



UTTAR PRADESH PUBLIC SERVICE COMMISSION

Advertisement No.-

A-9/E-1/2024

Date: 17.12.2024

Combined State Engineering Services (General/Special Recruitment) Examination - 2024

Date of Commencement of On-line Application: 17.12.2024

Last Date for Receipt of Examination Fee in the Bank and Submission of On-line Application: 17.01.2025

Last Date for Fee Reconciliation & Correction/Modification in submitted On-line Application: 24.01.2025

IMPORTANT

(1) (a) It is mandatory for the candidates to make One Time Registration (O.T.R.) and obtain O.T.R. Number before applying online.

(b) Those Candidates who have not obtained O.T.R. Number, may obtain it from commission's website <https://otr.pariksha.nic.in> in 72 hours before the submission of Online application.

(c) Only after obtaining O.T.R. Number a candidate may submit online application through commission's website <https://uppsc.up.nic.in>.

(2) At the time of online application the candidates are directed to ensure the preservation of information regarding all the stages (i.e. O.T.R., Fee payment, Final submission, Qualification related modification/Error correction etc.) in Soft/Hard copy for future references.

(3) It is clarified to the candidates that at the stage of Preliminary examination, the hard copy of the documents and On-line application should not be sent to the Commission.

(4) The candidates must send hard copy of their on-line applications and enclose self attested copies of all marksheets and certificates in support of their claims rendered in the online application when asked for. In this connection, a separate press communique shall be published in due course by the Commission.

SPECIAL NOTICE:-

(a) The candidates will be entirely responsible for on-line submission of application. The application of the candidate will be accepted only after the payment of the fee in the bank till the last date of fee submission.

(b) Candidates are also directed to visit the website of the commission for updates. All future information/instructions will be sent to the candidates on their mobile number and email ID as linked in O.T.R. by SMS or email.

1. IMPORTANT INFORMATION FOR CANDIDATES APPLYING ONLINE

This advertisement is available on the website of the commission <https://uppsc.up.nic.in>. 'O.T.R. BASED APPLICATION' system is applicable for applying against this advertisement. Application sent through any other medium will not be accepted. Therefore candidates have to apply online only.

The candidates applying online are expected to go through the following instructions thoroughly and apply accordingly:- When the candidate clicks on the "ALL NOTIFICATIONS/ ADVERTISEMENTS" in the Commission's website <https://uppsc.up.nic.in>, the 'ONLINE ADVERTISEMENT' will automatically be displayed, which has following 3 parts:-

(i) User Instructions

(ii) View Advertisement

(iii) Apply

The Instructions for filling Online form have been given in User Instructions. The candidates desirous to see the respective advertisement will have to click on "View Advertisement". Thereafter, a full advertisement will be displayed along with Sample Snapshots of Online Application procedure.

'Online Application' will be completed in four Stages:-

First Stage:- On clicking 'Apply', 'Authenticate with O.T.R.' will be displayed with respect to the examination and on clicking 'Authenticate with O.T.R.', 'Have You Completed Your O.T.R. Registration' will be displayed, in which the candidate will have to tick 'Yes' or 'No'. If the candidate:-

(i) Ticks on 'Yes' and clicks on 'Go' button, 'Enter your O.T.R. Number' will be displayed wherein he/she has to fill O.T.R. Number and click on 'Proceed' button. On clicking 'Proceed' button, 'Click here to Authenticate' will be displayed, clicking whereupon the candidate may authenticate through O.T.P. received on his/her registered mobile no./email ID or O.T.R. password. Having completed the process of Authentication, all personal details of the candidate (as filled in O.T.R.) will be displayed automatically. The candidate will have to fill only essential qualification as required for the post.

(ii) Ticks on 'No' and clicks on 'Go' button:- (a) First of all, the candidate has to obtain One Time Registration Number from O.T.R. Web-portal (<https://otr.pariksha.nic.in>) of the Commission. (b) After obtaining O.T.R. number the candidate will have to apply online according to the process adopted in First Stage.

Second Stage:- The First Stage procedure having been completed the 'Applicant Dashboard' will automatically be displayed on the screen. The candidate will have to click on 'Submit Details' under 'Application Part-2' against applied post, thereafter the permanent and correspondence address along with application form will automatically be displayed on the screen from O.T.R. along with the preferential qualifications prescribed for the post. The candidate will have to choose Yes/No option against each preferential qualification according to his/her eligibility for the same.

Third Stage:- After the completion of the procedure of second stage, 'Fee Confirmation Window' will automatically be displayed on the screen under which upon clicking on 'Yes' option in front of 'Proceed for fee payment' Home page of 'SBI MOPS' will be displayed comprising of 03 modes of payment:- (i) NET BANKING (ii) CARD PAYMENTS and (iii) OTHER PAYMENT MODES.

After payment of the required fee by any one of the above prescribed modes, 'Payment Transaction Slip' shall be displayed alongwith detail of fee payment, the print of which must be taken by clicking on 'Printer Icon'. In the event of 'Payment Failed' the candidate has to go to 'Candidate Dashboard Login' and after filling the O.T.R. number proceed to authenticate through O.T.P. or O.T.R. password and click 'Pending Payment' to pay the fee, compulsorily for online application.

Note:- It is mandatory to make payment in the 'ONLINE APPLICATION' Process by the candidate till the last date and time fixed for it. Candidates should take a print out of the same and keep it safe.

Fourth Stage:- After completing the procedure of the Third Stage the application form of the candidate will automatically be displayed on screen the print of which may be obtained by the candidate. The candidate will have to take the print of online application and keep it safe with himself/herself to produce it in the office of the commission when required in case of any discrepancy, else his/her request/claim will not be accepted. After applying, in case of any modification in the qualification of applied post, the candidate may click on 'Candidate Dashboard Login' of 'Home Page' to modify it only once till last date and time fixed for it.

Special Instructions

(1) अभ्यर्थियों द्वारा ऑनलाइन आवेदन करने की अंतिम तिथि/संशोधन तिथि तक ही श्रेणी, उपश्रेणी, डोमीसाइल, लिंग, जन्मतिथि, ई-डब्ल्यूएस, क्रीमीलेयर, नाम व पते का जो दावा किया जाएगा, वही मान्य होगा। अन्तिम तिथि के बाद कोई भी परिवर्तन संबंधी प्रत्यावेदन स्वीकार नहीं होगा। गलत सूचना प्रस्तुत करने पर अभ्यर्थन निरस्त माना जाएगा।

(2) Incomplete Online Application-Form shall be rejected and no communication in this regard shall be entertained.

(3) If at any stage, it comes to the knowledge of the commission that the candidate has

concealed or misrepresented any information, his candidature shall be rejected and proceeding to debar him from future examinations and selections shall be initiated.

(4) As per decision of the UPPSC a candidate will be liable to be debarred from this examination and all other future examinations and selections upto a maximum period of five years for furnishing any wrong information in his/her application form which cannot be substantiated by relevant documents or for any other malpractice.

(5) If any change is to be made in the personal detail mentioned in the O.T.R. it will be mandatory to Synchronise it on the Dashboard after that change. Otherwise change will not be allowed. In this regard any on-line /off-line representation will not be accepted for error correction/amendment. Incomplete application will be cursorily rejected and no correspondence will be entertained in this regard.

(6) The candidature of such candidates who are subsequently found ineligible according to the terms laid down in advertisement will be cancelled and their any claim for the Examination will not be entertained. The decision of the Commission regarding eligibility of the candidates shall be final.

(7) The Application/candidature will be rejected/cancelled if wrong date of birth is mentioned, candidate is overage or underage, does not possess the minimum educational qualifications, applications received after last date and cases of no signature under declaration in the format.

(8) The Commission may admit the candidates provisionally after summarily checking their applications but if it is found at any stage that applicant was not eligible or his/her application was not found entertainable initially, his/her candidature will be rejected and if the candidate is selected and recommended by the Commission, the recommendation made by the Commission for the appointment shall be withdrawn.

(9) In the event of involvement of a candidate in the concealment of any important information, pendency of any case/criminal case, conviction, more than one husband or wife being alive, submission of facts in a distorted manner, malpractice, canvassing for candidature/ selection etc, the Commission reserves the right to reject the candidature and debar him from appearing in the examination in question and in all other future examinations and selections.

2. Application Fee:- After completing the process of First and Second Stage in the online application process, deposit the fee category wise as per the instructions given in the Third stage. The prescribed fee of preliminary Examination for different categories is as under:-

(i) Unreserved/Economically - Exam fee Rs. 100/- + On-line

Weaker Sections/other processing fee Rs. 25/-
Backward Classes Total = Rs. 125/-

(ii) Scheduled Castes/ - Exam fee Rs. 40/- + On-line
Scheduled Tribes processing fee Rs. 25/-
Total = Rs. 65/-

(iii) Persons with disabilities - Exam fee NIL + On-line
(PWDs) processing fee Rs. 25/-
Total = Rs. 25/-

(iv) Ex-Servicemen - Exam fee Rs. 40/- + On-line
processing fee Rs. 25/-
Total = Rs. 65/-

(v) Dependents of the - According to their original
Freedom Fighters/ category
Women/Skilled Player

3. The U.P. Public Service Commission shall hold Preliminary Examination at various Centres for selecting suitable candidates for admission to the Combined State Engineering Services Main Examination. The Main Examination shall be conducted separately by the commission. The selection will be made on the basis of total marks obtained by the candidates in the Main Examination and Interview. The Date and Centre of Examination, decided by the Commission, will be intimated to the candidates by means of their e-Admission Certificate.

4. No. of vacancies:- Presently the number of vacancies is 604 (General Recruitment-582, Special Recruitment-22), the details of which are available in Appendix-5.

Pay Scale:- Level-10 (Rs. 15600-39100/-)

Note:- In special circumstances, on the request of the Government, the number of vacancies of the above advertised posts may decrease/increase depending upon the circumstances/requirements before the result of preliminary examination.

5. Reservation:- The reservation for Scheduled Castes of U.P./Scheduled Tribes of U.P./Economically Weaker Sections candidates of U.P./Other Backward classes candidates of U.P. shall be admissible in accordance with the provisions of relevant Govt. Rules. Similarly reservation for horizontal categories as Dependents of Freedom Fighters of U.P., Female Candidates, Ex-servicemen of U.P., and P.H. of U.P. shall be permissible as per rules.

Note: (1) उ0प्र0 के समाज के दिव्यांग अभ्यर्थियों के लिए शासन द्वारा अधिसूचित (चिन्हित) किये गये पदों पर चयन के संबंध में जारी कार्यालय ज्ञाप सं0-5/2022/18/1/2008/47/का-2/2022, दिनांक 18 अप्रैल, 2022 के बिंदु-5 (अनारक्षित रिक्तियों पर नियुक्ति) में प्राविधान निम्नानुसार किया गया है- दिव्यांगता से ग्रस्त व्यक्तियों के लिए उपयुक्त चिन्हित किये गये पदों में दिव्यांगता से ग्रस्त व्यक्ति को किसी अनारक्षित रिक्ति पर नियुक्ति के लिये प्रतिस्पर्धा करने से मना नहीं किया जा सकता है अर्थात् दिव्यांगता से ग्रस्त व्यक्ति को किसी अनारक्षित रिक्ति पर नियुक्त किया जा सकता है बशर्ते कि पद संगत श्रेणी की दिव्यांगता से ग्रस्त व्यक्तियों के लिए चिन्हित किया गया हो।

(2) शासनादेश संख्या-39 रिट/का-2/2019, दिनांक-26 जून, 2019 द्वारा शासनादेश संख्या-18/1/99/का-2/2006, दिनांक-9 जनवरी, 2007 के प्रस्तर-4 में दिये गये प्राविधान, 'यह भी स्पष्ट किया जाता है कि राज्याधीन लोक सेवाओं और पदों पर सीधी भर्ती के प्रक्रम पर महिलाओं को अनुमन्य उपरोक्त आरक्षण केवल उत्तर प्रदेश की मूल निवासी महिलाओं को ही अनुमन्य है', को रिट याचिका संख्या- 11039/2018 विपिन कुमार मौर्या व अन्य बनाम उत्तर प्रदेश राज्य व अन्य तथा सम्बद्ध 6 अन्य रिट याचिकाओं में मा0 उच्च न्यायालय इलाहाबाद द्वारा दिनांक-16.01.2019 को अधिकारातीत (ULTRA VIRES) घोषित करने संबंधी निर्णय के अनुपालन में शासनादेश दिनांक-09.01.2007 से प्रस्तर-04 को विलोपित किये जाने का निर्णय लिया गया है। उक्त निर्णय शासन द्वारा मा0 उच्च न्यायालय के आदेश दिनांक 16.01.2019 के विरुद्ध दायर विशेष अपील (डी) संख्या-475/2019 में मा0 न्यायालय द्वारा पारित होने वाले अंतिम निर्णय के अधीन होगा।

(3) ई0डब्ल्यूएस0 श्रेणी के अभ्यर्थियों द्वारा उनके श्रेणी का प्रमाण-पत्र कार्मिक अनुभाग के कार्यालय-ज्ञाप सं.-2019/4/1/2002/का-2/19टी0सी0-11, दिनांक 18.02.2019 के अनुरूप आवेदन करने के वर्ष के पूर्व का ही मान्य होगा।

(4) Candidates of any reserved category of U.P., if they want the benefit of reservation,

must mention their category/ subcategory (one or more than one, whichever) in the column related to O.T.R. because all the personal information will be automatically displayed in the application form from the O.T.R. (5) The Candidates claiming for the benefit of reservation/age relaxation must obtain, in support of their category a certificate issued by competent authority on the proforma available in Appendix-1 of this detailed advertisement and shall submit the same to the Commission when asked for. (6) Candidates claiming reservation/Age relaxation in more than one category will be entitled to only one concession, whichever is more beneficial to them. (7) The Scheduled Caste, Scheduled Tribes, Other Backward classes, Economically Weaker Sections (E.W.S.), Dependents of Freedom Fighter, PH., Skilled players of classified games and Ex-Servicemen candidates who are not the permanent residents of U.P. shall not be given the benefit of reservation/age relaxation. (8) In case of women candidates, the caste certificate issued from father side only will be treated valid. (9) It is mandatory for the candidates to enclose self-attested copies of all the certificates along with the application forms of Main Examination in support of the claims made by them in their application forms of Preliminary Examination regarding eligibility and category/sub category, failing which their claim shall not be entertained. 6. Conditions of Eligibility: In case of Emergency Commissioned/ Short Service Commissioned Officers (For age relaxation only):- In accordance with the provisions of the G.O. No. 22/10/1976-karmik-2-85, dated 30-1-1985 Emergency Commissioned/ Short Service Commissioned Officers who have not been released from Army but whose period of Army service has been extended for rehabilitation, may also apply for this examination on the following conditions: (A) Such applicants will have to obtain a certificate of the competent authority of Army, Navy, Air Force to the effect that their period of Service has been extended for rehabilitation and no disciplinary action is pending against them. (B) Such applicants will have to submit in due course a written undertaking that in case they are selected for the post applied for, they will get themselves released immediately from the Army Service. The above facilities will not be admissible to Emergency/Short Service Commissioned Officers, if :- (a) he gets permanent Commission in the Army, (b) he has been released from the Army on tendering resignation, (c) He has been released from the Army on grounds of misconduct or physical disability or on his own request and who gets gratuity. 7. MARITAL STATUS:- Male candidates who are married and have more than one wife living and female candidates who have married a person already having a wife shall not be eligible unless the Hon'ble Governor has granted an exemption from this condition. 8. EDUCATIONAL QUALIFICATIONS:					Territorial Army for a minimum period of two years, or (2) obtained a 'B' certificate of National Cadet Corps, or (3) successfully completed one year training as trainee, shall, other things being equal, be given preference in the matter of direct recruitment. (नोट:-लोक निर्माण अनुभाग-4 के पत्र संख्या-23-4001 (099) / 14 / 2022- लोक निर्माण अनुभाग-4-लोक निर्माण विभाग, दिनांक 14.06.2024 के अनुसार-"or a qualification recognised by the Government as equivalent there to, या सरकार द्वारा उसके समकक्ष मान्यता प्राप्त कोई अर्हता से तात्पर्य इन्स्टीट्यूट आफ इंजीनियर्स इण्डिया का सिविल इंजीनियरिंग का अर्ह एसोसिएट मेम्बर अर्थात् AMIE प्रमाण-पत्र है।")
			8.	U.P.Agriculture Service Group 'B' Grade-2 (Engineering Branch), Agriculture Department	Essential:- Bachelor's degree in Agricultural Engineering from a University established by law in India or qualification recognised by Government as equivalent thereto. (नोट:-कृषि निदेशक, उ०प्र० के पत्रांक-ए०ए०-545जी/ए-9, दिनांक 18.03.2024 के अनुसार समकक्ष अर्हता- “कृषि अभियांत्रिकी में स्नातक उपाधि”) Preferential:- (1) Postgraduate degree in Agricultural Engineering from a University established by law in India or a qualification recognised by Government as equivalent thereto. (नोट:-कृषि निदेशक, उ०प्र० के पत्रांक-ए०ए०-545जी/ए-9, दिनांक 18.03.2024 के अनुसार समकक्ष अर्हता- “कृषि अभियांत्रिकी में परास्नातक उपाधि”) (2) A candidate who has- (i) served in the Territorial Army for a minimum period of two years, or (ii) obtained a 'B' certificate of National Cadet Corps, shall, other things being equal, be given preference in the matter of direct recruitment.
			9.	Asstt. Director, Energy Department	Essential:- Bachelor's degree in Electrical Engineering from a University established by law in India or be an Associate Member of the Institution of Engineers (India) in Electrical Engineering. Preferential:- A candidate who has (1) served in the Territorial Army for a minimum period of two years, or (2) obtained a 'B' certificate of National Cadet Corps, shall, other things being equal, be given preference in the matter of direct recruitment.
			10.	Asstt. Engineer (Civil), Irrigation and Water Resources Directorate	अनिवार्य:- सहायक अभियन्ता के पद पर सीधी भर्ती के लिए अभ्यर्थी की निम्न अर्हतायें होनी आवश्यक हैं- (1) सरकार द्वारा मान्यता प्राप्त किसी संस्था या विश्वविद्यालय से सिविल अभियंत्रण में उपाधि रखता हो, या (2) इन्स्टीट्यूट ऑफ इंजीनियर्स (इण्डिया) का सिविल इंजीनियरिंग ब्रांच का एक अर्ह एसोसिएट मेम्बर हो। अधिमाननी:- अन्य बातों के समान होने पर सीधी भर्ती के मामले में ऐसे अभ्यर्थी को अधिमान दिया जाएगा जिसने- (1) प्रादेशिक सेना में न्यूनतम दो वर्ष की अवधि तक सेवा की हो, या (2) राष्ट्रीय कैडेट कोर का 'बी' प्रमाण-पत्र प्राप्त किया हो, या (3) प्रशिक्षणार्थी के रूप में एक वर्ष का प्रशिक्षण सफलतापूर्वक पूर्ण कर लिया हो।
			11.	Asstt. Engineer. (Civil), Medical Health and Family Welfare Deptt.	Essential:-(1) A Bachelor's Degree in Civil Engineering from a University established by law in India or a Degree recognised by the Government as equivalent thereto; or (2) An Associate Member of the Institution of Engineers (India), (Civil Engineering Branch) (नोट:- उ०प्र० सरकार के सार्वजनिक निर्माण अनुभाग-3 के गजट पत्र सं०-3428ई०वी०आर०/23-(3)-7ई०वी०आर०-86 दिनांक 04.08.1987 की अधिसूचना जिसमें उ०प्र० सर्विस ऑफ इंजीनियर्स (बिल्डिंग एण्ड रोड्स ब्रांच) क्लास-टू (संशोधन) नियमावली 1987 के प्रस्तर-9 के स्तम्भ-2 में लिखित विवरण के अनुसार:- किसी व्यक्ति को सेवा में तब तक सीधी भर्ती नहीं किया जायेगा जब तक कि- (क) वह सरकार द्वारा समय-समय पर मान्यता प्राप्त किसी संस्था से अभियांत्रिकी स्नातक (सिविल) की उपाधि न रखता हो, या (ख) वह इंस्टीट्यूशन ऑफ सिविल इंजीनियर्स (लंदन) के एसोसियेट मेम्बरशिप इकजामिनेशन का सेक्शन 'ए' और 'बी' उत्तीर्ण न हो, या (ग) वह सिटी एण्ड गिल्ड्स इंस्टीट्यूट (इम्पीरियल कॉलेज ऑफ साइंस एण्ड टेक्नालॉजी साउथ केनसिंगटन) की सिविल अभियांत्रिकी में एसोसियेटशिप इकजामिनेशन उत्तीर्ण न हो, या (घ) वह इंस्टीट्यूशन ऑफ इंजीनियर्स (इण्डिया) का पूर्णतः अर्हता प्राप्त सहयुक्त सदस्य (एसोसियेट मेम्बर) न हो, परन्तु 06 अगस्त, 1966 से इंस्टीट्यूट ऑफ इंजीनियर्स (इण्डिया) के सेक्शन "ए" और "बी" को उत्तीर्ण करना अपेक्षित होगा, या (ङ) उसने केन्द्रीय या राज्य विधान मण्डल के किसी अधिनियम द्वारा निगमित भारत के किसी विश्वविद्यालय से सिविल अभियांत्रिकी में स्नातक उपाधि प्राप्त की हो।) Preferential:- A candidate who has: (1) served in the Territorial Army for a minimum period of two years; or (2) obtained a 'B' certificate of National Cadet Corps; shall, other things being equal, be given preference in the matter of direct recruitment; Provided that for the post of Assistant Engineer (Civil) a Candidate who is a trainee shall, other things being equal, be given preference in the matter of direct recruitment.
Note:- (i) The candidates must possess all the requisite qualifications upto the last date for submitting the applications. (ii) The candidates who are appearing in the Examination of essential qualification prescribed for the posts need not apply, because they are not eligible. 9. AGE LIMIT: (i) Candidates must have attained the age of 21 years and must not have crossed the age of 40 years on July 01, 2024 i.e. they must have not been born earlier than 2nd July, 1984 and not later than July 01, 2003. (ii) Relaxation in Upper Age Limit:- (a) Upper age limit shall be greater by five years for candidates belonging to Scheduled castes of U.P., Scheduled Tribes of U.P., Other Backward Classes of U.P., Skilled players of U.P. of Classified Games, State Govt. Employees of U.P., including Teachers/Staff of the Basic Shiksha Parishad of U.P. and teachers/staff of the Government Aided Madhyamik Vidyalyas of U.P. i.e they must have not been born before 2nd July, 1979. (b) Upper age limit shall be greater by fifteen years for persons with disabilities (PH) of U.P. i.e. they must have not been born before 02 July, 1969. (c) Upper age limit shall also be greater by three years + Period of service rendered in Army for the Emergency Commissioned Officers/Short Service Commissioned Officers/ Ex-Army Personnels of U.P. (d) For the post Asstt. Engineer (Mechanical) in Irrigation and Water Resources Deptt., according to the provision of Rule-10(Age) of उत्तर प्रदेश अभियंता सेवा (सिंचाई विभाग) (समूह ख) नियमावली 2007 and for the post Asstt. Engineer (Civil) in Public Works Deptt., according to the provision of Rule-10(Age) of The Uttar Pradesh Public Works Department Group-B Civil Engineering Service Rules, 2004, relaxation in Age Limit is permissible as follows:- The upper age limit in the case of a candidate, who is trainee, shall be greater by one year. (e) For the post Asstt. Engineer (Civil) and Asstt. Engineer (Electrical/Mechanical) in U.P. Jal Nigam (Rural), according to the provision of Rule-9(Age) of उत्तर प्रदेश जल निगम अभियंता					
SI No.	Name of Post/ Name of Deptt.	Qualifications			
1.	Asstt. Engg. (Mechanical), Irrigation and Water Resources Department	अनिवार्य:- (1) सरकार द्वारा मान्यता प्राप्त किसी संस्था या विश्वविद्यालय से यांत्रिक अभियंत्रण में उपाधि रखता हो, या (2) इन्स्टीट्यूट ऑफ इंजीनियर्स (इंडिया) का मैकेनिकल इंजीनियरिंग ब्रांच का एक अर्ह एसोसियेट मेम्बर हो। अधिमाननी:- अन्य बातों के समान होने पर सीधी भर्ती के मामले में ऐसे अभ्यर्थी को अधिमान दिया जाएगा, जिसने (1) प्रादेशिक सेना में न्यूनतम 02 वर्ष की अवधि तक सेवा की हो, या (2) राष्ट्रीय कैडेट कोर का 'बी' प्रमाण-पत्र प्राप्त किया हो, या (3) प्रशिक्षणार्थी के रूप में एक वर्ष का प्रशिक्षण सफलतापूर्वक पूर्ण कर लिया हो।			
2.	Asstt. Engg. (Civil), U.P. Jal Nigam (Rural)	अनिवार्य:-किसी व्यक्ति की सेवा की सिविल शाखा में सीधी भर्ती द्वारा तब तक भर्ती नहीं किया जायेगा जब तक कि:- (1) वह उक्त प्रयोजन के लिए सरकार द्वारा मान्यता प्राप्त किसी संस्था या विश्वविद्यालय से सिविल अभियंत्रण में स्नातक अथवा उसके समकक्ष उपाधि न रखता हो या (2) उसमें अभियन्ता संस्था (भारत)(इन्स्टीट्यूशन ऑफ इंजीनियर्स इंडिया) की सहायक अभियन्ता सदस्यता/ सदस्यता परीक्षा (एसोसिएट मेम्बरशिप/ मेम्बरशिप) का भाग 'ए' और 'बी' उत्तीर्ण न किया हो। (नोट:- समकक्षता का तात्पर्य उ०प्र० सरकार के अतिरिक्त भारत गणराज्य के अन्य प्रदेशों द्वारा मान्यता प्राप्त संस्थाओं/ विश्वविद्यालयों से सिविल में स्नातक उपाधि से है।) अधिमाननी:- ऐसे अभ्यर्थी को जिसने:- (1) दो वर्ष की न्यूनतम अवधि तक प्रादेशिक सेना में सेवा की हो और (2) राष्ट्रीय कैडेट कोर का 'बी' प्रमाण-पत्र प्राप्त किया हो, अन्य बातों के समान होने पर सेवा में सीधी भर्ती के मामले में अधिमान दिया जाएगा।			
3.	Asstt. Engg. (Electrical/Mechanical), U.P. Jal Nigam (Rural)	अनिवार्य:- किसी व्यक्ति की सेवा की यांत्रिक शाखा में सीधी भर्ती द्वारा तब तक भर्ती नहीं किया जायेगा जब तक कि :- (1) वह उक्त प्रयोजन के लिए सरकार द्वारा मान्यता प्राप्त किसी संस्था या विश्वविद्यालय से विद्युत और/ या यांत्रिक अभियंत्रण में प्रदान की गयी स्नातक अथवा उसके समकक्ष उपाधि न रखता हो या (2) उसने विद्युत और/ या यांत्रिक अभियंत्रण में अभियन्ता संस्था (भारत) की सहयुक्त सदस्यता/ सदस्यता परीक्षा का भाग 'ए' और 'बी' उत्तीर्ण न किया हो। (नोट:- समकक्षता का तात्पर्य उ०प्र० सरकार के अतिरिक्त भारत गणराज्य के अन्य प्रदेशों द्वारा मान्यता प्राप्त संस्थाओं/ विश्वविद्यालयों से विद्युत/ यांत्रिक में स्नातक उपाधि से है।) अधिमाननी:- ऐसे अभ्यर्थी जिसने:- (1) दो वर्ष की न्यूनतम अवधि तक प्रादेशिक सेना में सेवा की हो और (2) राष्ट्रीय कैडेट कोर का 'बी' प्रमाण-पत्र प्राप्त किया हो, अन्य बातों के समान होने पर सेवा में सीधी भर्ती के मामले में अधिमान दिया जाएगा।			
4.	Asstt. Engg. (Civil), Rural Engineering Deptt.	Essential:- (1) Degree in Civil Engineering from any Institution or University recognised by the Government, or (2) Fully qualified Associate Member, Having Passed sections 'A' and 'B' of the Institution of Engineers (India) in Civil Engineering. Preferential:- A candidate who has- (1) served in the Territorial Army for a minimum period of two years, or (2) obtained a 'B' certificate of National Cadet Corps, shall, other things being equal, be given preference in the matter of direct recruitment.			
5.	Asstt. Engineer. (Electrical/Mechanical), Housing and Urban Planning Deptt. (U.P. Development Authorities Centralised Service)	अनिवार्य:- भारत या विदेश में किसी मान्यता प्राप्त कॉलेज या विश्वविद्यालय से विद्युत या यांत्रिक अभियन्त्रण में उपाधि। अधिमाननी:- अन्य बातों के समान होने पर सीधी भर्ती के मामले में ऐसे अभ्यर्थी को अधिमान दिया जाएगा, जिसने- (1) प्रादेशिक सेना में न्यूनतम दो वर्ष की अवधि तक सेवा की हो, या (2) राष्ट्रीय कैडेट कोर का 'बी' प्रमाण-पत्र प्राप्त किया हो।			
6.	Asstt. Engineer. (Civil), Housing and Urban Planning Deptt. (U.P. Development Authorities Centralised Service)	अनिवार्य:- भारत या विदेश में किसी मान्यता प्राप्त कॉलेज या विश्वविद्यालय से सिविल अभियन्त्रण में उपाधि। अधिमाननी:- अन्य बातों के समान होने पर सीधी भर्ती के मामले में ऐसे अभ्यर्थी को अधिमान दिया जाएगा, जिसने- (1) प्रादेशिक सेना में न्यूनतम दो वर्ष की अवधि तक सेवा की हो, या (2) राष्ट्रीय कैडेट कोर का 'बी' प्रमाण-पत्र प्राप्त किया हो।			
7.	Asstt. Engineer. (Civil), Public Works Deptt. (P.W.D.)	Essential:- Bachelor's Degree in Civil Engineering from a University established by law in India or a qualification recognised by the Government as equivalent thereto. Preferential:- A candidate who has- (1) served in the			

(सार्वजनिक स्वास्थ्य शाखा) सेवा नियमावली, 1978, relaxation in Age Limit is permissible as follows:- ऐसे अभ्यर्थियों की दशा में जो पहले पूर्ववर्ती स्वायत्त शासन अभियंत्रण विभाग में नियुक्त किये गये हो और जिनका अनुमोदन लोक सेवा आयोग द्वारा न किया गया हो, विनियम-5 (1) (क) (एक) के अधीन भर्ती के प्रयोजनार्थ आयु सीमा 40 वर्ष होगी। (f) For the post Asstt. Engineer (Electrical/Mechanical) and Asstt. Engineer (Civil) in Housing and Urban Planning Deptt. (U.P. Development Authorities Centralised Service), according to the provision of Rule-11(Age) of U.P. Development Authority Centralized Service Rules, 1985, relaxation in Age Limit is permissible as follows:- (1)in the case of a person who has already rendered one year's service or more in any of the service in the Development Authority, the maximum age limit shall be greater to the extent he has rendered continuous service or for a period of seven years whichever is less: (2) a candidate, who was entitled in respect of his age to appear at a selection in any year in which no selection is made though a vacancy existed, shall be deemed to be entitled in respect of his age to appear at the next following selection; 10. SOME INFORMATION ABOUT COMBINED STATE ENGINEERING SERVICES; MAIN EXAMINATION AND INTERVIEW:- (i) Only such candidates will be admitted to the Main Examination who are declared successful in Preliminary Examination for which the successful candidates will have to fill up another application form according to instructions of the Commission and for this application, the examination fee for Unreserved (General), Economically weaker sections, Other Backward Classes and for Candidates of Other States is Rs. 200/- and Rs. 25/- as online processing fee = Rs. 225/- and for Scheduled Caste and Scheduled Tribe candidates of U.P. the fee is Rs. 80/- and Rs. 25/- as on-line processing fee = Rs. 105/- The candidates of Physically Handicapped category of U.P. are exempted from fee but they have to pay Rs. 25/- only as on-line processing fee, Candidates of Ex-Army Personnels of U.P. Exam Fees is Rs. 80/- and Rs. 25/- as on-line processing fees = Rs. 105/- only but the candidates of D.F.F. of U.P./Women/ Skilled Sports Person candidates of U.P. shall have to deposit their fees according to their original category. (ii) For the Combined State Engineering Services Main Examination, the candidates are required to fill up and submit their Online Application and deposit required fee. (iii) Candidates should carefully note that they will have to appear in the Main Examination against the same Roll No. as allotted for the Preliminary Examination. (iv) The dates and venue for the Main Examination shall be informed by the Commission later on through e-Admit Cards. (v) Only such candidates will be called for interview who are declared successful on the basis of the Main Examination. (vi) Candidates will have to fill up the prescribed application form before the Interview (viva-voce test). (vii) Preferences for different posts will be asked at the time of Interview which will be treated final and no change therein will be admitted. In this regard no application for error correction/Modification shall be acceptable. (viii) All original certificates shall be verified at the time of Interview. Candidates will also be required to furnish four passport size Photographs, two unattested and two attested by their Head of Department or Head of the Institution where they have received last education or by a Gazetted Officer at the time of Interview. (ix) Candidates serving under the Central or State government will have to produce 'No Objection Certificate' at the time of interview, issued by the competent authority as to their employment. (x) It is essential for the candidates to appear in the interview who qualify on the basis of Main Examination. NOTE: The candidates must enclose self attested copies of all Marksheets/certificates in support of their claims rendered in the application form for Main Examination of the Combined State Engineering Services Examination 2024. If they do not enclose and send their self attested copies of all Marksheets/certificates in support of their claims till last date of application, their candidature shall be cancelled. 11. IMPORTANT INSTRUCTIONS FOR CANDIDATES:- (1) The date of birth of the candidates shall be admissible as entered in High School Certificate. The candidate will have to attach his/her High School or equivalent examination certificate with the application form of Main Examination. No other certificate shall be acceptable for Date of Birth and if it is not attached with the application, it shall be rejected. (2) The benefit of reservation to the categories of Physically Handicapped persons of society shall be given only on the posts which shall be Identified by the government for their Sub category. For this benefit, the Handicapped persons must produce a certificate of being handicapped in that sub category issued by Medical Officer/Specialist and counter signed by the Chief Medical Officer according to Rule 3 of U.P. Public Service (Reservation for physically Handicapped, Dependent of Freedom Fighters and Ex-Servicemen) (Amendment) Act, 2021. (3) The Ex-Army Personnels must be discharged from Army upto the last date prescribed for receipt of applications. (4) Date, time and venue etc. of examination along with Roll No. will be communicated to the candidates through e-Admit Cards. Candidates will have to appear only at the centre/venue allotted to them by the Commission. No change in centre/venue is permissible and no application shall be entertained in this regard. (5) The Commission reserves the right of cancelling the candidature of any candidate found indulging in any malpractice i.e. copying in examination hall or indiscipline, misbehavior or canvassing for his/her candidature etc. On violation of these instructions, the candidates may be debarred from this examination as well as future Examinations and selections. In this regard, decision of the commission shall be final. The provisions of Uttar Pradesh Public Examination (Prevention of Unfair Means) Act, 2024 Dated August 6, 2024 will be applicable in aforesaid examination. (6) In all communication to the Commission, the candidate must mention the name of examination, advertisement No., O.T.R. Number, Application ID, Name of the candidate, date of birth, father's/ Husband's name and also the Roll Number, if communicated. (7) Candidates selected for appointment will have to undergo Medical Examination as required under the Rules. (8) On the basis of the result of Preliminary Examination, fifteen times candidates to the number of vacancies shall be declared successful for the Main Examination and three times candidates to the number of vacancies shall be called for the interview. (9) While filling the OMR answer sheets, the candidates must use Black Ball Point Pen Only. Use of any other Pen or Pencil is strictly prohibited. (10) At the time of examination, candidates must fill all the information sought on the OMR Answer Sheet correctly by blackening the concerned circles, which are decipherable by the scanner machine. The Commission will evaluate OMR Answer Sheet only on the basis of information given by blackening the concerned circles of OMR Answer Sheet. The candidates are also directed not to use whitener, blade, pin or rubber etc. on the OMR Answer Sheet. In case of not blackening the circles properly in the OMR Answer Sheet and filling any information incorrectly, the Commission shall not evaluate such OMR Answer Sheet for which candidates themselves shall be wholly responsible. (11) As per the decision of Hon'ble Commission, the Answer Sheet used in objective-type examinations, will be in three copies and colours: First copy Original copy-Pink, Second copy Preserved copy-Green and Third copy Candidate's copy-Blue. After completion of the examination, the invigilator will keep the Original copy and Preserved copy of OMR Answer Sheet; and will give the Third copy (Candidate's copy-Blue) to candidates. (12) In the Preliminary/Main Examination for the objective type Question papers, penalty (Negative Marking) shall be imposed for wrong answers given by the candidates which is as below:-	(i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, one third (0.33) of the marks assigned to that question will be deducted as penalty. (ii) If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answer happens to be correct and there will be same penalty as above for that question. (iii) If a question is left blank i.e. no answer is given by the candidate, there will be no penalty for that question. (13) The minimum efficiency standard for S.C. & S.T. candidates is fixed 35% i.e. the Candidates of these Categories shall not be placed in the merit/select list if they have secured less than 35% marks in the Preliminary/Main examination. Similarly, the minimum efficiency standard for the candidates of other categories is fixed 40% i.e. such candidates shall not be placed in the merit/select list if they have secured less than 40% marks in the Preliminary/Main examination. All such candidates who have secured less marks than the marks of minimum efficiency standard as fixed by the Commission shall be treated disqualified. (14) The candidates of reserved categories will be adjusted against the unreserved category in the final selection only if he/she will not have availed any benefit/concession in qualifying standard at the stage of Preliminary/Main Examination. (15) If it is found that a candidate has submitted any forged documents he/she will be debarred from all selections of UPPSC forever and action under relevant sections of Bharatva Nyaya Sanhita will also be taken against him/her. (16) The candidates whose candidature are cancelled, those candidates do not remain candidates after the cancellation of candidature, therefore the marks of such candidates shall not be provided. GENERAL INSTRUCTIONS 1. In no circumstances, applications of any stage shall be accepted after the last prescribed date and time. Applications found without requisite information and without photograph and signature, even when received in time, may be summarily rejected. 2. In the On-line system, the candidates must ensure that all the requisite information have been duly filled and must submit by the last prescribed Date & Time. Candidates must take the Print and keep it safely. In any discrepancy, the candidates will have to produce the said print to the commission's office otherwise no request shall be entertained. 3. Those candidates, willing to take the benefit of the reservation/ age relaxation must obtain a certificate, issued by the competent authority, in support of the reserved category, in the prescribed format printed in this detailed advertisement (Appendix-1) and submit the same to the Commission, whenever required to do so. Candidate claiming more than one reservation/age relaxation will be given only one such concession, which will be more beneficial. The Candidates who are not originally domicile of U.P. belonging to SC, ST, O.B.C., E.W.S., dependents of freedom fighters, Ex-Servicemen, Skilled sports person and PH are not entitled to the benefit of reservation/age relaxation. In case of the women candidates, the caste certificate issued from father side only will be treated valid. 4. The Commission do not advise to candidates about their eligibility. Therefore, they should carefully read the advertisement and when satisfied about their eligibility as per conditions of the advertisement, only then apply. The candidates must possess all the requisite qualifications till the last date for submitting the applications. 5. In the category of dependents of the freedom fighters only sons, daughters, grandsons (Son's son/Daughter's son) and grand daughters (son's daughter/daughter's daughter, married/unmarried) are covered. It is advised that the candidates of aforesaid category must obtain the reservation certificate from the District Magistrate in terms of Govt. Order No. 453/79-V-1-15-1(ka) 14-2015, dated 07.04.2015 in the prescribed format and submit the same. 6. In case the candidates feel any problem in the "On-line Application", they may get their problem resolved by sending their queries to the 'Mail Box' of the commission. 7. Proforma of cast certificates are available in Appendix-1, Plan and Syllabus for Preliminary Examination are available in Appendix-2, Plan and syllabus for Main Examination are available in Appendix-3; relevant service rules of related posts are given in Appendix-4, and details of the vacancies are available in Appendix-5. Detailed Application Form: At the online page there is a 'Declaration' for the candidates. Candidates are advised to go through the contents of the Declaration carefully. Candidate has the option to either agree or disagree with the contents of Declaration by clicking on 'I Agree' or 'I do not agree' buttons. In case the candidate opts to 'I do not agree', the application will be dropped and the procedure will be terminated. Acceptance of 'I Agree' only will make possible the submission of the candidate's Online Application. Notification Details This section shows information relevant to Notification i.e. Notification number, selection type, directorate/ department name and post name. Personnel Details from OTR This section shows information about candidate's personnel details i.e. OTR Number, candidate name, Father/ Husband name, Gender, DOB, UP domicile, Category, Marital status, email and contact number, photo & signature, address, UP Freedom Fighter, Ex Army, service duration and your physical challenges, Skilled Player, Outstanding Player of U.P., Debarred candidate. Education & Experience Details It shows your educational and experience details Declaration segment At the page there is a 'Declaration' for the candidates. Candidates are advised to go through the contents of the Declaration carefully. After filling all above particulars there is provision for preview your detail before final submission of application form on clicking on "Preview" button. Preview page will display all facts/particulars that you have mentioned in O.T.R. if you are sure with filled details then click on "Submit" button to finally push data into server with successfully submission report that you can print. [CANDIDATES ARE ADVISED TO TAKE A PRINT OF THIS PAGE BY CLICKING ON THE "Print" OPTION AVAILABLE] For other information candidates are advised to select desired option in 'Home Page' of Commission's website https://uppsc.up.nic.in IMPORTANT ANNOUNCEMENT :- NOTIFICATIONS/ADVERTISEMENTS • All Notification/Advertisements :- ONLINE APPLICATION FORMS SUBMISSION • Candidate Registration • Fee Deposition /Reconciliation • Submit Application Form • Modify Submitted Application • Candidate Dashboard (OTR Based) :- CANDIDATE'S HELP DESK SECTION • Double Verification mode • View Application Status • Download Admit Card • Print Duplicate Registration Slip • Print Detailed Application Form • List of Applications Having ANY Objections • View Answer Key LAST DATE FOR RECEIPT OF APPLICATIONS: On-line Application process must be completed (including filling up of OTR, Part-I, Part-II and Part-III of the Form) before last date of form submission according to Advertisement, after which the web-link will be disabled.
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Form-IV

Certificate of Disability

(In cases of other than those mentioned in Forms II and III)

(Name and Address of the Medical Authority/Board issuing the Certificate)

Recent passport size attested photograph (showing face only) of the person with disability

Certificate No.

Date:

This is to certify that we have carefully examined Shri/Smt./Kum. _____ son/wife/daughter of Shri _____ Date of birth (DD/MM/ YY) _____ age _____ years, male/ female _____ Registration No. _____ permanent resident of House No. _____ Ward/Village/ Street _____ Post Office _____ District _____ State _____, whose photograph is affixed above, and am satisfied that he/she is a case of Disability. His/her extent of percentage physical impairment/disability has been evaluated as per guidelines (.....number and date of issue of the guidelines to be specified) and is shown against the relevant disability in the table below:-

S. N.	Disability	Affected part of body	Diagnosis	Permanent physical impairment/mental disability (in%)
1.	Locomotor disability	@		
2.	Muscular Dystrophy			
3.	Leprosy cured			
4.	Cerebral Palsy			
5.	Acid attack Victim			
6.	Low Vision	#		
7.	Deaf	£		
8.	Hard of Hearing	£		
9.	Speech and Language disability			
10.	Intellectual Disability			
11.	Specific Learning Disability			
12.	Autism Spectrum Disorder			
13.	Mental illness			
14.	Chronic Neurological Conditions			
15.	Multiple sclerosis			
16.	Parkinson's disease			
17.	Haemophilia			
18.	Thalassemia			
19.	Sickle Cell disease			

Please strike out the disabilities which is not applicable)
2. The above condition is progressive/non-progressive/ likely to improve/not likely to improve.
3. Reassessment of disability is:-
(i) not necessary,
or
(ii) is recommended/after.....years..... months, and therefore this certificate shall be valid till.... (DD) (MM) (YY)
@ e.g. Left/right/both arms/legs
e.g. Single eye/both eyes
£ e.g. Left/Right/both ears
4. Signature and seal of the Medical Authority.

Name and Seal of Member	Name and Seal of Member	Name and Seal of the Chairperson
Signature/thumb impression of the person in whose favour certificate of disability is issued	Countersigned by the Chief Medical Officer (with seal)	

उत्तर प्रदेश लोक सेवा (शारीरिक रूप से विकलांग, स्वतंत्रता संग्राम सेनानियों के आश्रितों और भूतपूर्व सैनिकों के लिये आरक्षण), अधिनियम, 1993 (यथासंशोधित) के अनुसार स्वतंत्रता संग्राम सेनानी के आश्रित के प्रमाण—पत्र का प्रपत्र।
प्रमाण—पत्र
प्रमाणित किया जाता है कि श्री / श्रीमती निवासी ग्राम— नगर— जिला— उत्तर प्रदेश लोक सेवा (शारीरिक रूप से विकलांग, स्वतंत्रता संग्राम सेनानियों के आश्रितों और भूतपूर्व सैनिकों के लिये आरक्षण) अधिनियम, 1993 के अनुसार स्वतंत्रता संग्राम सेनानी हैं और श्री / श्रीमती / कुमारी (आश्रित) पुत्र / पुत्री / पौत्र (पुत्र का पुत्र या पुत्री का पुत्र) तथा पौत्री (पुत्र की पुत्री या पुत्री की पुत्री) (विवाहित अथवा अविवाहित) उपरांकित अधिनियम, 1993 (यथासंशोधित) के प्राविधानों के अनुसार उक्त श्री / श्रीमती (स्वतंत्रता संग्राम सेनानी)के आश्रित हैं।
स्थान:
दिनांक:

हस्ताक्षर
पूरा नाम
पदनाम
मुहर
जिलाधिकारी
(सील)

कुशल खिलाड़ियों के लिये प्रमाण—पत्र जो उ.प्र. के मूल निवासी हैं शासनादेश संख्या—22 / 21 / 1983—कार्मिक—2 दिनांक 28 नवम्बर, 1985 प्रमाण—पत्र के फार्म — 1 से 4 प्रारूप —1 (मान्यता प्राप्त क्रीड़ा / खेल में अपने देश की ओर से अन्तर्राष्ट्रीय प्रतियोगिता में भाग लेने वाले खिलाड़ी के लिये) सम्बन्धित खेल की राष्ट्रीय फेडरेशन / राष्ट्रीय एसोसिएशन का नाम राज्य सरकार की सेवाओं / पदों पर नियुक्ति के लिए कुशल खिलाड़ियों के लिए प्रमाण—पत्र प्रमाणित किया जाता है कि श्री / श्रीमती / कुमारी आत्मज / पत्नी / आत्मजा श्री निवासी पूरा पता ने दिनांक से दिनांक तक (स्थान का नाम) में आयोजित..... (क्रीड़ा / खेल—कूद का नाम) की प्रतियोगिता / टूर्नामेन्ट में देश की ओर से भाग लिया। उनके टीम के द्वारा उक्त प्रतियोगिता / टूर्नामेन्ट में स्थान प्राप्त किया गया। यह प्रमाण—पत्र राष्ट्रीय फेडरेशन / राष्ट्रीय एसोसिएशन / (यहाँ संस्था का नाम दिया जाये) में उपलब्ध रिकार्ड के आधार पर दिया गया है।

स्थान हस्ताक्षर
दिनांक नाम
पद
संस्था का नाम
मुहर

नोट : यह प्रमाण—पत्र नेशनल फेडरेशन / नेशनल एसोसिएशन के सचिव द्वारा व्यक्तिगत रूप से किये गये हस्ताक्षर होने पर ही मान्य होगा।

प्रारूप — 2
(मान्यता प्राप्त क्रीड़ा / खेल में अपने प्रदेश की ओर से राष्ट्रीय प्रतियोगिता में भाग लेने वाले खिलाड़ी के लिये) सम्बन्धित खेल की प्रदेशीय एसोसिएशन का नामराज्य सरकार की सेवाओं / पदों पर नियुक्ति के लिए कुशल खिलाड़ियों के लिए प्रमाण—पत्र प्रमाणित किया जाता है कि श्री / श्रीमती / कुमारी आत्मज / पत्नी / आत्मजा श्री निवासी (पूरा पता) ने दिनांक..... से दिनांक..... तक..... में (क्रीड़ा / खेल—कूद का नाम) की प्रतियोगिता (टूर्नामेन्ट स्थान का नाम) आयोजित राष्ट्रीय में (क्रीड़ा / खेल— कूद का नाम) की प्रतियोगिता / टूर्नामेन्ट में प्रदेश की ओर से भाग लिया। उनके टीम के द्वारा उक्त प्रतियोगिता / टूर्नामेन्ट में स्थान प्राप्त किया गया। यह प्रमाण—पत्र (प्रदेशीय संघ का नाम) में उपलब्ध रिकार्ड के आधार पर दिया गया है।
स्थान हस्ताक्षर
दिनांक नाम
पद
संस्था का नाम
मुहर

नोट : यह प्रमाण—पत्र प्रदेशीय खेल—कूद संघ के सचिव द्वारा व्यक्तिगत रूप से किये गये हस्ताक्षर होने पर ही मान्य होगा।

प्रारूप — 3
(मान्यता प्राप्त क्रीड़ा / खेल में अपने विश्वविद्यालय की ओर से अन्तर्विश्वविद्यालय प्रतियोगिता में भाग लेने वाले खिलाड़ी के लिये) विश्वविद्यालय का नाम राज्य स्तर की सेवाओं / पदों पर नियुक्ति के लिए कुशल खिलाड़ियों के लिए प्रमाण—पत्र प्रमाणित किया जाता है कि श्री / श्रीमती / कुमारी आत्मज / पत्नी / आत्मजा श्री निवास (पूरा नाम) विश्वविद्यालय की कक्षा के विद्यार्थी ने दिनांक से दिनांक तक (स्थान का नाम) में आयोजित अन्तर्विश्वविद्यालय (क्रीड़ा / खेल—कूद का नाम) प्रतियोगिता / टूर्नामेन्ट में विश्वविद्यालय की ओर से भाग लिया। उनके टीम के द्वारा उक्त प्रतियोगिता / टूर्नामेन्ट में स्थान प्राप्त किया गया। यह प्रमाण—पत्र डीन ऑफ़ स्पोर्ट्स अथवा इंचार्ज खेल कूदविश्वविद्यालय में उपलब्ध रिकार्ड के आधार पर दिया गया है।
स्थान हस्ताक्षर
दिनांक नाम
पद
संस्था का नाम
मुहर

नोट : यह प्रमाण—पत्र विश्वविद्यालय के डीन ऑफ़ स्पोर्ट्स या इंचार्ज खेल—कूद द्वारा व्यक्तिगत रूप से किये गये हस्ताक्षर होने पर ही मान्य होगा।

प्रारूप — 4
(मान्यता प्राप्त क्रीड़ा / खेल में अपने स्कूल की ओर से राष्ट्रीय खेल—कूद में भाग लेने वाले खिलाड़ी के लिये)डाइरेक्ट्रेट ऑफ पब्लिक इन्स्ट्रक्शन्स /निदेशक, शिक्षा, उत्तर प्रदेश राज्य स्तर की सेवाओं / पदों पर नियुक्ति के लिए कुशल खिलाड़ियों के लिए प्रमाण—पत्र प्रमाणित किया जाता है कि श्री / श्रीमती / कुमारी आत्मज / पत्नी / आत्मजा श्री निवासी (पूरा पता) में स्कूल में कक्षा के विद्यार्थी ने दिनांक से दिनांक तक(स्थान का नाम) में आयोजित स्कूलों के नेशनल गेम्स की (क्रीड़ा / खेल—कूद का नाम) प्रतियोगिता / टूर्नामेन्ट में स्कूल की ओर से भाग लिया। उनके टीम के द्वारा उक्त प्रतियोगिता / टूर्नामेन्ट में स्थान प्राप्त किया गया। यह प्रमाण—पत्र डाइरेक्ट्रेट ऑफ पब्लिक इन्स्ट्रक्शन्स / शिक्षा में उपलब्ध रिकार्ड के आधार पर दिया गया है।
स्थान हस्ताक्षर
दिनांक नाम
पद
संस्था का नाम
मुहर

नोट : यह प्रमाण—पत्र निदेशक / या अतिरिक्त / संयुक्त या उपनिदेशक डाइरेक्ट्रेट ऑफ पब्लिक इन्स्ट्रक्शन्स / शिक्षा द्वारा व्यक्तिगत रूप से हस्ताक्षर होने पर मान्य होगा।

Appendix-2
उ0प्र0 सम्मिलित राज्य अभियंत्रण सेवा परीक्षा
प्रथम चरण—प्रारम्भिक परीक्षा
परीक्षा—योजना

प्रश्नपत्र — एक (वस्तुनिष्ठ प्रकारक)
प्रश्नों की संख्या — 150 (सामान्य ज्ञान—25 प्रश्न, सामान्य हिन्दी—25 प्रश्न एवं इंजीनियरिंग एप्टीट्यूड—100 प्रश्न)
कुल अंक — 300 (प्रत्येक प्रश्न 2 अंक)
समयावधि — 2 घंटा
प्रारम्भिक परीक्षा मात्र अर्हकारी होगी जिसमें मा0 आयोग द्वारा निर्धारित मानक प्रति पद 15 गुना अभ्यर्थी द्वितीय चरण (मुख्य परीक्षा) में सम्मिलित होने हेतु सफल किये जायेंगे। इस सम्बन्ध में मा0 आयोग द्वारा समय—समय पर लिये गये प्रक्रियागत निर्णय प्रभावी होंगे।

पाठ्यक्रम

सामान्य ज्ञान: सामान्य ज्ञान के प्रश्न—पत्र समसामयिक घटनाओं और ऐसी बातों की उनके वैज्ञानिक पहलुओं पर ध्यान देते हुए जानकारी सम्मिलित होगी जो प्रतिदिन के अनुभव में आती है तथा जिनकी किसी शिक्षित व्यक्ति से अपेक्षा की जा सकती है। प्रश्न—पत्र में भारत का इतिहास, राजनीति और भूगोल के ऐसे प्रश्न भी सम्मिलित होंगे जिनका उत्तर उम्मीदवार विशेष अध्ययन किये बिना ही दे सकेंगे।

सामान्य हिन्दी— हिन्दी का पाठ्यक्रम इस प्रकार बनाया जायेगा ताकि उम्मीदवार की हिन्दी भाषा की समझ और शब्दों के कुशल प्रयोग की जाँच हो सके। इसका स्तर हाई स्कूल का होगा।

Engineering Aptitude:-
1. General principles of design and drawing
2. Engineering materials
3. Basics of thermodynamics
4. Water resources and conservation processes
5. Basics of project management
6. Industrial safety and safety standards
7. Information and communication technologies (ICT)
8. Basics of artificial intelligence and robotics
9. Types of machinery maintenance
10. Green Energy
11. Basics of measurement & instrumentation
12. Energy conversion principles
13. Disaster management
14. Ethics and values in engineering profession
15. Quality control
16. Intellectual property rights
17. Human health and sanitation
18. Handling & storage of products
19. Climate change
20. Production & construction

21. Recent development in applied sciences

22. Role of Science & Technology in daily life

Appendix-3

द्वितीय चरण—मुख्य परीक्षा की योजना एवं पाठ्यक्रम

सम्मिलित राज्य अभियन्त्रण सेवा परीक्षा हेतु वस्तुनिष्ठ प्रकार के निम्नवत् दो प्रश्न—पत्र होंगे:—

प्रथम प्रश्न पत्र

विषय	प्रश्नों की संख्या	अंक	कुल अंक	समय
1— सामान्य हिन्दी	25 (प्रत्येक प्रश्न 3 अंक)	75	375	2.30 (ढाई घण्टा)
2— मुख्य विषय (सिविल इंजी0— I, मैके0 इंजी0— I, विद्युत इंजी0— I, कृषि इंजी0— I)	100 (प्रत्येक प्रश्न 3 अंक)	300		

द्वितीय प्रश्न पत्र

विषय	प्रश्नों की संख्या	अंक	कुल अंक	समय
1— सामान्य अध्ययन	25 (प्रत्येक प्रश्न 3 अंक)	75	375	2.30 (ढाई घण्टा)
2— मुख्य विषय (सिविल इंजी0— II, मैके0 इंजी0— II, विद्युत इंजी0— II, कृषि इंजी0— II)	100 (प्रत्येक प्रश्न 3 अंक)	300		

तृतीय चरण—व्यक्तित्व परीक्षा (साक्षात्कार) — 100 अंक

कुल योग — 375 + 375 + 100 = 850 अंक

पाठ्यक्रम

सामान्य हिन्दी— हिन्दी का पाठ्यक्रम इस प्रकार बनाया जायेगा ताकि उम्मीदवार की हिन्दी भाषा की समझ और शब्दों के कुशल प्रयोग की जाँच हो सके। इसका स्तर हाई स्कूल का होगा।

सामान्य अध्ययन: सामान्य अध्ययन के प्रश्न—पत्र समसामयिक घटनाओं और ऐसी बातों की उनके वैज्ञानिक पहलुओं पर ध्यान देते हुए जानकारी सम्मिलित होगी जो प्रतिदिन के अनुभव में आती है तथा जिनकी किसी शिक्षित व्यक्ति से अपेक्षा की जा सकती है। प्रश्न—पत्र में भारत का इतिहास, राजनीति और भूगोल के ऐसे प्रश्न भी सम्मिलित होंगे जिनका उत्तर उम्मीदवार विशेष अध्ययन किये बिना ही दे सकेंगे।

CIVIL ENGINEERING

PAPER-1

PART-A

ENGINEERING MECHANICS, STRENGTH OF MATERIALS AND STRUCTURAL ANALYSIS.

Units and Dimensions, SI units, vectors, concept of force, Concept of particle and rigid body concurrent, Non-Concurrent and parallel forces in a plane, moment of force and varignon's theorem free body diagram, conditions of equilibrium Principle of virtual work, equivalent force system.

First and second Moment of area, Mass moment of inertia, Static Friction, inclined plane and bearings, kinematics and kinetics, kinematics in Cartesian and Polar Coordinates, motion under uniform and non-uniform acceleration, motion under gravity, Kinetics of particle: Momentum and Energy principles, D Alembert's principle, Collision of elastic bodies, rotation of rigid, bodies, simple harmonic motion.

STRENGTH OF MATERIALS:

Simple Stress and Strain, Elastic constants, axially loaded compression members, Shear force and bending moment, theory of simple bending, bending stress, Shear Stress, beams of uniform strength, Leaf Spring, close coiled helical springs, Strain Energy in direct Stress, bending & Shear. Deflection of beams; Macaulay's method, Mohr's Moment area method, Conjugate beam method, unit load method, Torsion of Shafts, Transmission of power, Elastic stability of columns, Euler's Rankin's and Secant formulae. Principal stresses and strains in two dimensions, Mohr's Circle, Theories of Elastic Failure, Thin and Thick cylinder, Stresses due to internal and external pressure-Lame's equations.

STRUCTURAL ANALYSIS: Castiglianios theorems I and II, Unit load method of consistent deformation applied to beams and pin jointed trusses. Slope-deflection, moment distribution, Kani's method of analysis and column Analogy method applied to indeterminate beams and rigid frames. Rolling loads, and influence lines: Influence lines for reactions of beam, shear force and bending moment at a section of beam. Criteria for maximum shear force and bending moment in beams traversed by a system of moving loads, influence lines for simply supported plane pin jointed trusses, Arches: Three hinged, two hinged and fixed arches, rib shortening and temperature effects, influence lines in arches, Matrix methods of analysis: Force method and displacement method of analysis of indeterminate beams and rigid frames. Plastic Analysis of beams and frames: Theory of plastic bending, plastic analysis, statical method, Mechanism method. Unsymmetrical bending: Moment of inertia, product of inertia, position of neutral axis and principal axis, calculation of bending stresses.

PART-B

DESIGN OF STRUCTURES: STEEL, CONCRETE AND MASONRY STRUCTURES.

STRUCTURAL STEEL DESIGN:

Structural steel: Factors of safety and load factors, rivetted, bolted and welded joints and its connections, Design by working, stress/limit state method of tension and compression member, beams of built up section, rivetted and welded plate girders, gantry girders, stancheons with battens and lacings, slab and gussetted column bases, Design of highway and railway bridges: Through and deck type plate girder, Warren girder, Pratt truss.

DESIGN OF CONCRETE AND MASONRY STRUCTURES:

Reinforced Concrete: Working Stress and Limit State Method of design-Recommendations of B.I.S. codes, design of one way and two way slabs, stairs-case slabs, simple and continuous beams of rectangular, T and L sections, compression members under direct load with or without eccentricity, isolated and combined footings, Cantilever and counter-fort type retaining walls, Water tanks: Design requirements as per B.I.S. code for rectangular and circular tanks resting on ground, Prestressed concrete: Methods and systems of prestressing, anchorages, analysis and design of sections for flexure based on working stress, losses of prestress, Earthquake resistant design of building as per BIS code. Design of brick masonry as per I. S. Codes, Design of masonry retaining walls.

PART - C

Building Materials, Construction Technology, Planning and Management Building Materials: Physical properties of construction materials with respect to their use: stones bricks, tiles, lime, glass, cement, mortars, Concrete, concept of mix design, pozzolans, plasticizers, super plasticizers, Special concrete: roller compacted concrete, mass concrete, self compacting concrete, ferro cement, fibre reinforced concrete, high strength concrete, high performance concrete, Timber: properties, defects and common preservation treatments, Use and selection of materials for various uses e.g. Low cost housing, mass housing, high rise buildings.

Constructions Technology, Planning and Management:

Masonry constructions using brick, stone, construction detailing and strength characteristics paints, varnishes, plastics, water proofing and damp proofing materials. Detailing of walls, floors, roofs, staircases, doors and windows. Plastering, pointing,

flooring, roofing and construction features. Retrofitting of buildings, Principle of planning of building for residents and specific uses, National Building code provisions and uses. Basic principles of detailed and approximate estimating, specifications, rate analysis, principles of valuation of real property. Machinery for earthwork, concreting and their specific uses, factors effecting selection of construction equipments, operating cost of equipments. Construction activity, schedules, organizations, quality assurance principles. Basic principle of network CPM and PERT uses in construction monitoring, cost optimization and resource allocation. Basic principles of economic analysis and methods. Project profitability: Basis principles of financial planning, simple toll fixation criterions.

PART - D

GEO TECHNICAL ENGINEERING AND FOUNDATION ENGINEERING

Types of soils, phase relationships, consistency limits particles size distribution, classifications of soils, structure and clay mineralogy. Capillary water, effective stress and pore water pressure, Darcy's Law, factors affecting permeability, determination of permeability, permeability of stratified soil deposits. Seepage pressure, quick sand condition, compressibility and consolidation, Terzaghi's theory of one dimensional consolidation, consolidation test.

Compaction of soil, field control of compaction total stress and effective stress parameters, pore pressure parameters, shear strength of soils, Mohr Coulomb failure theory, shear tests.

Earth pressure at rest, active and passive pressures, Rankin's theory Coulomb's wedge theory, Graphical method of earth pressure on retaining wall, sheetpile walls, braced excavation, bearing capacity, Terzaghi and other important theories, net and gross bearing pressure.

Immediate and consolidation settlement, stability of slope, total stress and effective stress methods, conventional methods of slices, stability number. Subsurface exploration, methods of boring, sampling, penetration tests, pressure meter tests, essential features of foundation, types of foundation, design criteria, choice of type of foundation, stress distribution in soils, Boussinessq's theory, Westergaard method, Newmarks chart, pressure bulb, contact, pressure, applicability of different bearing capacity theories, evaluation of bearing capacity from filed tests, allowable bearing capacity, settlement analysis, allowable settlement, proportioning of footing, isolated and combined footings, rafts, pile foundation, types of piles, plies capacity, static and dynamic analysis, design of pile groups, pile load test, settlement of piles lateral loads, foundation. for bridges, Ground improvement techniques: sand drains, stone columns, grouting, soil stabilization geotextiles and geomembrane, Machine foundation: Natural frequency, design of machine foundations based on the recommendation of B.I.S. codes.

CIVIL ENGINEERING PAPER-II

Part - A

FLUID MECHANICS, OPEN CHANNEL FLOW, HYDRAULIC MACHINES AND HYDROPOWER ENGINEERING.

Fluid Mechanics: Fluid properties and their roles in fluid motion, fluid statics including forces acting on plane and curved surfaces, Kinematics and Dynamics of Fluid flow: Velocity and acceleration, stream lines, equation of continuity, irrotational and rotational flow, velocity potential and stream functions, flownet, methods of drawing flownet, source and sink, flow separation, free and forced vorties.

Flow control volume equation, continuity, momentum and energy equations, Navier-Strokes equation, Euler's equation of motion and application to fluid flow problems, pipe flow, plane, curved, stationary and moving vanes sluice gates, weirs, orifice meters and Venturi meters.

Dimensional Analysis and Similitude: Buckingham's Pi-theorem, dimensionless parameters, similitude theory, model laws, undistorted and distorted models.

Laminar Flow: Laminar flow between parallel, stationary and moving plates, flow through pipes.

Boundary Layer: Laminar and turbulent boundary layer on a flat plate, laminar sub-layer, smooth and rough boundaries, submerged flow, drag and lift and its applications. Turbulent flow through pipes: Characteristics of turbulent flow, velocity distribution, pipe friction factor, hydraulic grade line and total energy line, siphons, expansion and contractions in pipes pipe networks, water hammer in pipes and surge tanks.

Open Channel Flow: Flow types, uniform and nonuniform flows, momentum and energy correction factors, Specific energy and specific force, critical depth, resistance equations and roughness coefficient, rapidly varied flow, flow in transitions, Brink flow, Hydraulic jump and its applications, waves and surges, gradually varied flow, classification of surface profiles, control section, Integration of varied flow equation and their solution.

HYDRAULIC MACHINES AND HYDROPOWER:

Centrifugal pumps-Types, characteristics, Net Positive Suction-head (NPSH), specific speed, Pumps in series and parallel. Reciprocating pumps, Air vessels, Hydraulic ram, efficiency parameters, Rotary and positive displacement pumps, diaphragm and jet pumps.

Hydraulic turbines: types, classification, Choice of turbines, performance parameters, controls, characteristics, specific speed. Principles of hydropower development: Types, layouts and component works, surge tanks, 'types and choice, Flow duration curves and dependable flow, Storage and pondage, Pumped storage plants, Special types of hydel plants.

Part - B

Hydrology and Water Resources Engineering

Hydrology: Hydrologic cycle, precipitation, evaporation, transpiration, infiltration, overland flow, hydrographs, flood frequency analysis, flood routing through a reservoir, channel flow routing- Muskingam method.

Ground Water flow: Specific yield, storage coefficient, coefficient of permeability, confined and unconfined aquifers, radial flow into a well under confined and unconfined conditions, Open wells and tube wells. Ground and surface water recourses single and multipurpose projects, storage capacity of reservoirs, reservoir losses, reservoir sedimentation. Water requirements of crops consumptive use, duty and delta, irrigation methods, Irrigation efficiencies.

Canals: Distribution systems for canal irrigation, canal capacity, canal losses, alignment of main and distributory canals, Design of canal by kennedy's and Lacey's thoeory, Water logging and its prevention.

Diversion head works: Components, Principles and design of weirs on permeable and impermeable foundations, Khosla's theory, Bligh's creep theory Storage works. Cross drainage works.

Types of dams, design principles of gravity and earth dams, stability analysis. Spillways: Spillway types energy dissipation.

River training: Objectives of river training, methods of river training and bank protection.

Part-C

Transportation Engineering

Highway Engineering: Principles of Highway alignments, classification and geometric design, elements and standards for roads.

Pavement: flexible and rigid pavements Design principles and methodology Construction methods and materials for stabilized soil. WBM, Bituminous works and Cement Concrete roads. Surface and sub-surface drainage arrangements for roads, culvert structures. Pavement distresses and strengthening by overlays.

Traffic surveys and their application in traffic planning, Typical design features for channelized, intersection, rotary etc., signal designs, standard traffic signs and markings.

Railway Engineering: Permanent way, ballast, sleeper, chair and fastenings, points,

crossings, different types of turn outs, cross-over, setting out of points, Maintenance of track, super elevation, creep of rails ruling gradients, track resistance tractive effort, curve resistance, Station yards and station buildings, platform sidings, turn outs, Signals and interlocking, level crossings.

Air port Engineering: Layouts, Planning and design.

Part - D

Environmental Engineering

Water supply: Estimation of water demand, impurities in water and their significance, physical, chemical and bacteriological parameters and their analysis, waterborne diseases, standards for potable water.

Water collection & treatment: Intake structures, principles and design of sedimentation tank, coagulation cum flocculation units slow sand filter, rapid sand filter and pressure filter, theory & practices of chlorination, water softening, removal of taste and salinity, Sewerage Systems, Domestic and industrial wastes, storm, sewage, separate and combined systems, flow through sewers, design of sewers.

Waste water characterization: Solids, Dissolved oxygen (DO), BOD COD, TOC, and Nitrogen, Standards for disposal of effluent in normal water course and on to land.

Waste water treatment: Principles and design of wastewater Treatment units-, Screening, grit chamber, sedimentation tank activated sludge process, trickling filters, oxidation ditches, oxidation ponds, septic tank; Treatment and disposal of sludge; recycling of waste water.

Solid waste management: Classification, Collection and disposal of solid waste in rural and urban areas, Principles of solid waste management.

Environmental pollution: Air and water pollution and their control acts. Radioactive waste and their disposal Environmental impact assessment of Thermal power Plants, mines and river valley projects, Sustainable development.

Part-E

Survey and Engineering Geology

(a) Surveying: Common methods and instruments for distance and angle measurements in Civil Engineering works, their use in plane table traverse survey, levelling, triangulation, contouring and topographical maps. Survey layouts for culverts canal, bridge, roads, railway alignment and buildings.

Basic principles of photogrammetry and remote sensing.

Introduction to Geographical information system.

Engineering Geology

Basic concepts of Engineering geology and its applications in projects such as dams, bridges and tunnels.

MECHANICAL ENGINEERING

PAPER-I

1. Engineering Mechanics:

Analysis of force systems, friction, centroid and centre of gravity, trusses and beams principle of virtual work, kinematics and kinetics of particle, kinematics and kinetics of rigid bodies.

2. Mechanism and Machines:

Velocity and acceleration of links, cams and followers gears and gear trains clutches, belt drives, brakes and dynamometers, Flywheel and governors, balancing of rotating and reciprocating masses, balancing of multi cylinder engines, Free and forced vibration damped vibration, whirling of shafts.

3. Mechanics of Solids:

Stresses and strains, compound stresses strains, Torsion of circular shafts, stresses and deflections in beams unsymmetrical bending, curved beams, Thin and thick cylinders and spheres, Buckling of columns, Energy methods, helical and leaf springs.

4. Design of Machine Elements:

Design for Static and dynamic loading, Theories of failure, fatigue principles of design of rivetted, welded and bolted joints, shafts, springs, bearings, brakes, clutches and flywheels.

5. Engineering Materials:

Crystal systems and crystallography, crystal imperfections, Alloys and phase diagrams, Heat treatment, ferrous and non ferrous metals and alloys, Mechanical properties and testing.

6. Manufacturing: Metal casting, metal forming, metal joining, Mechanics of metal cutting, machining and machine tool operations, unconventional machining methods limits, fits and tolerances, inspection: Surface roughness, comparators, computer integrated manufacturing, Flexible manufacturing systems, jigs and fixtures

7. Industrial Engineering:

Production, planning and control, inventory control and operation, research, CPM and PERT.

8. Mechatronics and Robotics:

Microprocessors and microcontrollers, Architecture, Programming, Computer interfacing Programmable logic controller, sensors and actuators, Piezoelectric accelerometers, Hall effect sensors, optical encoder, resolver, Inductosyn, Pneumatic and Hydraulic Actuators, stepper motor, control system, mathematical modeling, control signals, controllability and observability, Robotics: Robot classification, robot specification. Notation: Direct and inverse kinematics homogeneous co-ordinates and arm equation of four axis SCARA Robot.

MECHANICAL ENGINEERING

PAPER-II

1. Thermodynamics:

Thermodynamic systems and processes, properties of pure substances, concepts and applications of zeroth, first and second law of thermodynamics, entropy, availability and irreversibility, detailed analysis of thermodynamic cycles, ideal and real gases, fuels and combustion.

2. Fluid Mechanics:

Basic concepts and properties of fluids, manometry, fluid statics, buoyancy equations of motion, Bernoulli's equation and applications, viscous flow of incompressible fluids, laminar and turbulent flows, flow through pipes and head losses in pipes, dimensional analysis, Forces on immersed bodies and boundary layer over a flat plate, isentropic and adiabatic flows, normal shock waves.

3. Heat Transfer:

Modes of heat transfer, steady and unsteady heat conduction, thermocouple time constant, critical thickness of insulation, heat transfer from fins, momentum and energy equations for boundary layer flow on a flat plate. Free and forced convection, radiation heat transfer, Stefan-Boltzmann law, shape factor, black and grey body radiation heat exchange, boiling and condensation, heat exchanger analysis, LMTD and NTU - effectiveness methods.

4. Energy conversion:

SI and CI engines, performance characteristics and testing of IC engines, combustion phenomena in SI and CI engines, carburetion and fuel injection systems, emissions and emission control. Reciprocating and rotary pumps, pelton wheel, Francis and Kaplan turbines, velocity diagrams impulse and reaction principles steam and gas turbines; Rankine and Brayton cycles with regeneration and reheat, high pressure boilers, draft, condensers. Unconventional power systems, including nuclear, MHD, biomass, wind and tidal systems, utilization of solar energy; Reciprocating and rotary compressors; theory and applications, Theory of propulsions, pulsejet and ramjet engines.

5. Environmental control:

Vapour compression, vapour absorption, steam jet and air refrigeration systems properties of refrigerant and their nomenclature, psychometrics properties and processes psychrometric relations, use of psychrometric chart, load estimation, supply air conditions sensible heat factors, air conditioning system layout, comfort chart, comfort and industrial air conditioning.

ELECTRICAL ENGINEERING

PAPER - I

Networks and Systems: Steady-state and Transient-state Analysis of systems Thevenin's-, Norton's-, Superposition- and Maximum Power Transfer-theorems, Driving point Transfer functions, Two-port networks, Laplace and Fourier transforms and their applications in Network analysis, Z-transforms for discrete systems, R-L, R-C & L-C network synthesis.

E.M. Theory: Analysis of electrostatic and magnetostatic fields, Laplace, Poisson and Maxwell equations, solution of boundary value problems, electromagnetic wave propagation, ground and space waves, Propagation between Earth Station and Satellites.

Control systems: Mathematical modelling of dynamic linear continuous systems, Block diagrams and Signal flow graphs, time-response specifications, steady-state error, Routh- Hurwitz criterion, Nyquist techniques, Root Loci, Bode Plots, Polar Plot, and stability analysis, Lag-, Lead-, Lag-Lead-compensation, state-space modelling, state transition matrix, controllability and observability.

Elements of Electronics: Basics of semiconductor diodes, BJT, FET and their characteristics, different types of transistors and FET amplifiers equivalent circuits and frequency response, feedback oscillators, colpitts oscillator and Hartley Oscillator, Operational amplifiers-characteristics and applications.

Power System Analysis and Design: Line parameters and calculations, Performance of Transmission lines. Mechanical design of overhead lines and Insulators, Corona and radio interference Parameters of single- and three-core Cables, Bus admittance matrix, Load flow equations and methods of solutions, Fast-decoupled load flow, Balance- and Unbalanced-faults analysis, Power system stability, Power system transients and travelling Waves, EHV Transmission, HVDC transmission, Concepts of FACTS, Voltage Control and Economic operation, Concepts of distributed generation, solar and wind power, smart grid concepts.

Elements of Electrical Machines:- General concepts of E.m.f., m.m.f., and torque in rotating machines, DC Machines: motor and generator characteristics, equivalent circuits, commutation and armature reaction, starting and speed controls of motors; Synchronous Machines: performance, regulation, Parallel operation of generators, motor starting, characteristics and applications, Transformers: phasor-diagram and equivalent circuit, efficiency, and voltage regulation, auto-transformers, 3-phase transformers.

Measurement:- Basic methods of measurement, Precision and standards, error analysis, Bridges and Potentiometers; moving coil, Moving iron, dynamometer and induction type instruments, measurement of voltage, current, power, energy, and power factor Instrument transformers, digital voltmeters and multimeters, phase-, time- and frequency measurement. Q-meters Oscilloscopes, Basics of sensors, and data acquisition system, Instrumentation systems for pressure and temperature measurements.

ELECTRICAL ENGINEERING

PAPER - II

Power Electronics and Drives: Semiconductor, power, diodes, transistors, thyristors triacs, GTOS, MOSFETS and IGBTs static characteristics and principles of operation, triggering circuits single phase and threephase controlled rectifiers-fully controlled and half controlled, smoothing and filters regulated power supplies, DC-DC choppers and Inverters, speed control circuits for DC and A.C. drives, Basics of electric drives: types, quadrant operation, reversing and braking of electric motors, estimation of power ratings, traction motors.

Digital Electronics: Boolean algebra, logic gates, combinational and sequential logic circuits, multiplexers, multivibrators, sample and hold circuits, A/D and D/A converters, basics of filter circuits and applications, active filters, semiconductor memories.

Microwaves and Communication systems: Electromagnetic wave in guided media, wave guide components, resonators, microwave tubes, microwave generators and amplifiers.

Analog Communication basics: modulation and demodulation, noise and bandwidth, transmitters and receivers, signal to noise ratio, digital communication basics, sampling quantizing, coding frequency- and time-domain multiplexing, sound and vision broadcast antennas, transmission lines at audio and ultra-high frequencies.

Induction and special Machines: Three-phase Induction motors Rotating magnetic field, Torque-slip characteristics, Equivalent Circuit and determination of its parameters, starters, speed control, Induction generators. Single phase Induction motors: Theory and phasor diagrams, characteristics, starting and applications, repulsion motor, series motor: E.m.f. equation and phasor diagram and performance, servomotors, stepper motors, reluctance motors, brushless DC motors (BLDC).

Power system protection and Switch gear: Methods of Arc Extinction, Restriking voltages and recovery voltage, testing of circuit breakers, Protective relays, protective schemes for power system equipment, surges in transmission line and protection.

Numerical Methods: Solution of non liner algebraic equations, single and multisteps methods for solution of differential equations.

Electrical Engineering Materials: Crystal structure and defects, conducting, insulating and magnetizing Materials, super-conductors.

Elements of Microprocessors: Data representation and representation of integer and floating point-numbers. Organization and programming of a microprocessor, ROM and RAM memories CPU of a microcomputer, interfacing memory and I/O devices Programmable peripheral and communication interface. Application of microprocessors.

AGRICULTURAL ENGINEERING

PAPER-I

(a) Thermodynamics and Heat Engines: Concept of energy, temperature and heat equations; laws of thermodynamics, pure substances and their properties; entropy Rankine, air standard Otto, Diesel and Joule cycles; indicator diagrams.

(b) Farm Power: Sources and status of power in India; farm power and agricultural productivity relationship; construction and operational features of IC engines, various, system of IC engine namely carburetion, ignition, cooling, lubrication; valves and valve timing, special features of diesel engines, tractors and their classification, power transmission, repair and maintenance; tractor testing, and tractor economics; power tillers -their economics and suitability, Energy in Agriculture.

(c) Farm Machinery: Design, construction, operation, repair and maintenance of tillage tools, implements and equipment viz. mould board and disk plough; harrows, cultivators, rotary tiller, seeding and planting machines, hoe, weeders, sprayers and dusters; harvester, threshers and combines; soil and crop factors influencing machine performance and energy requirements; selection of farm machines, economics of agricultural mechanization. Earth moving machineries.

(d) Heat and Mass Transfer: Thermal properties of materials; steady state and transient heat conduction, natural and forced convection; boiling, condensation, thermal radiation exchange, Heat exchangers, heat and mass transfer analogy; Fick's laws of diffusion, psychrometrics; analysis of heat and mass transfer processes, instrument and measurement systems.

(e) Process and Food Engineering: Unit operations in post harvest processing (cleaning, grading, drying, size reduction, evaporation, pasteurization, distillation etc.); processing of cereals, pulses, oilseeds, fruits & vegetables, animal feed, spices, dairy products, meat etc.; design of processing equipment and systems, milking machines.

(f) Storage and handling: Changes in stored products during storage; storage of food grains and their products, perishables (vegetable, fruits, dairy product, meat and eggs) storage system- air tight ventilated, refrigerated, modified atmospheric and controlled atmospheric storages; packaging; conveyors; design and management of storage and handling systems. Reducing losses in storages and handling.

