



ಕರ್ನಾಟಕ ರಾಜ್ಯಪತ್ರ

ಅಧಿಕೃತವಾಗಿ ಪ್ರಕಟಿಸಲಾದುದು
ವಿಶೇಷ ರಾಜ್ಯ ಪತ್ರಿಕೆ

ಭಾಗ - ೧ Part - I	ಬೆಂಗಳೂರು, ಶುಕ್ರವಾರ, ೨೧, ಆಗಸ್ಟ್, ೨೦೨೬ (ಶ್ರಾವಣ, ೩೦, ಶಕವರ್ಷ, ೧೯೪೮) BENGALURU, FRIDAY, 21, AUGUST, 2026 (SHRAVANA, 30, SHAKAVARSHA, 1948)	ಸಂ. ೭೫೪ No. 754
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ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯ: ಕರ್ನಾಟಕ ರಾಜ್ಯದ ನಗರಸ್ಥಳೀಯ ಸಂಸ್ಥೆಗಳಿಗೆ ಮಂಜೂರಾಗಿರುವ ಪೌರಸೇವಾ ವೃಂದದ ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ ವೃಂದದ ನೇರ ನೇಮಕಾತಿ ಕೋಟಾದ ಹುದ್ದೆಗಳನ್ನು ಭರ್ತಿ ಮಾಡಲು ನೇರ ನೇಮಕಾತಿ ವಿಧಾನ ಹಾಗೂ ಪರೈಕ್ರಮವನ್ನು ನಿಗದಿಪಡಿಸಲು The Karnataka Municipalities (Recruitment of Officers & Employees) Rules, 2010 ಗೆ ತಿದ್ದುಪಡಿ - ಕಾರ್ಯಕಾರಿ ಆದೇಶ.

ಓದಲಾಗಿದೆ: ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆ ಸಂಖ್ಯೆ: ನಅಇ 52 ಬಿಎಂಎಸ್ 2009, ದಿನಾಂಕ: 21-01-2011

ಪ್ರಸ್ತಾವನೆ:

(1) ಮೇಲೆ ಓದಲಾದ ದಿನಾಂಕ: 21-01-2011 ರ ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆಯನ್ವಯ ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆಯ ಪೌರಸೇವಾ ವೃಂದದ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳಾದ The Karnataka Municipalities (Recruitment of Officers & Employees) Rules, 2010 ಜಾರಿಗೆ ಬಂದಿರುತ್ತದೆ. ಸದರಿ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳಲ್ಲಿ ಮಂಜೂರಾಗಿರುವ ವಿವಿಧ ಶ್ರೇಣಿಯ ಹುದ್ದೆಗಳಲ್ಲಿ ರಾಜ್ಯದ ಎಲ್ಲಾ ನಗರಸಭೆಗಳಿಗೆ ತಲಾ 1 ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ ಹುದ್ದೆ ಮಂಜೂರಾಗಿದ್ದು, ಸದರಿ ಹುದ್ದೆಗಳ ಶೇಕಡ 40% ರಷ್ಟನ್ನು ನೇರ ನೇಮಕಾತಿ ಮೂಲಕ ಭರ್ತಿ ಮಾಡಲು ಅವಕಾಶ ಕಲ್ಪಿಸಲಾಗಿದೆ.

(2) ಪೌರಸೇವಾ ವೃಂದದ ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ ವೃಂದಕ್ಕೆ ಈವರೆಗೆ ನೇರ ನೇಮಕಾತಿ ಕೈಗೊಂಡಿರುವುದಿಲ್ಲ. ಅಲ್ಲದೆ, ಸದರಿ ಹುದ್ದೆಗಳಿಗೆ ನೇರ ನೇಮಕಾತಿ ಕೈಗೊಳ್ಳಲು ನೇಮಕಾತಿ ವಿಧಾನವನ್ನಾಗಲಿ ಅಥವಾ ನೇರ ನೇಮಕಾತಿ ಪರೀಕ್ಷೆಯ ಪರೈಕ್ರಮವನ್ನಾಗಲಿ The Karnataka Municipalities (Recruitment of Officers & Employees) Rules, 2010 ರಲ್ಲಿ ನಿಗದಿಪಡಿಸಲಾಗಿರುವುದಿಲ್ಲ. ಆದ್ದರಿಂದ ಸದರಿ ಹುದ್ದೆಗಳ ನೇರ ನೇಮಕಾತಿಗೆ ನೇಮಕಾತಿ ವಿಧಾನವನ್ನು ಹಾಗೂ ನೇಮಕಾತಿ ಪರೀಕ್ಷೆಯ ಪರೈಕ್ರಮವನ್ನು ನಿಗದಿಪಡಿಸಲು The Karnataka Municipalities (Recruitment of Officers & Employees) Rules, 2010 ರನ್ವಯ ಜಾರಿಯಲ್ಲಿರುವ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳನ್ನು ಸಮಗ್ರವಾಗಿ ಪರಿಷ್ಕರಿಸುವುದು ಅಗತ್ಯವಾಗಿರುತ್ತದೆ.

(3) ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳನ್ನು ಪರಿಷ್ಕರಿಸಲು / ತಿದ್ದುಪಡಿ ತರಲು ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ:ಸಿಆಸುಇ 97 ಎಸ್ಆರ್‌ಡಿ 2004, ದಿನಾಂಕ: 08-04-2004ರಲ್ಲಿ ನಿಗದಿಪಡಿಸಿದ ಎಲ್ಲಾ ಕಾರ್ಯ-

ವಿಧಾನಗಳನ್ನು ಅನುಸರಿಸಬೇಕಾಗುತ್ತದೆ. ಆದರೆ ಈ ಕಾರ್ಯ ವಿಧಾನವನ್ನು ಅನುಸರಿಸಲು ಬಳಹಪ್ಪು ಕಾಲಾವಕಾಶ ಹಿಡಿಯುವುದರಿಂದ ಸದರಿ ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ ವೃಂದಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳಿಗೆ ತಿದ್ದುಪಡಿ ಮಾಡುವುದನ್ನು ಕಾಯ್ದಿರಿಸಿ, ಮೇಲೆ ಓದಲಾದ ದಿನಾಂಕ: 21-01-2011 ರ ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆಯನ್ವಯ ಜಾರಿಗೆ ಬಂದಿರುವ ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆಯ ಪೌರಸೇವಾ ವೃಂದದ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳಾದ The Karnataka Municipalities (Recruitment of Officers & Employees) Rules, 2010 ರಲ್ಲಿ ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ ವೃಂದದ ನೇರ ನೇಮಕಾತಿ ಹುದ್ದೆಗಳಿಗೆ ನೇರ ನೇಮಕಾತಿ ಕೈಗೊಳ್ಳುವ ಸಲುವಾಗಿ ನೇಮಕಾತಿ ವಿಧಾನ ಹಾಗೂ ನೇರ ನೇಮಕಾತಿ ಪರೀಕ್ಷೆಗಾಗಿ ಪಠ್ಯಕ್ರಮವನ್ನು ನಿಗದಿಪಡಿಸಲು ಕಾರ್ಯಕಾರಿ ಆದೇಶವನ್ನು ಹೊರಡಿಸಲು ಸರ್ಕಾರವು ತೀರ್ಮಾನಿಸಿದೆ. ಅದರಂತೆ ಈ ಆದೇಶ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ಜಸಂಇ 149 ಎಂಎಲ್‌ಆರ್ 2026,
ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 21-08-2026

(4) ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಿರುವ ಕಾರಣಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆ ಸಂಖ್ಯೆ: ನಅಇ 52 ಬಿಎಂಎಸ್ 2009, ದಿನಾಂಕ: 21-01-2011 ರನ್ವಯ ಜಾರಿಗೆ ಬಂದಿರುವ The Karnataka Municipalities (Recruitment of Officers & Employees) Rules, 2010 ರ Part – IV ರಡಿಯ ನಿಯಮ 17 ರ ನಂತರ Part – V ರ ನಿಯಮ 17A, 17B, 17C, 17D, 17E, 17F, 17G ಮತ್ತು 17H ಗಳನ್ನು ಈ ಕೆಳಕಂಡಂತೆ ಸೇರ್ಪಡೆಗೊಳಿಸಿ ಆದೇಶಿಸಿದೆ:-

PART - V

17A. Conduct of Competitive Examination for direct recruitment of Assistant Executive Engineer Posts.- (1) A competitive examination for recruitment to the posts of Assistant Executive Engineers for open competition (forty percent quota) shall be held in the manner set out in Schedule IVA. The Commission shall call for applications by advertisement for admission to the competitive examination in such form as it may determine before such date and on payment of such fees as may be specified by the Commission in the Advertisement. The Commission shall also specify in such advertisement the provisional number of vacancies to be filled and the number of vacancies reserved for Scheduled Castes, Scheduled Tribes and other Backward Classes. The Commission shall be responsible for all arrangements relating to the conduct of a competitive examination.

17B. Scheme of Examination.- (1) The competitive examination shall consist of-

(a) a written examination in Kannada, English, General Knowledge and optional subjects specified in Schedule IVA; and

(b) personality test.

(2) The maximum marks for personality test shall not exceed 5% of the marks fixed for competitive examination.

17C. Eligibility of Candidates for personality test. – The Commission shall prepare a separate list of candidates in the order of merit on the basis of the results of the competitive examination. From among whose names are included in such list, as far as may be, such number of candidates as is equal to five times the number of vacancies notified shall be called for personality test subject to calling candidates belonging to Scheduled Castes, Scheduled Tribes and Other Backward Classes in the same ratio as the vacancies are reserved for them.

17D. List selected from the selected candidates.- (1) The Commission shall prepare in the order of merit a select list of candidates comprising candidates selected from open competition on the basis of the aggregate of the marks secured in the written examination and personality test and after taking into consideration the rules and orders in force relating to reservation of posts for Scheduled Castes, Scheduled Tribes, Other Backward Classes and others.

(2) The Commission shall, in accordance with the provisions of sub-rule (1) also prepare an additional select list of candidates in the order of merit who are not included in the final select list prepared under sub-rule (1). The number of candidates included in additional select list shall be equal to 20 percent of the number of vacancies notified in each category under rule 1. No person selected in the additional list shall be appointed to a vacancy not notified for recruitment

(3) The list so prepared under sub-rule (1) and (2) shall be published by the Commission in the Official Gazette and a copy thereof shall be sent to the Appointing Authority.

17E. Appointment of candidates.- (1) Candidates whose names are included in the select list published under sub-rule (1) of rule 4 may be appointed by the Appointing Authority in the vacancies in the cadre in the order in which their names are found in the list after satisfying itself, after such enquiry as may be considered necessary, that each such candidate is suitable in all respects for appointment as Assistant Executive Engineer.

(2) The candidates whose names are included in the additional select list published under sub-rule (2) of rule 17D may also be appointed by the Appointing Authority in the vacancies arising due to non reporting of candidates included in the final select list, in the particular category in which the names are found in the additional select list, after such enquiry as may be considered necessary.

(3) The inclusion of names of candidates in the final select list or additional select list prepared and published under rule 17D shall not confer any right of appointment.

17F. Duration of the operation of the list.- The select list and the additional select list published by the Commission under rule 17D shall be operative till all the candidates in the select list are appointed to the number of posts notified or for a period of one year, whichever is earlier.

17G. Application of General Recruitment Rules.- Except in respect of matters for which provision is made in this Scheme, the provisions of the Karnataka State Civil Services (General Recruitment) Rules, 1977 for the time being in force, shall be applicable for purposes of recruitment under this Scheme.

17H. Application of other rules.- The Karnataka Civil Service Rules, the Karnataka Civil Services (Conduct) Rules, 2021 and all other rules for the time being in force regulating the conditions of service of Government servants made or deemed to have been made under the Karnataka State Civil Services Act, 1978 (Karnataka Act 14 of 1990), in so far as such rules are not inconsistent with the provisions of those rules, shall be applicable to persons appointed under this Scheme.

(5) ಮುಂದುವರೆದು, ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ ಹುದ್ದೆಯ ನೇರ ನೇಮಕಾತಿಗಾಗಿ ನೇರ ನೇಮಕಾತಿ ಪರೀಕ್ಷೆಯ ಪಠ್ಯಕ್ರಮವನ್ನು ನಿಗದಿಪಡಿಸಲು ಮೇಲ್ಕಂಡ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಾವಳಿಗಳ ಅನುಸೂಚಿ IV ರ ನಂತರ ಅನುಸೂಚಿ IVA ನ್ನು ಈ ಕೆಳಕಂಡಂತೆ ಸೇರ್ಪಡೆಗೊಳಿಸಿ ಆದೇಶಿಸಿದೆ:-

SCHEDULE – IVA

(see rule 17A to 17H)

Competitive Examination for Direct Recruitment of Assistant Executive Engineer Posts

The competitive examination shall consist of written examination and personality test. Candidates shall answer all question papers, except Kannada language paper, in English in their own hand.

A. Written Examination:

(1) **English** : Maximum marks-100. Duration of the paper- 1 ½ hours.

(2) **Kannada**: Maximum marks 100. Duration of the paper- 1 ½ hours.

Note:- The marks obtained in compulsory papers i.e. in English and in Kannada shall be of qualifying nature. For qualifying in these papers, a minimum of 30% in each paper and 35% aggregate is prescribed. The marks obtained in these two papers shall not be considered for determining the merit for selection. Candidates who do not secure the prescribed marks in the qualification papers, namely, Kannada and English, shall not be eligible for personality test and selection.

(3) **General Knowledge**: Maximum marks 100. Duration of the Paper 1 ½ hours.

(4) **Optional subjects** - A candidate may select any two of the subjects specified in **Part A** and any two of the subjects specified in **Part B**; provided that a candidate who has selected the subject of Roads and Bridges or Public Health Engineering in **Part A** shall not be eligible to select the subject of Highway Engineering or Public Health Engineering, as the case may be, in **Part B**.

Maximum marks for each subject - 100. Duration of each of the papers – 3 hours.

The Standard and Syllabus of the Examination shall be as fixed in the B.E. degree of AMIE Examination.

Part-A	Part-B
(i) Irrigation	(i) Advanced Structure
(ii) Roads and Bridges	(ii) Pre-stressed Concrete
(iii) Construction Technology and Management	(iii) Advanced Soil Mechanics
(iv) Highway Engineering	(iv) Public Health Engineering
	(v) Hydraulics and Dams
	(vi) Hydrology
	(vii) Theory of Elasticity
	(viii) Basic Electronics

The Syllabi for papers on English and General Knowledge and of the optional subjects are as follows:-

SYLLABUS

English-(1):- English paper will be of S.S.L.C. level and comprises of comprehension of given passage, precise writing, usage, vocabulary, short essay, communication skills. For short essay a choice of subjects will be given. Candidates are expected to keep close to the subject of the essay; to arrange their ideas in orderly fashion and to write concisely. Passages will be set for summary of precise. Credit will be given for effective and exact expression.

Kannada-(2):- Kannada paper will be of S.S.L.C. level and comprises of comprehension of given passage, precise writing, usage, vocabulary, short essay, translation from English to Kannada. For short essay a choice of subjects will be given. Candidates are expected to keep close to the subject of the essay; to arrange their ideas in orderly fashion and to write concisely.

Passages will be given for summary or precise. Credit will be given for effective and exact expression.

General knowledge - (2)- Including General knowledge of current events and of such matters of every day observation and experience their scientific aspects may be expected of an educated person who has not made a special study of any scientific subjects. The papers will also include questions of Indian History and Geography of a nature which candidates should be able to answer without special study.

OPTIONAL SUBJECTS (Part. A)

I. Irrigation

1. General - Terminology, History of Irrigation, Irrigation practice in India, Factors governing feasibility of Irrigation development.

2. Irrigation systems: Well Irrigation, Lift Irrigation, Flow irrigation by canals, Inundation Irrigation and Delta Irrigation of South India, Sprinkler Irrigation, Comparative study of the various systems.

3. Irrigation Projects: Investigations and Planning of irrigation projects, Productive and protective works, Details of project surveys, Location sites for reservoir, canal alignment preparation of plans, estimates and reports for irrigation works, Estimation of yield for the economic design of storage reservoirs. Multipurpose projects.

4. Economic and Administrative aspects of Irrigation Schemes: Socio economic aspects, Organization and administration of projects, Legal aspects, Cost benefit studies, Classification and use of project land, water resources, water requirements, Ground water surveys.

5. Hydrological studies for an irrigation scheme. Catchments characteristics, Run off cycle, Rainfall losses percolation, evaporation, transpiration, evapotranspiration and consumptive use, Flood frequency studies, Flood hydrographs, Unit hydrographs, Synthetic unit graphs.

6. Amount and frequency of irrigation watering, Quality of irrigation water, Salinity and alkalinity Engineering aspects of land drainage, Soil investigations, Structure and fertility, Soil moisture constants, Infiltration measurement, Laws of soil water movement.

7. Reservoirs/Different kinds of reservoirs, Selection of sites, Flood absorptive capacity of reservoirs and its importance, Isolated tanks, Tanks in series, Tanks fed by feeder channels from rivers or streams, Design, Construction, maintenance and repairs of earthen bunds, Filling up breaches. Design of surplus works, Tank sluices, Drainage arrangements, Elements of design, construction and maintenance of masonry dams, Drainage galleries, Various forms of surplus works for flood water disposal, Head sluices and securing sluices in dams.

8. Anicuts of river weirs- Types of river weirs, Weirs on permeable strata, Design and construction of river regulators, settling and head sluices, Crest shutters, Flood Banks and protective works.

9. Distribution system - Classification of channels, methods of alignment design of canal sections, capacities and velocities in canals, in deltaic and non-deltaic country Location and design of distributer system, Design of cross drainage works, Silt and silt, Kennedys silt theory, silt deposits in reservoirs, tanks and canals, Methods to arrest silt accumulation, Soil erosion and its cause, prevention and control. Catchments treatment.

10. River Training- Regime of river, Moll's Theory, Flood Bank and Levels, Navigation aspects; Model studies of rivers, Ball's spurs and Groynes.

11. Anti-malarial engineering works and their importance.

II ROADS AND BRIDGES.

Roads

1. General- Importance of highway development, Highway economies and Highway financing and Highway system.
2. Surveys- Highway planning surveys, location surveys and soil surveys, Presentation of data in terms of charts and tables urban and rural areas, Highway plans and specifications.
3. Highway Design - Geometric design- Rights of way, Highway capacity, design speeds, cross section sight distances, grade line, alignments channelisation, inter sections and inter changes, grade separators, rotary inter sections etc.
4. Highway Construction- Urban and Rural areas, economic principles; drainage of road way and road side and subsoil drainage and hydrology, hydraulics! design principles, drainage structures.
5. Highway Construction - Site Clearance, different types of road rollers, earth moving equipment and construction equipment, Modern highway practices of construction, Specifications for highway materials and construction.
6. Highway maintenance - Surface maintenance, shoulder and approach maintenance, snow and ice control, bridge and culvert maintenance etc. Traffic service and maintenance cost.

Bridges

1. ATE for design, Hydrologic investigations of the watershed area, Flood estimation for bridge water ways by Empirical formulas, Rational method Probability method and Unit graph method.
2. Practical rules of design and economic Span Types of Bridges such as Deck and through bridges, Bowstring, suspension and Moveable span bridges.
3. Design of floor system and different types of bearing specifications for Railway and Highway bridges

I. Public Health Engineering:-

(a) Sanitary Engineering.

1. Drainage and Sewerage - Objects of Scheme - surface drainage, underground sewerage systems and the general arrangement of the several works, principles of design, Data to be collected, allowances for inclusions of the foul part of the rainfall, size velocity and gradients of sewers, Selection of suitable system and evolution of a scheme, design. design of the necessary works of sewer line.
2. House Drainage - Water closets, taps, soil and other pipes, sinks, inventories, urinals and baths.
3. The sewer line - Laying, jointing and testing of sewer, Construction of manholes, flushing tanks, Over flows junctions, catch-basin inverted syphons and public conveniences, maintenance of sewer lines.
4. Pumping sewage - Treatment of sewage before disposal objects. Characteristics of sewage, Modern methods of treatment including diffused air and other processes, Collection and disposal of solid refuse, Screening and pulverising -various methods of composting- utilisation and disposal.
5. Elements of Public Health Engineering - Latrines, Drainage refuse collection and disposal, plumbing, food and milk sanitation, restaurants, market places, slaughter houses, cemeteries, parks, hospitals, playgrounds and cinema halls.
6. Elements of town Planning - Housing, Zoning, Lighting and Ventilation factors, Dust control, Developing environment beautifying town, malaria control, fly and rodent control, rural sanitation, fairs and festivals and disinfection.

(b) Water Supply.

7. Value and Importance of water Supply - Domestic, Commercial and Public requirement - allowance for prospective population -variation in demand.

8. Quantity of water - estimating the quantity of water for a town or city, considering various modifying influences affecting consumption per capita, Estimating the quantity of water available from a source (surface water from rainfall and catchments and underground water by pumping and other methods), Sources of Water-impounded, perennial streams, artesian wells, shallow wells, deep well and infiltration galleries.

9. Quality of Water - Pollutioncontamination and infection waterborne diseases, sanitary survey, conservation of catchments and basin, Water analysis, physical bacterial, chemical microscopic, Protection of water supplies control of algae, river pollutions and its control, Purity of water, PH value.

10. Construction of water works - General principles of economics, construction and arrangement of the several types of water intake works fordifferent sources.

11. Purification of water-Study of impurities (suspended, dissolved and colloidal) plain sedimentation, sedimentation with coagulation, types of coagulants and their uses, slow and rapid filtration, pressure and other filters modern methods of sterilization and ariation-purification of water for industrial use, different methods.

12. Pumping and Distribution system - System of supply, construction of pipe lines and conduits, pumping machinery service reservoirs, balancing reservoirs, stand pipes and water towers, Distribution system (grid iron, dead end and ring system) Appurtenances such valves, hyor. rate controllers and meters, expansion joints, manholes. Principles to be followed in the design of distribution system, maintenance and repairs, detection of leakages, prevention of waste.

IV. Construction Technology and Management

1. Quantitative methods in construction.
2. Construction, planning and control
3. Advances in construction materials.
4. Construction in disaster prone areas.
5. Rehabilitation of structures.
6. Construction economics and finance.
7. Construction management and computer application.
8. Mechanisation in construction.
9. State laws governing construction.

PART-B

1. Advanced structure :

1. Compound stresses and strains- Mohr's Circle and its applications. Compound strains, Principal strains, graphical solutions.

2. Effects of temperature on Mechanical properties of materials.

3. Theories of elastic failure.

4. Strain Energy Methods - Deflection of simple trusses, strain every methods applied to simple beams and trusses.

5. Castigliano's Theorem I and its application to simple cases.

6. Analysis of continuous beams, propped cantilevers, fixed beams, Slope-deflection equations and moment distribution.

7. Three hinged arches, Lines of resistance through hinged arches under dead and live loads, influence lines for horizontal thrust and bending moment. Reaction locus.

8. Rolling loads-curves of maximum bending moments and maximum shear forces, the enveloping parabola and determination of equivalent uniformly distributed load under different system of loading.

9. Influence lines of reaction, shear force, bending moment and deflection, Reversal of stress under live load, Williot-Mohr's diagram.

10. Determination of stresses in the members of the frames due to rolling loads - Influence lines.

II. Prestressed Concrete :

1. Technology of high strength concrete and steel bars and wires, Principles of design, Review of the various design methods. Continuous beams-elastic and ultimate design. Flat slabs.

2 Indeterminate prestressed concrete structures - Prestressed concrete long-span bridges design.

3. Theories - bond, creep and other related phenomena.

4. Stress analysis of the anchorage zone.

III. Advanced Soil Mechanics:

1. Definition of soil components - Soil Identification and classification, Soil-water air phases in soils and fundamental relationships. Soil structure and significance of soil structure. Physical-chemical approach.

2. Flow of water through soil – concept of Darcy's Co-efficient. Permeability and its measurement. Capillary Phenomena, Shrinkage and swelling soils, frost action, drainage.

3. Consistency and plasticity of soils - requirements for engineering classification - compaction of soils and fundamental principles of compacted soils stress distribution in soils-seepage forces and related problems.

4. Compressibility of soils - contact pressure and sub-grade relation. Strength theories for granular and cohesive soils and related tests.

Application of practical problems

5. Active and Passive earth pressure - effects of surcharge. Theories of earth pressures in tunneling and shaft lining, Bearing capacity-approximate theories of bearing capacity. Design considerations, evaluation of design procedures, Building codes -Load tests. Settlement analysis.

6. Land slides and related phenomena, Stability of slopes and cuts. Buck heads and sheet-piles, Methods of stability, Analysis and selection of shear. Ground Water problems, Basic differential equations. Mechanics of piping of cut-offs, filters and berms.

IV. Public Health Engineering:

(a) Sanitary Engineering

1. Drainage and Sewerage - Objects of Scheme-surface drainage, underground sewerage systems and the general arrangement of the several works, principles of design, Data to be collected, allowances for inclusions of the foul part of the rainfall, size velocity and gradients of sewers, Selection of suitable system and evolution of a scheme, design of the several necessary works of a sewer line sewers.

2. House Drainage-Water closets, taps, soil other pipes, sinks, inventories, urinals and baths.

3. The sewer line – Laying, jointing and testing of sewer, Construction of manholes, flushing tanks, Over flows junctions, catch-basin inverted syphons of public conveniences, Maintenance of sewer lines.

4. Pumping sewage -Treatment of sewage before disposal objects, Characteristics of sewage, Modern methods of treatment including diffused air and other processes, Collection and disposal solid refuse, Screening and pulverising – various methods of composting – utilisation and disposal.

5. Elements of Public Health Engineer Engineering - Latrines, Drainage refuse collection and disposal, plumbing, food and milk sanitation, restaurants, market places, slaughter houses, cemeteries, parks, hospitals, playgrounds and cinema halls.

6. Elements of town Planning – Housing Zoning, Lighting and Ventilation factors Dust control, Developing environment beautifying town, malaria control, fly and rodent control, rural sanitation, fairs and festivals and disinfection.

(b) Water Supply

7. Value and Importance of water Supply - Domestic, Commercial and Public requirement – allowance for prospective population – variation in demand.

8. Quantity of water - estimating the quantity of water for a town or city, considering various modifying influences affecting consumption per capita. Estimating the quantity of water available from a source (surface water from rainfall and catchments and underground water by pumping and other methods), Sources of Water-impounded, perennial streams, artesian wells, shallow wells, deep well and infiltration galleries.

9. Quality of Water - Pollution, contamination and infection waterborne diseases, sanitary survey, conservation of catchments and basin, Water analysis, physical bacterial, chemical and microscopic, Protection of water supplies – control of algae, river pollutions and its control, Purity of water PH value.

10. Constructions of water works -General principles of economics and arrangement of the several types of water intake works for different sources.

11. Purification of water - Study of impurities (suspended, dissolved and colloidal) plain sedimentation, sedimentation with coagulation, types of coagulants and their uses, slow and rapid filtration, pressure and other filters modern methods of sterilization and aeration-purification of water for industrial use, different methods.

12. Pumping and Distribution system -system of supply, construction of pipe lines conduits, pumping machinery service reservoirs, balancing reservoirs, stand pipes and water towers, Distribution system (grid iron, dead-end and ring system), Appurtenances such as valves, hydrant, rate controllers and meters, expansion joints, manholes, Principles to be followed in the design of distribution system, maintenance and repairs, detection of leakages, prevention of waste.

V. Highway Engineering :

1. General - Importance of highway development, Highway economics and Highway financing and Highway system.
2. Surveys - Highway planning surveys, location surveys and soil surveys, Presentation of data in terms of charts and tables (urban and rural areas) Highway plans and specifications.
3. **Highway design - Geometric design** - Rights of way, Highway capacity, design speeds, cross section, sight distances, grade line, alignment, **channelization**, inter-section, etc.
4. **Highway Drainage** - Urban and Rural areas, economic principles drainage of roadway and road side and sub soil drainage and hydrology, hydraulic design principles, drainage structure.
5. Highway Construction - Site clearance, different types of road rollers, earth moving equipment and construction equipment, Modern highway, practices of construction, Specifications for highway materials and construction.
6. **Highways Maintenance** - Surface maintenance, shoulder and approach maintenance, snow and ice control, bridge and culvert maintenance etc. Traffic service and maintenance cost.

VI. Hydraulics and Dams:

1. General equation of motion of fluids, potential flow conformal mapping applied to hydraulic structures, laminar and turbulent motion in conduits, boundary layer phenomena, turbulent mixing and flow past flat plates, Circular cylinders and spheres.
2. Steady and unsteady flow in open channels, backwater curves in natural and artificial channels, hydraulic jump, surges and waves, standing waves in super-critical flow, transportation of sediments.
3. Details design of earthen bunds, Stability-Investigation of Projects, Special features of designs of other hydraulic-structures.
4. Details design of masonry dams, (Various methods).

VII. Hydrology:

1. Hydrologic cycle, Basic data, sources of Hydraulic data, Hydrologic failures
2. Hydrographs, ground water and soil moisture, Hydrographic analysis, Run-off and factors affecting run off, Stream flow records.
3. Precipitation types, measurement of rainfall, Precipitation records, storm frequency and mean annual rainfall.
4. Water losses: Evaporation and Percolation losses, Transpiration losses, Soil Evaporation. Water-shed leakage,
5. Arid, semi-Arid regions (with particular reference to India).
6. Snow and Floods - Distribution, function and structure methods of control, cause, distribution and control of floods.

VIII. Theory of Elasticity:

Components of stress and strain. Hookers Law, Differential equation of equilibrium, Compatibility of equations, Stress functions, Two dimensional problems in rectangular Co-ordinates, St.Venant's principle. Bending of a cantilever loaded at one end, Deflection of beams. Two dimensional problems in polar Co-ordinates.

IX. Basic Electronics:

1. High Vacuum Tubes - Fundamental properties of electron tubes, thermionic emission and other types of emissions Diode – its characteristics, Diode as Rectifier, Space charge, Action of the Grid. The triode, tetrode and pentode their characteristics, Beam tubes and Remote cut-off tubes.

2. Power supply systems for cathode heating, Anode-Power Grid bias supply-Rectifier circuits and filters.

3. Vacuum tube amplifiers Triode as an amplifier and its equivalent circuit. Inter stage couplings, Resistance-capacitance coupled, Transformer- coupled and Impedance-coupled Amplifiers, Frequency Response, Classification of Amplifiers Class A, Class B, Class C, operation, Voltage amplifiers and power amplifiers. Efficiencies of power amplifiers, Push-pull working Negative feed back Amplifier C.C. – amplifier Radio Frequency, Voltage and Power Amplifiers, Feed and neutralising Circuits.

4. Vacuum tube oscillators and common oscillators.

5. Modulation and Detection, Principles of simple and super heterodyne receivers.

6. Electrical discharge through Gas Townsend discharge, Glow discharge, Arc discharge, Characteristics of Phenatrons and Thuratrons. Phase shift, control of

7. Cathode Ray Tube Construction, operation and sample applications.

8. Photo-electric cells : Principle, Characteristics and simple applications.

9. Simple Industrial applications:

(a) Motor Control Circuit

(b) Welding Equipment Control Circuit

(c) Hoist Control

(d) Glow Tube Voltage Regulator.

ಟಿಪ್ಪಣಿ:-

(1) ಈ ಕಾರ್ಯಕಾರಿ ಆದೇಶದ ಮೂಲಕ ನಿಗದಿಪಡಿಸಿದ ನೇಮಕಾತಿ ವಿಧಾನವು ಸದರಿ ಕಾರ್ಯಕಾರಿ ಆದೇಶವನ್ನು ಹೊರಡಿಸಿದ ದಿನಾಂಕದಿಂದ ಆರು ತಿಂಗಳು ಅಥವಾ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳು ತಿದ್ದುಪಡಿಯಾಗುವ ದಿನಾಂಕದವರೆಗೆ, ಇವುಗಳಲ್ಲಿ ಯಾವುದು ಮೊದಲೋ ಅಲ್ಲಿಯವರೆಗೆ ಮಾತ್ರ ಜಾರಿಯಲ್ಲಿರುತ್ತದೆ.

(2) ಆರು ತಿಂಗಳ ಒಳಗಾಗಿ ಈ ನೇಮಕಾತಿ ಕಾರ್ಯವಿಧಾನವನ್ನು ಚಾಲ್ತಿಯಲ್ಲಿರುವ ವೃಂದ ಮತ್ತು ನೇಮಕಾತಿ ನಿಯಮಗಳಿಗೆ ತಿದ್ದುಪಡಿ ತಂದು ಅಳವಡಿಸತಕ್ಕದ್ದು.

**ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ,**

(ಟಿ.ಮಂಜುನಾಥ)

ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ,

ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ (ಎಂ.ಎ. - 1 & 3).