JAMMU AND KASHMIR PUBLIC SERVICE COMMISSION

Polo Ground, Srinagar – 190001

(www.jkpsc.nic.in)

Subject: Conduct of Screening Test and notification of the syllabus for the posts of Lecturer Grade-I Mechanical Engineering in Technical Education Department.

NOTIFICATION NO: 32 -PSC (DR-SYL) OF 2012
D A T E D : 18 -05-2012.

In continuation of Notification No. 28-PSC (DR-P) of 2012 dated 25.04.2012, the syllabus for conduct of Screening Test for the posts of Lecturer Grade-I Mechanical Engineering in Technical Education Department is notified as under:-

SYLLABUS FOR LECTURER GRADE-I MECHANICAL ENGINEERING

Statics: Simple applications of equilibrium equations.

Dynamics: Simple applications of equations of motion, simple harmonic motion, work energy, power.

Theory of Machines: Simple examples of links and mechanics. Classification of gears, standard gear tooth profiles, Classification of bearing. Function of fly wheel. Types of governors. Statics and dynamic balancing. Simple examples of vibration of bars. Whirling of shafts.

Mechanics of solids: Stress, strain, Hook's Law, elastic modulii, Bending moments and shearing force diagrams for beams. Simple bending and torsion of beams springs, thinwalled cylinders Mechanical properties and material testing.

Manufacturing Science: Mechanics of metal cutting, tool life, economics of machining, cutting tool materials. Basic machining processes, types of machine tools, transfer lines, shearing drawing, spinning, rolling, forging, extrusion. Different types of casting and welding methods.

Production Management: Method and time study, motion economy and work space design, operation and flow process charts. Product design and cost selection of manufacturing process. Break even analysis, Site selection, plant layout, Materials handling, selection of equipment for job, shop and mass production, Scheduling, dispatching routing.

Thermodynamics: Heat, work and temperature, First and second laws of thermodynamics, Carnot, Rankine, Otto and Diesel Cycles.

Fluid Mechanics: Hydrostatics Continuity equation, Bernoullis theorem. Flow through pipes. Discharge measurement. Laminar and Turbulent flow, concept of boundary layer.

Heat Transfer: Heat transfer by conduction, Convection and Radiation. One dimensional steady state conduction through walls and cylinders. Fins, Concept of thermal boundary layer. Heat transfer, coefficient, Combined heat transfer, coefficient, Heat exchangers.

Energy Conversion: Compression and spart ignition engines, Compressors, fans and blowers. Hydraulic pumps and turbines Thermal turbo machines.

Boiler Flow of stream through nozzles layout of power plants.

Environmental Contorl Refrigeration cycles, refrigeration equipment- its operation and maintenance, important refrigerants, Psychometrics comfort, cooling and dehumidification.

It is further notified for information of the concerned that the Screening Test for the posts of Lecturer Grade-I Mechanical Engineering shall be conducted on **10.06.2012.**

Sd/-
(Ishtiaq Ahmad Bhat),
Under Secretary,
J&K Public Service Commission

No. PSC/DR/Lect.Grade-I Mech/2012/204 Dated: 18 .05.2012

Copy to:-

1. Commissioner/Secretary to Government, Technical Education Department.
2. Director Information/Joint Directors Information, J&K Government, Srinagar/Jammu for favour of getting the notice published in atleast two local leading English dailies of Srinagar/Jammu.
3. General Manager, Govt. Press Jammu for publication in extra ordinary issue of the gazette.
4. Deputy Secretary/Under Secretary, J&K Public Service Commission.
5. Prl. Pvt. Secretary to Hon'ble Chairman, J&K Public Service Commission for information of the Hon'ble Chairman.
6. Private Secretary to Shri _____, Member, J&K Public Service Commission information of the Member .
7. PA to Secretary, J&K Public Service Commission for information of the Secretary.
8. In-Charge Camp Office, Jammu.
9. I/C Website for uploading the notice on website. One hard & one soft copy.
10. Notice Board, J&K PSC, Jammu/ Srinagar.
11. Main file/Programme file.