information of the valid online Caste Certificate issued by competent Authority in the online application form. If the valid online Caste Certificate issued by the competent Authority is not in possession of the applicants at the time of submission of the online application form, she/ he must give a self-declaration in the format appended in the online application form.



- Candidate claiming age relaxation under “Ex-Servicemen” category need to upload any one of the Ex-Servicemen Documents i.e. Discharge Certificate/ Identity card/ PPO (wherein the date of entry, date of discharge and period of service rendered in Defence Forces have been reflected). Ex-Servicemen who is going to retire within six months from the closing date of online application may apply for the post by obtaining “No Objection Certificate” from the appropriate authority mentioning therein the date of appointment, date of retirement and years of service rendered in Defence Forces. However, such candidates have to submit the discharge certificate on the date of certificate verification for considering their claims under Ex-Servicemen category. The scanned document must be in “Pdf” format between ranges of 100 kb to 500 kb.
- Candidates claiming reservation/ age relaxation under “PwD (Persons with Disabilities)” category need to upload a valid online PwD certificate issued by Unique Disability Identification (UDID). The scanned document must be in “Pdf” format between ranges of 100kb to 500 kb.
- Candidate claiming reservations under Sports Person category need to **upload sports identity card issued by Director of Sports and Youth Service Department, Odisha**. The scanned document must be in “pdf” format between ranges of 100kb to 500kb.
- The candidate should ensure that the scanned Photograph and full Signature, Left/ Right Hand Thumb Impression and other relevant documents are clearly identifiable/ visible. Otherwise, the registration and application shall be liable for rejection. No correspondence on this account shall be entertained.
- Applicants who are Odisha Government servant should obtain a “**No Objection Certificate**” from their controlling authority and upload the same with the Online Application. At the certificate verification stage they must produce the original “No Objection Certificate”. Those who were not Odisha Government Servants at time of application but became Government Servants subsequently during the recruitment process, must submit No Objection Certificate at stage of certificate verification. Non Submission of No Objection Certificate shall be treated as disqualification and the candidate shall forfeit his/her candidature for the post.
- Candidates must submit correct data/ information in the Online Application Form. If at any stage of recruitment or thereafter, it is found that any information furnished by the candidate in her/ his online application is false/ incorrect or the candidate has suppressed any relevant information or the candidate otherwise does not satisfy the eligibility criteria prescribed for the post, her/ his candidature for the post will be cancelled forthwith.



**Annexure-B**

**Document to be submitted at the time of Certificate Verification:**

- a. Downloaded copy of Admission letter for Certificate Verification.
- b. Downloaded copy of Bio-Data-cum-Attestation form duly filled and signed.
- c. Copy of the Online Application form legibly signed by the candidate at the appropriate place.
- d. HSC Certificate & Mark Sheet or equivalent certificate in support of Date of Birth, issued by the concerned Board/Council.
- e. +2/equivalent certificate & mark sheet.
- f. Bachelor's Degree pass Certificate and mark sheet of relevant subjects.
- g. Caste certificate issued by the competent authority for the purpose of employment/service. (In case of ST, SC & SEBC Candidates only) SEBC category candidates must submit photocopy of valid SEBC certificate issued by the competent authority which must be within one year prior to the closing date of Online Application.
- h. Certificate either of passing HSC examination with Odia as a compulsory subject, or in lieu thereof a certificate of passing Odia of M.E. standard issued by competent authority.
- i. Photocopy of permanent disability certificate issued by UDID (by Appropriate Medical Authority) in case of PwD candidates.
- j. Discharge certificate, identity card and document indicating the period of service rendered in defence forces in case of Ex-Servicemen candidates.
- k. Sports Identity Card issued by Director of Sports & Youth Service Department, Govt. of Odisha in case of sports person candidates.
- l. NOC in case of candidates working in Government Service.

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## ANNEXURE-C

### **Detailed Syllabus of Preliminary Written Examination**

- Arithmetic– 10<sup>th</sup> Standard
- Data Interpretation (Chart, Graph, Table, Data Sufficiency etc.) – 10<sup>th</sup> standard
- Logical Reasoning and Analytical Ability, General Mental Ability.
- Current Events of National and International Importance.
- Computer / Internet Awareness.

### **Detailed Syllabus for Main Written Examination is given below:**

#### **Paper-I (Language)**

##### **(A) English**

Usage, vocabulary, Grammar (Verb, adverb, preposition, error correction/ recognition, Synonyms/antonyms), sentence rearrangement& comprehension.

##### **(B) ଓଡ଼ିଆ**

ବ୍ୟାକରଣ : କ୍ରିୟା, ଭୂମି ସଂଶୋଧନ/ ଚିହ୍ନଟ , କାଳ (ଅତୀତ /ବର୍ତ୍ତମାନ /ଭବିଷ୍ୟତ ), ଭାଷାଜ୍ଞାନ , ପ୍ରତିଶବ୍ଦ , ବିପରୀତବୋଧକ ଶବ୍ଦ , କ୍ରିୟା ବିଶେଷଣ , କତା କ୍ରିୟା ସମ୍ବନ୍ଧ ।

#### **Paper-II (GENERAL STUDIES)**

##### **(A) General Awareness**

- (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-Scientific inventions, uses of science in everyday life, issues of environment, ecology, biodiversity& climate change.
- (5) Geography of India & Odisha, Use of maps for planning and monitoring
- (6) Regional Planning & Demography
- (7) Important National & International Institutions, Organizations.

##### **(B) Quantitative Aptitude & Reasoning.**

Quantitative analysis, Basic numeracy (number and their relations, orders of magnitude), Problems on Age Calculation, Statistics & probability, Data Interpretation (Charts, Graphs, Tables, data Sufficiency, etc.), General Mental Ability, Arithmetic Reasoning, Decision making and problem solving.

**Paper-III TECHNICAL**

Optional Paper (Any one)-Statistics/Economics/Mathematics

**STATISTICS**

**UNIT-1:**

**(a) Basic Mathematics:**

Permutations and Combinations, Binomial Theorem, Logarithmic and Exponential series.

**(b) Probability-I:**

Definition of probability: Classical, Empirical and Axiomatic approach, Sample space and events, Correspondence between sets and events, Probability by direct enumeration, Laws of addition and multiplication, Conditional probability and independent events.

**(c) Probability-II:**

Bayes' rule and its application, pairwise independence and mutual independence of events, Mathematical expectation of random variable, Laws of addition of expectation, Multiplication law of expectation for independent random variables, variance of sum of random variables.

**UNIT-II:**

**(a) Statistical Methods**

Definition, Scope and Limitations of Statistics, Collection of data: Primary and Secondary data, Classification of data according to attributes and variables. Tabulation of data, One-way and two-way tables. Presentation of data: Diagrams, Graphs and charts, Simple, multiple, sub-divided and percentage Bar-diagram, Pie-diagram, Pictogram and Cartograms, Histogram, Frequency polygon, Frequency curve and Ogives.

**(b) Frequency distribution, Measures of central tendency and measures of location:**

Arithmetic mean, Geometric mean, Harmonic mean, Median, Mode, Quartiles, Deciles and percentiles.

**(c) Measures of dispersion:**

Range, Inter-quartile range, Quartile Deviation, Mean absolute deviation, Standard deviation, coefficient of variation and Lorenz curve.

**(d) Moments, Skewness and kurtosis:**

Raw and central moments of various orders, Skewness and its different measures, kurtosis, Beta one ( $\beta_1$ ) Beta two ( $\beta_2$ ) Gamma one ( $\gamma_1$ ) and gamma two ( $\gamma_2$ ) measures.

**UNIT-III**

**(a) Sampling methods:**

Sample, population, sampling units, sampling frame, Principal steps in sample survey, Census versus Sample survey, Idea about questionnaires and schedules, sampling non-sampling errors, Elementary idea on simple random sampling with and without replacement.

Methods of drawing random samples: Lottery method and random number table method, Estimation of population mean and population total, Variance of these estimates.

**(b) Stratified Sampling:**

Elementary idea on stratified random sampling, Proportional and optimum allocation, Estimation of population mean and population total, Variance of these estimates.

**(c) Statistical system in India:**

Statistical organizations in the Union and State Governments, Agricultural statistics (Area, yield and Land Utilization statistics), Population Census, National Sample Survey.

**Unit-IV: Time Series**





Definition, uses and components of time series, measurement of trend: Freehand, semi- average, moving average and least squares methods, Measurement of Seasonal fluctuations: simple averages, Ratio to trend, Ratio to moving average and link relatives methods.

### **Unit-V: Index Number**

Need, meaning & uses of index number, important steps in the construction of Index Number, Problems in selection of items, base year, average and system of weighting. Weighted Index number, Laspeyre's, Paasche's and Fisher's ideal index numbers. Time Reversal, Factor Reversal and circular tests, Base shifting, splicing and Deflating of Index number, Cost of living index numbers- construction & uses.

### **Unit-VI:**

- (a) Bivariate frequency distribution, simple correlation, Rank correlation (including ties), linear regression, Regression co-efficients and their properties. Probability Distributions: Binomial and Poisson distributions with properties and applications (computation of mean and variance only)
- (b) Normal probability distribution, its properties and applications (mathematical proof excluded), Elementary ideas on testing of hypothesis, large samples tests based on normal distribution (mean, variance and proportion).

## **ECONOMICS**

Indian Economic Development and Elementary Statistics

### **1 . Status and Structure of Indian Economy**

- (a) Status of Indian Economy on the eve of Independence.
- (b) Basic characteristics of Indian economy.
- (c) Structural changes in the Indian economy; Relative contributions of Primary, Secondary and Tertiary sectors.
- (d) Infrastructure and its role in the Indian economy - Economic Infrastructure (Energy, Transport and Communications), Social Infrastructure (Education and Health).

### **2. Sectoral Development, Planning and Economic Reforms.**

- (a) Agriculture - its importance, causes of low productivity, and Green Revolution; Present Agricultural situation.
- (b) Industry its importance, Industrial policy of 1948, 1956 and 1991.
- (c) (d) Foreign trade-its role, composition and direction, Export-import Policy. Objectives and goals of Five Year Plans.
- (e) Economic Reforms since 1991-need, main features of Liberalisation, Privatisation and Globalisation.

### **3. Current challenges facing the Indian Economy.**

- (a) The population problem - Demographic features, causes of population growth, adverse effects of population growth, and population control.
- (b) Poverty - Absolute and Relative poverty, causes of poverty, and poverty alleviation programmes.
- (c) Unemployment - Types of unemployment, causes of unemployment and measures to solve them.
- (d) Inflation-problems and policies.
- (e) Sustainable Development - Meaning, indicators, effects of economic growth on environment, and the problem of global warming.

### **4. Introductory Statistics.**

- (a) Meaning, scope, importance and limitations of statistics.
- (b) Sources of statistical data - Primary and Secondary, NSSO and Census of India as sources of secondary data
- (c) Methods of data collection - census and sampling methods and their relative merits and demerits.
- (d) Meaning and types of variables, frequency distribution.
- (e) Tabular and Diagrammatic presentation of data, Bar diagram, Pie diagram, Histogram, Polygon, Ogive, Time series graph.

### **5. Statistical Methods.**

- (a) Measures of Central Tendency-Simple and weighted arithmetic mean, median

and mode.

(b) Measures of dispersion-Absolute measures: Range, Quartile Deviation, Mean Deviation and Standard Deviation and their merits and demerits.

(c) Relative Measures: Coefficient of Range, Quartile Deviation, Mean Deviation and Standard Deviation.

(d) Lorenz Curve: Meaning and application.

(e) Correlation - Meaning, Types, Karl Pearson's Method of computing correlation coefficient in the context of

### **Elementary Micro and Macro Economics**

#### **1. Basics of Microeconomics and Consumer Behaviour.**

(a) Meaning of Economics and Microeconomics.

(b) Central problems of an Economy-Scarcity- and Choice; What; how and for whom to produce?

(c) Basic concepts - Human wants, Utility, Goods, Value, Price and Wealth.

(d) Laws of Consumption - Marginal and Total utility, Law of Diminishing Marginal Utility, Law of Equimarginal utility.

(e) Demand - Meaning and determinants, Law of demand, Movement along and shifts in demand curve, Price elasticity of demand and its determinants.

#### **2. Production, Cost, Revenue, Supply and Forms of Market.**

(a) Meaning of production and production function; Total, Average and Marginal Product; Law of Variable Proportions.

(b) Cost-Money and Real cost; Implicit and Explicit cost; Opportunity Cost; Fixed and Variable costs;

(c) Total, Average and Marginal costs in the short run and their relationship.

(d) Revenue- Total, Average and Marginal Revenue and their relationship.

(e) Supply - Meaning and Law of supply.

(f) Market - Meaning, Forms of Market: Pure and Perfect competition, Monopoly, Monopolistic Competition and Oligopoly; Price Determination under perfect competition; market price and normal price.

#### **3. Distribution.**

(a) Meaning of Distribution, Ricardian Theory of Rent and Quasi-Rent, Money and Real Wages,

(b) Determinants of Real wage, Causes of Wage Differences, Gross and Net Interest, Gross and Net Profit, Constituents of Profit.

#### **4. Introductory Macroeconomics.**

(a) Meaning of Macroeconomics, Difference between Macro-and Micro-Economics.

(b) National Income - Meaning and Aggregates related to National Income (GNP, GDP, NNP and NDP at Factor Cost and Market Price), National Disposable Income (Gross and Net), Private Income, Personal Income, Personal Disposable Income, Real and Nominal GDP, GDP and Welfare, Circular Flow of Income in a

Two sector Economy, Methods of Computing National Income: Product (Value added), Income and Expenditure Methods.

(c) Income Determination-Aggregate Demand and its Components, Aggregate Supply, Simple Keynesian Theory of Income Determination,

#### **5. Money, Banking and Public Finance.**

(a) Definition and functions of money.

(b) Meaning and functions of commercial Banks, Functions of Central Bank.

(c) Meaning of Public Finance, Sources of Public Revenue, Concepts of Revenue and Capital Expenditure, Plan and Non-Plan Expenditure, Developmental and Non-Developmental Expenditure.

(d) Meaning and objectives of Government Budget, Difference between balanced and unbalanced budgets, surplus and deficit budgets.

## **MATHEMATICS**

### **Unit-I**

#### **(A) Logic:**



Statements, negation, conjunction, disjunction, conditional, biconditional and their truth tables. Tautology and equivalence of statements, implications and double Implications. Converse, Inverse, Contrapositive. Different methods of proof with emphasis on method of Mathematical induction.

**(B) Sets:**

Proofs of commutative, associative and distributive properties of set union and intersection, Difference and symmetric difference of sets. De Morgan's laws., Cardinality of sets, similar sets, cartesian product of sets, cartesian plane and its representation by  $\mathbb{R} \times \mathbb{R}$ ., Representation of 3-dimensional space by  $\mathbb{R} \times \mathbb{R} \times \mathbb{R}$ .

**(C) Real number system and Inequalities:**

Natural numbers and Integers, Arithmetic of Integers, Prime numbers, Rational and Irrational numbers, Real numbers, Algebraic properties of real numbers, ordering in  $\mathbb{R}$ , Absolute value, Triangle inequality, AM > GM. Inequality (simple cases). Solution of linear inequation in one variable.

**(D) Quadratic Polynomials:**

- (i) Roots of quadratic polynomial, factorisation of quadratic polynomial,
- (i) Maximum and minimum values of quadratic polynomial for all real values of the variable.
- (a) Sign of quadratic polynomial for real values of the variable.
- (iv) Solution of quadratic inequations.
- (v) Graph of Quadratic polynomial of the form  $ax^2 + bx + c = 0$

**(E) Complex number system:**

- (i) Complex number and their algebraic properties, Argand plane and geometrical representation of complex numbers, modulus, argument and conjugate of complex numbers. Triangle inequality.
- (ii) Square roots of a complex number, cube roots of unity and their properties.
- (iii) Statement and proof of De-Moivre's theorem for integral index: Statement for rational index and its application.

**Unit-II**

**(A) Relation**

- (i) Definition, domain and range of a relation, inverse of a relation, types of relation.
- (ii) Relation in a set, equivalence relation, congruence modulo relation on the set of integers.
- (iii) Equivalence classes and partition of a set through examples only.

**(B) Function:**

- (i) Definition, domain, range of a function, injective, surjective and bijective functions.
- (ii) Equality of functions, composition of functions, inverse of a function, odd and even functions,
- (iii) Real valued function of a real variable.
- (iv) Domain, range and graph of the following functions with simple properties, trigonometric and inverse trigonometric functions,  $a^x$ ,  $\log_a x$  for  $a > 1$  and  $0 < a < 1$ ,  $\exp$ ,  $\ln x$ ,  $[x]$   $[x]$ .  $\text{sgn}(x)$ .

**(C) Limit and continuity:**

Limit of function ( $\hat{\epsilon}$ - $\delta$  definition only), left-hand limit, right hand limit, infinite limit, limit at infinity, Algebra of limits (without proof), continuity, limits and continuity of trigonometric functions,  $a^x$ ,  $\log_a x$  and composite functions. (Details of proof for continuity, of  $a^x$ ,  $\log_a x$  and composite functions excluded)

**(D) Differentiation:**

Derivatives, its geometrical and physical meaning, algebra of derivatives, derivatives of algebraic polynomial and trigonometric functions from first principle, relation between continuity and differentiability.

**Unit-III**

**(A) Trigonometry:**

- (i) Periodicity of trigonometric functions.
- (ii) Trigonometric ratios of compound, multiple and sub multiple angles and standard trigonometric formulae.
- (iii) Trigonometric equations and their general solutions,
- (iv) Properties of triangles,

(v) Inverse trigonometric functions.

**(B) Sequence and series:**

(i) Definition of sequence and series.

(ii) Infinite geometric series, Arithmetico-geometric series.

(iii) Exponential and logarithmic series.

**(C) Statistics:**

Measures of dispersion, mean deviation, standard deviation and variance, co-efficient of variation, co-efficient of correlation.

**(D) Number system:**

(i) Decimal, binary, octal and hexadecimal number systems,

(ii) Conversion of a number from one system to the other,

(iii) Binary arithmetic.

**Unit-IV: Co-ordinate Geometry of two Dimensions.**

**(A) Straight line:**

Rectangular co-ordinate system, distance and division formula, Area of a triangle, slope of a line, Angle between lines. Locus of an equation and equation of a locus. Equation of a straight line in different forms. Reduction of the general form to different forms. Distance of a point from a line. Condition for concurrency of three straight lines, Family of straight lines, equation of bisectors of angles between two straight lines, Pair of straight lines of the forms  $ax^2+2hxy+by^2=0$  and  $ax^2+2hxy+by^2+2gx+2fy+c=0$ . Angle between the pair of straight lines. Change of axes (translation only).

**(B) Circle:**

Definition and equation of a circle. Tangent and Normal to a circle. Condition of tangency. System of circles, (Angle between two circles and condition of orthogonality) Equation of a circle in parametric form.

**(C) Conic Section:**

Standard cartesian form of equation of parabola, ellipse and hyperbola, and their equations in parametric form. Equations of tangents and normals. Condition of tangency, rectangular.

**Unit-V**

**(A) Differential Calculus:**

Derivatives of composite functions (chain rule), Inverse trigonometric functions, Implicit functions, exponential and logarithmic functions, Logarithmic differentiations, Derivatives of functions represented by parametric forms, successive differentiation. Leibnitz theorem (Statement only) & its application in problems. Partial derivatives, Euler's theorem (without proof) and its simple applications.

**(B) Applications of Derivatives:**

Rate of change, Increasing and decreasing functions, tangents and normals, approximations, maxima and minima (simple problem), Rolle's theorem, Lagrange's and Cauchy's Mean value Theorem (without proof) Geometrical interpretations of Rolle's and Lagrange's theorem and their simple applications, Indeterminate forms, L Hospital's rule (without proof) and its applications.

**Unit-VI**

**(A) Integral Calculus**

Anti-derivatives, Indefinite integrals, Standard integration formulae, algebra of integrals, Integration by method of substitution, by parts, by partial fractions and integration of rational and irrational algebraic functions and trigonometric functions. Definite-integral, fundamental theorem of integral calculus (Statement only), Elementary properties of definite integrals, Walli's formula. Evaluation of areas of plane regions bounded by simple curves using definite integral.

**(B) Differential Equations:**

Definition, order, degree, general and particular solutions of a differential equation, formation of differential equation. Solutions of differential equations by method of separation of variables,



homogeneous differential equations of first order and first degree, linear differential equations of the form.

$p \cdot x \cdot y \cdot x$   
 $dx$

$dy$  Solutions of differential equations of the form  $( )^2$   
 $2$

$fx$   
 $dx$   
 $dy$

### **Unit-VII:**

#### **(A) Vectors:**

Vectors and scalars, Types of vectors, algebra of vectors, position vector of a point, Resolution of a vector into components. Scalar (dot) product of two vectors and its geometrical meaning, Commutative and distributive properties of dot product, vector (cross) product and its geometrical meaning, properties of vector product (without-proof) Scalar triple product and vector triple product with simple applications.

#### **(B) Three Dimensional Geometry**

Co-ordinate axes and co-ordinate planes, co-ordinates of a point, distance between two points, division formula. Direction cosines and direction ratios of a line. Projection of line segment on another line, Angle between two lines, Definition of a plane and its equations in different forms. Transformation of the general form to normal form. Angle between two planes, Distance of a point from a plane, System of planes. Equation of a plane bisecting the angle between two planes. Symmetrical and un-symmetrical form of equation of a line and transformation of unsymmetrical form to symmetrical form. Condition of coplanarity of two lines, Angle between a line and a plane, Distance of a point- from a line.

Definition and equation of a sphere in standard form. Sphere through four non-coplanar points. Equation of a sphere when end points of a diameter are given.

#### **(C) Linear Programming**

Introduction to Linear Programming Problem (LPP), Graphical solution of system of linear equations in two variables. (upto three constraints)

### **Unit-VIII**

#### **(A) Determinants and Matrices:**

Determinants up to order three, Minors and Co-factors, properties of determinants, Cramer's rule. Matrices, Algebra of matrices, transpose and inverse of a matrix, solution of system of linear equations in two or three variables by matrix inversion method.

#### **(B) Permutation, Combination and Binomial Theorem:**

Counting principle, Permutations and combinations (with and without repetition) Statement of Binomial theorem for any rational index and proof of this theorem for positive integral index and identities involving binomial co-efficients.

#### **(C) Probability:**

Basic concepts of probability, Conditional probability and independence Compound events, Random variable and probability Distribution (Binomial distribution only)

### **PAPER-IV BASIC COMPUTER EDUCATION (THEORY)**

**50 marks**

**1 Hr**

#### **UNIT-1: Computer Fundamentals:**

Necessity and uses of computer, what is computer?, Computer as a system, problem and problem solving technique, Important terminology, Input-Output devices, types of computer, (Digital, Analog, Hybrid, Super computer, Main Frame, Mini, JC, Note Book, and Laptop). Generation of Computer, Computer Memory, (Main, Secondary, virtual. Buffer, Cache,) Computer Languages and its types.

#### **UNIT-II: Operating System:**

Types, software, Dos and Windows: Fundamentals and Commands, Security and Anti- virus  
Introduction to

**MS-OFFICE:**

**MS-WORD:** Creating a File, setting and typing text, page formatting. editing, printing, saving the files, creating Folders, Insertion tables and objects, Bulleting, Page Numbering, spell check, indenting, paragraph setting and mail merge, CD writing.

**MS-EXCEL:** Spread sheet and its uses, an introduction, formatting work sheet, setting columns/Rows, range, Format, protect, sorting, types of graphs, functions and formula, printing text, copying and saving the document.

**MS-POWER POINT:** Features, Uses, Menus, Toolbars, creating a presentation through auto context wizard, templates, manual slides show, saving, deleting, opening a presentation, Editing.

**MS-ACCESS:** Data base, data base Management system, RDBMS, advantages and limitations of MS-Access, parts, tables, Integrity constraints, relationship and designing tables.

**UNIT-III: INTERNET AND COMPUTER SECURITY:**

Introduction to Internet, net browsing, Emails, Networking and its types, topology.

computer crime, components required for internet, saving and printing the web files.

APLLICATIONS: in Education, Medical Science, Business, Entertainment, Social services and Research etc.

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