

NATIONAL REMOTE SENSING CENTRE
ADVERTISEMENT NO.NRSC/RMT/3/2017 DATED 20.05.2017
Name of the Post : Technician – B (Instrument Mechanic)
Post Code : TB 4

SYLLABUS – WRITTEN TEST

Type of Examination	:	Objective Type (Multiple Choice Questions)
No. of Questions	:	80 Questions
Apportionment of marks	:	Each Question carries one mark.
Duration of Examination	:	02 Hours

Qualification Requirement : ITI/NTC/NAC in Instrument Mechanic Trade.
(Examination will broadly comprise of below mentioned topics as covered in ITI/NTC/NAC in Instrument Mechanic Trade.)

1. Electrical components, Ohm's law & Kirchhoff's laws
2. Magnet and magnetism
3. Principles of alternating current
4. Introduction of AC and DC generators
5. Transformer
6. Basics of electrical measuring instruments
7. AC instruments and DC instruments Meter range extension
8. Ohm meters
9. Semi conductor devices, Rectifiers, Filters, Voltage regulators, Power Supply units, Oscillators, Operational Amplifier.
10. Number systems, Logic Circuits
11. Digital meters, CRO, A/D and D/A converters
12. Introduction to Computers and microprocessor
13. Instrument characteristics Statistical analysis
14. Principle of Pressure in Liquids & Gases.
15. Electrical pressure transducers, Low Pressure Measurement, Pressure Instrument
16. Principles of level measurement, Pressure head instruments, Electrical method conductivity, Solid level measurement, Temperature measurement, Bimetallic and fluid filled temperature instruments, Electrical temperature instrument.
17. Pyrometry, Recorders, Control valves.
18. Introduction to controllers, types of controller and their operation.
19. Digital control systems, Networking protocols, Fundamentals of SCADA and DCS.
20. Identification of symbols of switches and relays, electrical motors, various types of transformers, electrical measuring instruments, transmitter and sensors, pressure sensors. Functional block diagram of pressure indicator and transmitter, temperature sensors, indicators and transmitter, various types of recorders,