MECHANICAL ENGINEERING TECHNICIAN II

EXAM CODE: 7WR31
EXAM TYPE: OPEN/NON-PROMOTIONAL
LOCATION: STATEWIDE
SALARY INFORMATION: $4264 - $5337
CLASS & SCHEM CODE: 3594 HI40
BULLETIN RELEASE DATE: SEPTEMBER 1, 2017

EQUAL OPPORTUNITY & DRUG FREE STATEMENTS

The State of California is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right to family care and medical leave, gender, gender expression, gender identity, genetic information, marital status, medical condition, military or veteran status, national origin, political affiliation, race, religious creed, sex (includes pregnancy, childbirth, breastfeeding and related medical conditions), and sexual orientation. It is the objective of the State of California to achieve a drug-free work place. Any applicant for State employment will be expected to behave in accordance with this objective because the use of illegal drugs is inconsistent with the law of the State, the rules governing civil service and the special trust placed in public servants.

FINAL FILING DATE

September 19, 2017

Examination Applications (STD 678) must be postmarked or submitted in person no later than the final filing date. Applications postmarked or submitted after 4:30pm on the final filing date will not be accepted for any reason. Dates printed on Mobile Bar Codes, such as the Quick Response (QR) Codes available at the USPS, are not considered Postmark dates for the purpose of determining timely filing of an application. Faxed or emailed applications will not be accepted.

WHO SHOULD APPLY

Candidates who meet the minimum qualifications of the classification, as stated on this examination bulletin, may apply.

HOW TO APPLY

It is the personal responsibility of each examination candidate to submit their application materials within the timeframe and in the manner specified on this examination bulletin. Examination Applications (STD 678) may be mailed or submitted in person by the final filing date to:

MAILING ADDRESS: OR SUBMIT IN PERSON:
Department of Water Resources Department of Water Resources
P.O. Box 942836 1416 9th Street, Room 320
Sacramento, CA 94236 Sacramento, CA 95814

DO NOT MAIL OR SUBMIT APPLICATIONS TO THE CALIFORNIA DEPARTMENT OF HUMAN RESOURCES OR DEPARTMENT OF WATER RESOURCES' FIELD OFFICES.

Examination Applications must be dated and signed with an original signature. Applications must include “to” and “from” dates (month/day/year), time base, and position titles. Applications received without this information will be rejected. Resumes and other attachments will not be accepted in lieu of a completed application.
**IDENTIFICATION REQUIRED**

Accepted applicants are required to bring either a photo identification card or two forms of signed identification to each phase of the examination.

**SPECIAL TESTING INFORMATION**

If you have a disability and need special testing arrangements, mark the appropriate box in Question 2 of the Examination Application (STD 678). You will be contacted to make specific arrangements.

**EXAMINATION INFORMATION**

This examination will consist of a Qualification Appraisal Interview weighted 100%. In order to obtain a position on the eligible list, a minimum rating of 70% must be attained. Competitors who do not appear for the interview will be disqualified.

**EXAMINATION DATE(S)**

It is anticipated that interviews will be held during October/November 2017.

**ELIGIBLE LIST INFORMATION**

An open/non-promotional list will be established for use by all state agencies. Eligibility expires 12 months after it is established. Competitors must then retest to reestablish eligibility.

**POSITION DESCRIPTION**

This is the full journey level in the series. Under the direction of an engineer, Mechanical Engineering Technician II’s assist in and sometimes conduct field investigations; prepares complete design and contract drawings and checks shop drawings and construction submittals; designs difficult mechanical systems to previously established standards, with engineering help only for unusual features that have not been standardized; secures information from catalogs; prepares difficult plans, specifications and quantity and cost estimates on a wide variety of mechanical work such as air conditioning, ventilation and heating systems for buildings and tunnels, bridge mechanical devices, piping and duct work, highway maintenance equipment and equipment components and mechanical systems for power plants, pumping plants and generator, fan and pump installations; prepares difficult mechanical system layouts and detail drawings; uses state-of-the-art technology, i.e., CADD, personal computers, stand-alone interactive systems and automated lettering devices; incorporate mechanical details into general plans and occasionally will work on drawings and designs other than mechanical; inspects routine manufacturing and installations of mechanical materials and highway maintenance equipment and equipment components, especially where conformance to standard design requirements are involved; make routine engineering calculations; reports the status of general mechanical engineering work and completed results.

**REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION**

All applicants must meet the minimum qualifications for this examination by the final filing date.

Qualifying experience may be combined on a proportionate basis if the requirements stated below include more than one pattern and are distinguished as “Either” I, “or” II, “or” III, etc. For example, candidates possessing qualifying experience amounting to 50% of the required time of Pattern I, and additional experience amounting to 50% of the required time of Pattern II, may be admitted to an examination as meeting 100% of the overall experience requirement.

- **Either I**
  - Two years of experience as a Mechanical Engineering Technician I in the California state service.

- **Or II**
  - Five years of drafting and design experience in an engineering office (one year of which may be specification writing only), two years of which must have been mechanical drafting and design experience equivalent in level of responsibility to a Mechanical Engineering Technician I in the California state service. AND

- **Education**
  - Completion of a two-year terminal curriculum in mechanical technology at a community college, or completion of the sophomore year (at least 60 semester units or equivalent quarter units) of a professional mechanical engineering college or university curriculum. [Candidates may substitute mechanical drafting experience for the education on the basis that one year of experience is equivalent to one year (at least 30 semester units or equivalent quarter units) of education.]
Applicants qualifying under an education requirement MUST provide a copy of their college diploma and/or transcripts (unofficial are acceptable) by the final filing date as proof of completion of the required education. Competitors who fail to provide proof of completion of the required education will be eliminated from the examination.

SCOPE OF EXAMINATION

In addition to evaluating the competitors’ relative abilities as demonstrated by the quality and breadth of experience, emphasis in the examination will be on measuring competitively, relative to job demands, each competitor’s:

Knowledge of:

1) Design of mechanical systems, components and materials.
2) Installation and construction methods.
3) Drafting symbols, devices and mechanisms.
4) State-of-the-art technology, i.e., CADD, personal computers, stand-alone interactive systems and various technical aids.
5) Air conditioning, ventilation and heating systems, piping and duct work and fan, turbine, pump, highway maintenance equipment and equipment components and installations.
6) Mechanical theory, and practice.
7) Engineering mathematics.
8) The department's safety and health policies and procedures.
9) Basic safety practices contained in the California Code of Regulations, Title 8 Industrial Relations, Safety Orders, and the General Industry Safety Orders regarding personal protective equipment.

Ability to:

1) Follow directions.
2) Prepare design and contract drawings for mechanical work from existing drawings and from design notes and sketches.
3) Interpret all drawings, plans and specifications of any kind encountered in the work and incorporate mechanical and associated drawings, plans and specifications into general design and contract documents.
4) Prepare as-built plans.
5) Use state-of-the-art technology, i.e., CADD, personal computers, stand-alone interactive systems and automated lettering devices.
6) Prepare neat and accurate drafting and freehand and machine lettering.
7) Report the status of work and the completed results.
8) Prepare basic, or assist in preparation of complex plans, specifications and quantity and cost estimates of mechanical work.
9) Do mechanical design and layout work of average difficulty and detail drafting of the most complex nature.
10) Work independently.
11) Prepare engineering calculations.
12) Check and plot from field notes and prepare and check complex plans, quantity and cost estimates and specifications of mechanical work.
13) Do complex layout work.
14) Specify and estimate mechanical systems and components.
15) Do shop and field inspection of equipment and mechanical systems.
16) Correlate plans, designs, drawings and data with physical conditions.

EDUCATION AND EXPERIENCE

If conditions warrant, this examination may utilize an evaluation of each candidate’s experience and education as compared to a standard developed from the class specification. For this reason it is especially important that each candidate take special care in accurately and completely filling out their application. List all experience relevant to the “Requirements for Admittance to the Examination” shown on this announcement. Supplementary information will be accepted but read the “Requirements for Admittance to the Examination” carefully to see what kind of information will be useful to the staff doing the evaluation.

VETERANS PREFERENCE

Assembly Bill 372, signed into law by Governor Brown on August 12, 2013, changes the way the Veterans Preference process is administered by the State of California. Veterans Preference will be awarded as follows, starting on January 1, 2014: 1) Any veteran, widow or widower of a veteran, or spouse of a 100 percent disabled veteran, who achieves a passing score in an entrance examination, shall be ranked in the top rank of the resulting eligibility list. Any veteran who has been dishonorably discharged or released is not eligible for Veteran’s Preference. 2) An entrance exam is defined, under law, as any open competitive examination 3) Veterans Preference is not granted once a person achieves permanent civil service status.

The California Department of Human Resources (CalHR) has information on how to apply for Veterans Preference on their website at www.jobs.ca.gov and on the Application for Veterans Preference form (CalHR 1093). Additional information is also available at the Department of Veterans Affairs website at www.cdva.ca.gov.
Career Credits will be granted.

The Department of Water Resources reserves the right to revise the examination plan to better meet the needs of the service if the circumstances under which this examination was planned change. Such revision will be in accordance with civil service laws and rules and all competitors will be notified.

For an examination with a written feature, it is the candidate’s responsibility to contact the Department of Water Resources seven days prior to the test date if he/she has not received his/her notice. For an examination without a written feature it is the candidate’s responsibility to contact the Department of Water Resources at (916) 653-4838, TDD (916) 653-1804, three weeks after the final filing/cut-off date if he/she has not received his/her notice.

Applications are available at Department of Water Resources’ (DWR) offices, the DWR website: www.water.ca.gov/jobs/currentexams.cfm, local office of the Employment Development Department, and California Human Resources (CalHR) at https://jobs.ca.gov/pdf/std678.pdf.

If you meet the requirements stated on this bulletin, you may take this examination, which is competitive. Possession of the entrance requirement does not assure a place on the eligible list. All candidates who pass will be ranked according to their scores.

General Qualifications: Candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, and ability to work cooperatively with others; and a state of health consistent with the ability to perform the assigned duties of the classification.

Examination Locations: When a written or performance test is part of the examination, it will be given in such places in California as the number of candidates and conditions warrant. Ordinarily, qualifications appraisal interviews are scheduled in Sacramento and Los Angeles. However, locations of interviews may be limited or extended as conditions warrant.

If a candidate’s notice of oral interview fails to reach him/her prior to the day of the interview due to a verified postal error, he/she will be rescheduled upon written request.

Eligible Lists: Eligible lists established by competitive examination, regardless of date, must be used in the following order: 1) subdivisional promotional, 2) departmental promotional, 3) multidepartmental promotional, 4) servicewide promotional, 5) departmental open, 6) open eligible list. When there are two lists of the same kind, the older must be used first. Eligible lists will expire in one to four years unless otherwise stated on this bulletin. In the case of continuous testing examinations, names are merged into the appropriate lists in order of final test scores (except as modified by veterans preference credits) regardless of the date of the test, and the resulting eligible lists will be used only to fill vacancies in the area shown on the bulletin.

Promotional Examinations Only: Competition is limited to employees who have a permanent civil service appointment. Under certain circumstances other employees may be allowed to compete under provisions of Rules 234, 235, 235.2. State Personnel Board Rules 233, 234, 235, 235.2 and 237 contain provisions regarding civil service status and eligibility for promotional examinations. These rules may be reviewed at departmental personnel offices or at the Information Counter of State Personnel Board offices. TDD is Telecommunications Device for the Deaf and is reachable only from phones equipped with a TDD Device. California Relay Telephone Service for the Deaf or hearing impaired: From TDD phones: 1-800-735-2929; From Voice phones: 1-800-735-2922.

For information regarding this examination, please contact Teresa Bullock at (916) 653-6330.