अध्याय – 04

पाठ्यक्रम

कुल अंक - 100

	प्रश्न पत्र- 1	कुल अंक 100
01	सभी पदों के लिए ट्रेड से संबंधित पाठ्यक्रम के 75 वस्तुनिष्ठ Objective type प्रश्न (पाठ्यक्रम अन्त में संलग्न	75 अंक
	कक्षा दसवी स्तर के निम्न विषयों से 25 वस्तुनिष्ठ Objective type प्रश्न 1. विज्ञान एवं गणित 2. सामान्य ज्ञान 3. तार्किक ज्ञान 4. बेसिक कम्प्यूटर ज्ञान	25 अंक

Directorate of Skill Development, Govt. of Madhya Pradesh

Syllabus for Training Officer - Electronics Mechanic :
Paper code -01 (Post code 01 & 02)

1. Perform basic workshop operations using suitable tools for fitting, riveting, drilling etc. observing suitable care & safety following safety precautions. (NOS: ELE/N1002)
2. Select and perform electrical/ electronic measurement of single range meters and calibrate the instrument. (NOS: ELE/N9401)
3. Test &service different batteries used in electronic applications and record the data to estimate repair cost. (NOS: ELE/N7001)
4. Measure AC/DC using proper measuring instruments and compare the data using standard parameter. (NOS: ELE/N9402)
5. Measure the various parameters by DSO and execute the result with standard one. (NOS: ELE/N9403)
6. Plan and execute soldering & de-soldering of various electrical components like Switches, PCB & Transformers for electronic circuits. (NOS: ELE/N7812)
7. Test various electronic components using proper measuring instruments and compare the data using standard parameter. (NOS: ELE/N5804)
8. Assemble simple electronic power supply circuit and test for functioning. (NOS: ELE/N5804)
9. Construct, test and verify the input/output characteristics of various analog circuits. (NOS: ELE/N9404)
10. Plan and construct different power electronic circuits and analyse the circuit functioning. (NOS: ELE/N1201)
11. Select the appropriate opto electronics components and verify the characteristics in different circuit. (NOS: ELE/N6102)
12. Assemble, test and troubleshoot various digital circuits. (NOS: ELE/N1201)
13. Simulate and analyze the analog and digital circuits using Electronic simulator software. (NOS: ELE/N6102)
14. Construct and test different circuits using ICs 741operational amplifiers & ICs 555 linear integrated circuits. (NOS: ELE/N9405)
15. Read and apply engineering drawing for different application in the field of work. (NOS: PSS/N9401)
16. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: PSS/N9402)
17. Prepare, crimp, terminate and test various cables used in different electronics industries. (NOS: ELE/N6307)
18. Install, configure, interconnect given computer system(s) and demonstrate & utilize application packages for different application. (NOS: ELE/N4614)
19. Identify, place, solder and desolder and test different SMD discrete components and ICs package with due care and following safety norms using proper tools/setup. (NOS: ELE/N5102)
20. Rework on PCB after identifying defects from SMD soldering and de-soldering. (NOS: ELE/N5102)
21. Construct different electrical control circuits and test for their proper functioning with due care and safety. (NOS: ELE/N9407)
22. Assemble and test a commercial AM/ FM receiver and evaluate performance. (NOS: ELE/N9408)
23. Test, service and troubleshoot the various components of different domestic/ industrial programmable systems. (NOS: ELE/N9802)
24. Execute the operation of different sensors, identify, wire & test various transducers of IoT Applications. (NOS: ELE/N9409)
25. Identify different loT Applications with IoT architecture. (NOS: ELE/N3102)
26. Plan and carry out the selection of a project, assemble the project and evaluate performance for a domestic/commercial application. (NOS: ELE/N9802)
27. Prepare fibre optic setup and execute transmission and reception. (NOS: ELE/N5902)
28. Plan and Interface the LCD, LED, DPM panels to various circuits and evaluate performance. (NOS: ELE/N8107)
29. Detect the faults and troubleshoot SMPS, UPS and inverter. (NOS: ELE/N7202)
30. Identify, Test and verify characteristics of Photovoltaic cells, Modules, Batteries and Charge controllers. Install a solar panel, execute testing and evaluate performance by connecting the panel to the inverter. (NOS: ELE/N5902)
31. Dismantle, identify the various parts and interface of a cell phone to a PC. Estimate and troubleshoot. (NOS: ELE/N8107)
32. Check the various parts of a LED lights & stacks and troubleshoot. (NOS: ELE/N9302)
33. Identify, operate various controls, troubleshoot and replace modules of the LCD/LED TV & its remote. (NOS: ELE/N3102)
34. Read and apply engineering drawing for different application in the field of work. (NOS: PSS/N9401)
35. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: PSS/N9402)

Syllabus for Training Officer - Mechanic Diesel
Paper code -02 (Post code 03 & 04)

1. Check & perform Measuring & marking by using various Measuring & Marking tools (Vernier Callipers, Micrometre, Telescope gauges, Dial bore gauges, Dial indicators, straightedge, feeler gauge, thread pitch gauge, vacuum gauge, tire pressure gauge.) Following safety precautions. (NOS: ASC/N1404)
2. Plan & perform basic fastening & fitting operation by using correct hand tools, Machine tools & equipment. (NOS: ASC/N1405)
3. Trace and Test all Electrical & Electronic components & circuits and assemble circuit to ensure functionality of system. (NOS: ASC/N1435)
4. Trace & Test Hydraulic and Pneumatic components. (NOS: CSC/N9465)
5. Check & Interpret Vehicle Specification data and VIN. Select & operate various Service Station equipment. (NOS: ASC/N1404)
6. Dismantling & Assembling of Diesel Engine (LMV/HMV) (NOS: ASC/N9403)
7. Overhauling and Testing of Diesel Engine. (NOS: ASC/N9404)
8. Tracing, testing and servicing/ overhauling of engine cooling and lubrication system. (NOS: ASC/N9408)
9. Tracing, testing and servicing of engine intake and exhaust system (NOS: ASC/N9406)
10. Overhauling and testing of fuel feed system (NOS: ASC/N9402)
11. overhauling of stationary diesel engine (NOS: ASC/N9409)
12. Monitor emission of vehicle pollution. (NOS: ASC/N9407)
13. Overhauling of Alternator and Starter Motor. (NOS: ASC/N9436)
14. Diagnose & rectify the defects in LMV/HMV to ensure functionality of vehicle. (NOS: ASC/N1438)
15. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)
16. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)

Syllabus for Training Officer - REFRIGERATION AND AIR CONDITIONER MACHENIC
Paper code -03 (Post code 05 & 06)

1. Identify trade related hazards and safety procedures following safety precautions. NOS: ELE/N 1002
2. Produce fitting jobs as per drawing (Range of operations: marking, sawing, filing, drilling, reaming, taping and dieing etc.). NOS: ELE/N3114
3. Produce Sheet metal components (range of operation bending, riveting and soldering etc.). NOS: ELE/N3114 marking, metal cutting,
4. Identify electrical safety. Join different wire, measure power, currents, volts and earth resistance etc. Connect single phase, 3 phase motors i.e. star and delta connections. NOS: ELE/N 1002
5. Identify the electronic components and their colour code i.e. transistor, capacitor, diode, amplifier, I.C and able to work soldering. NOS: ELE/N3112
6. Perform gas welding, brazing, soldering observing related safety. NOS: ELE/N3112
7. Identify RAC tools and equipment and recognise different parts of RAC system. Perform copper tube cutting, flaring, swaging, brazing. NOS ELE/N 3108
8. Test mechanical & electrical components. Perform leak test, vacuuming, gas charging, wiring & installation of refrigerator. NOS: ELE/N3112
9. Identify electrical and mechanical components of a refrigerator. NOS: ELE/N3112
10. Test compressor motor terminal, start compressor Direct with relay & without relay, technique of flushing, leak testing, replacing capillary & filter drier, evacuation & gas charging. NOS: ELE/N3112
11. Check components of frost-free refrigerator (electrical / mechanical), wiring of frost-free freeze & air distribution in refrigerator sector. Leak detection, evacuators & gas charging. NOS: ELE/N3112
12. Dismantle, repair and assemble hermetic, fixed and variable speed compressor, and test performance. NOS: ELE/N3112
13. Identify the terminals of sealed compressor and their wiring and measure current, volts, watts and use of DOL starter with different types of motors. NOS: ELE/N3112
14. Perform selection of Hermetic compressor for different appliances, starting methods, testing controls & safety cut out used in sealed compressor. NOS: ELE/N3112
15. Identify the components of control system of Inverter A.C and wiring of control system NOS ELE/N3114
16. Perform servicing & de-scaling of condenser (internals & externals) used in different appliances NOS ELE/N3114
17. Perform fitting & adjustment of drier, filter & refrigerant controls used in different refrigeration system. NOS: CSC/N9413
18. Perform servicing of different evaporator used in different appliances. NOS: CSC/N9414
19. Carry out Recovery and Recycling of Refrigerant used, alternative of CFC, HFC re-cover, transfer & handling of gas cylinders. NOS ELE/N3114

20. Retrofit CFC/HFC machine with ozone friendly refrigerant with understanding of the compatibility. NOS ELE/N3114
21. Pack thermal insulation and prevent cooling leakage. NOS ELE/N3114
22. Install window AC, test Electrical & electronics components & Fault diagnosis & remedial measures. NOS ELE/N3114
23. Perform servicing of electrical & electronic control test, installation, wiring, fault finding & remedial measures of different split AC. NOS ELE/N3114
24. Perform servicing of car AC. Fault diagnosis & remedial measures NOS ELE/N3114
25. Read and apply engineering drawing for different application in the field of work. NOS CSC/N9401
26. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. NOS CSC/N9402
27. Carry out servicing, dismantling, checking different parts of different types of commercial compressor, replacing worn out parts, Check lubrication system. Assemble & check performance. NOS-ELE/N3140
28. Perform servicing of different types of water-cooled condenser. NOS- ELE/N3140
29. Perform servicing and performance test of Cooling tower NOS- ELE/N3141
30. Conduct Servicing, backwash & re-generate Water treatment plant of circulating water. NOS CSC/N9415
31. Perform Fitting of expansion valve, adjustment of refrigerant flow according to heat load. NOS-ELE/N3140
32. Perform servicing of evaporator &chillers. NOS- ELE/N3140
33. Carry out servicing and retrofit of Water cooler and dispenser. NOS CSC/N9416
34. Service, retrofit of visible cooler and bottle cooler and test performance. NOS CSC/N9417
35. Conduct servicing of deep freezer and test performance. NOS CSC/N9418
36. Install, service, repair, gas charging and testing performance of Ice Cube machine. NOS CSC/N9419
37. Repair, servicing & retrofit of ice candy plant. NOS CSC/N9420
38. Perform servicing of Ice plant and evaporative condenser. NOS CSC/N9421
39. Perform Servicing and preventive maintenance of walk in cooler & cold storage. NOS CSC/N9422
40. Study psychrometric chart and measure psychrometric properties using psychrometric, anemometer i.e. DBT, WBT, RH, air flow etc. NOS-ELE/N3140
41. Perform servicing of motor and blowers used in different air conditioning system. NOS-ELE/N3141
42. Construct, install, pack thermal and acoustic insulation of different air ducts. NOS-ELE/N3141
43. Perform servicing and maintenance of different types of air filters. NOS- ELE/N3141
44. Perform servicing, installation, fault diagnosis and remedial measures on Package AC with Air cooled condenser. NOS CSC/N9423
45. Carry out Servicing, installation, fault diagnosis and remedial measures in Package A.C. with water cooled condenser. NOS-ELE/N3140
46. Identify the various components of central AC test electrical components and make wiring. Servicing of A.H.U, damper, check air flow, De-scaling of condenser and CT servicing. NOS- ELE/N3141
47. Pump down the system, top up oil and gas and check temperature and pressure. NOS-ELE/N3140
48. Identify components of DX system. Test components, make wiring of DX system. Test leak and evacuate, gas charge the system and check the performance. Maintenance, trouble shoot and operate the plant. NOS-ELE/N3140
49. Identify the different parts of VRF/VRV system, check and service VRF/VRV system. NOS-ELE/N3141
50. Identify different parts of indirect or chillers system. Check components and make wiring, leak test, evacuate and gas charge/ top up. Servicing the plant and trouble shoot. NOS-ELE/N3141
51. Identify chilled water pipe line. Servicing of dampers, FCU and water control valves. NOS-ELE/N3141
52. Troubles shoot both Central A.C. plant DX and indirect system. Check different control system, installation of other major components, servicing of all parts including cooling tower and water treatment plant. NOS-ELE/N3141
53. Perform Servicing, fault diagnosis, repair and maintenance of mobile A.C. leak test, evacuation, gas charging, check magnetic clutch and make wiring. Test performance after start. NOS-ELE/N3141
54. Perform preventive maintenance of different plants. Maintain log book based on daily operation. NOS-ELE/N3141
55. Read and apply engineering drawing for different application in the field of work. NOS CSC/N9401
56. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study, NOS CSC/N9402

Syllabus for Training Officer - DRAUGHTSMAN CIVIL
Paper code -04 (Post code 07 & 08)

1. Draw free hand sketches of hand tools used in civil work following safety precautions. (NOS: IES IES/N9401)
2. Draw plane figures applying drawing instruments with proper layout and the method of folding drawing sheets. (NOS: IES/N9402)

3. Construct plain scale, comparative scale, diagonal scale and vernier scale. (NOS: IES/N9403)
4. Draw orthographic projections of different objects with proper lines, lettering and dimensioning. (NOS: IES/N9404)
5. Draw Isometric / Oblique / Perspective views of different solid / hollow / cut sections with proper lines, lettering and dimensioning. (NOS: IES/N9405)
6. Draw component parts of a single storied residential building with suitable symbols and scales. (NOS: IES/N9406)
7. Draw different types of stone and brick masonry. (NOS: IES/N9407)
8. Draw different types of shallow and deep foundation. (NOS: IES/N9408)
9. Draw different types of shoring, scaffolding, underpinning, framework and timbering. (NOS: IES/N9409)
10. Draw different types of Damp proofing in different position. (NOS: IES/N9410)
11. Drawing of different types of arches and lintels with chajja. (NOS: IES/N9411)
12. Perform site survey with plane table and prepare a map. (NOS: IES/N9412)
13. Make topography map bycontourswithleveling instrument. (NOS: IES/N9413)
14. Perform site survey with Theodolite and prepare site plan. (NOS: IES/N9414)
15. Drawing of different types of carpentry joints. (NOS: IES/N9415)
16. Draw different types of doors and windows according to manner of construction, Arrangement of component, and working operation. (NOS: IES/N9416)
17. Perform site survey with chain / tape and prepare site plan. (NOS: IES/N9417)
18. Perfom site survey with prismatic compass and prepare site plan. (NOS: IES/N9418)
19. Prepare the detailed drawing of electrical wiring system. (NOS: IES/N9419)
20. Draw types of ground and upper floors. (NOS: IES/N9420)
21. Draw different types of vertical movement according to shape, location, materials in stair, lift, ramp and escalator. (NOS: IES/N9421)
22. Draw different types of roofs, truss according to shape, construction, purpose and span. (NOS: IES/N9422)
23. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: IES/N9423)
24. Draw single storied building site plan layout. (NOS: CON/N1302)
25. Create objects on CAD workspace using Toolbars, Commands, Menus, formatting layer and style. (NOS: CON/N1302)
26. Draw a sanction plan of double storied flat roof residential building by using CAD. (NOS: CON/N1302)
27. Create objects on 3D modeling concept in CAD. (NOS: IES/N9424)
28. Prepare a drawing of public building detailing with roof and coloumns by frame structures using CAD. (NOS: CON/N1302)
29. Prepare detailed drawing of RCC structures using CAD and prepare bar bending schedule. (NOS: IES/N9425)
30. Draw the details of a framed structure and portal frame of a residential building using CAD. (NOS: IES/N9426)
31. Draw the different types of steel sections, rivets and bolts using CAD. (NOS: CON/N1302)
32. Draw the details of girders, roof trusses and steel stanchions using CAD. (NOS: CON/N1302)
33. Prepare the detailed drawing showing the different types of sanitary fittings, arrangements of manholes, details of septic tank using CAD. (NOS: IES/N9427)
34. Draw the details flow diagram of water treatment plant (WTP) and Swerage Treatment plant (STP). (NOS: IES/N9428)
35. Draw the cross sectional view of different types of roads showing component parts using CAD. (NOS: IES/N9429)
36. Draw the details of different types of culverts using CAD. (NOS: IES/N9430)
37. Prepare detailed drawing a bridge using CAD. (NOS: IES/N9431)
38. Draw the typical cross section of rail sections, railway tracks in cutting and embankment usingCAD. (NOS: IES/N9432)
39. Prepare detailed drawing of typical cross sections of Dam, barrages, weir and Cross drainageworks using CAD. (NOS: IES/N9433)
40. Draw the schematic diagram of different structures of Hydro electric project using CAD. (NOS: IES/N9434)
41. Prepare detailed estimate and cost analysis of different types of building and other structures using application software. (NOS: IES/N9435)
42. Prepare rate analysis of different items of work. (NOS: IES/N9436)
43. Problems on preparing preliminary/Approximate estimates for building project. (NOS: IES/N9437)
44. Prepare a map using Total station. (NOS: IES/N9438)
45. Locate the station point using GPS and obtain a set of co-ordinates. (NOS: IES/N9439)
46. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study (NOS: IES/N9440)

Syllabus for Training Officer – ELECTRICIAN
Paper code -05 (Post code 09 & 10)

1. Prepare profile with an appropriate accuracy as per drawing following safety precautions. (NOS: PSS/N2001)
2. Prepare electrical wire joints; carry out soldering, crimping and measure insulation resistance of underground cable. (NOS: PSS/N0108)
3. Verify characteristics of electrical and magnetic circuits. (NOS: PSS/N6001, PSS/N6003)
4. Install, test and maintenance of batteries and solar cell. (NOS: PSS/N6001)
5. Estimate, Assemble, install and test wiring system. (NOS: PSS/N6001)
6. Plan and prepare Earthing installation. (NOS: PSS/N6002)
7. Plan and execute electrical illumination system and test. (NOS: PSS/N9403)
8. Select and perform measurements using analog / digital instruments and install/diagnose smart meters. (NOS: PSS/N1707)
9. Perform testing, verify errors and calibrate instruments. (NOS: PSS/N9404)
10. Plan and carry out installation, fault detection and repairing of domestic appliances. (NOS: PSS/N6003)
11. Execute testing, evaluate performance and maintenance of transformer. (NOS: PSS/N2406, PSS/N2407)
12. Read and apply engineering drawing for different application in the field of work. (NOS: PSS/N9401)
13. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: PSS/N9402)
14. Plan, execute commissioning and evaluate performance of DC machines. (NOS: PSS/N4402)
15. Execute testing, and maintenance of DC machines and motor starters. (NOS: PSS/N4402)
16. Plan, execute commissioning and evaluate performance of AC motors. (NOS: PSS/N1709)
17. Execute testing, and maintenance of AC motors and starters. (NOS: PSS/N1709)
18. Plan, execute testing, evaluate performance and carry out maintenance of Alternator /MG set. (NOS: PSS/PSS/N9405)
19. Execute parallel operation of alternators. (NOS: PSS/N9405)
20. Distinguish, organise and perform motor winding. (NOS: PSS/N4402)
21. Assemble simple electronic circuits and test for functioning. (NOS: PSS/N9406)
22. Assemble accessories and carry out wiring of control cabinets and equipment. (NOS: PSS/N9407)
23. Perform speed control of AC and DC motors by using solid state devices. (NOS: PSS/N9408)
24. Detect the faults and troubleshoot inverter, stabilizer, battery charger, emergency light and UPS etc. (NOS: PSS/N6002)
25. Plan, assemble and install solar panel. (NOS: PSS/N9409)
26. Erect overhead domestic service line, outline various power plant layout and explain smart distribution grid and its components. (NOS: PSS/N0106)
27. Examine the faults and carry out repairing of circuit breakers. (NOS: PSS/N7001)
28. Install and troubleshoot Electric Vehicle charging stations. (NOS: PSS/N9410)
29. Read and apply engineering drawing for different application in the field of work. (NOS: PSS/N9401)
30. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: PSS/N9402)

Syllabus for Training Officer – COMPUTER OPERATOR AND PROGRAMMING ASSISTANT (COPA)
Paper code -06 (Post code 11 & 12)

1. Install and setup operating system and related software in a computer following safety precautions. (NOS: SSC/N3022)
2. Create, format and edit document using word processing application software. (NOS: SSC/N3022)
3. Create, format, edit and develop a workbook by using spreadsheet application software. (NOS: SSC/N3022)
4. Create and customize slides for presentation. (NOS: SSC/N3022)
5. Create and manage database file using MySQL. (SSC/N8115, SSC/N8116, SSC/N8117)
6. Install, setup/configure, troubleshoot and secure computer network including Internet. (NOS: SSC/N3022)
7. Develop web pages using HTML and CSS. (NOS: SSC/N0503, SSC/N0501)
8. Develop web pages using Java Script. (NOS: SSC/N0503, SSC/N0501)
9. Create workbooks with advanced formulae, macros, charts, pivot tables and demonstrate ability to use Power tools. (NOS: SSC/N9402)
10. Browse, select and transact using E commerce websites. (NOS: SSC/N9403)
11. Secure information from Internet by using cyber security concept. NOS (SSC/N0305, SSC/N0901, SSC/N0922)
12. Explain Cloud concepts & services. (NOS: SSC/N9405)
13. Write programs using Python / Java language. (NOS: SSC/N9406, SSC/N9407)

Syllabus for Training Officer – Fitter
Paper code -07 (Post code 13 & 14)

1. Plan and organize the work to make job as per specification applying different types of basic fitting operation and Check for dimensional accuracy following safety precautions. [Basic fitting operation - Marking, Hacksawing, Chiselling, Filing, Drilling, Taping and Grinding etc. Accuracy: ± 0.25mm] CSC/N0304
2. Manufacture simple sheet metal items as per drawing and join them by soldering, brazing and riveting. CSC/N03001
3. Join metal components by riveting observing standard procedure. CSC/N0304
4. Join metal component by arc welding observing standard procedure. CSC/N0304
5. Cut and join metal component by gas (oxyacetylene) CSC/N0304
6. Produce components by different operations and check accuracy using appropriate measuring instruments. [Different Operations Drilling, Reaming, Taping, Dieing; Appropriate Measuring Instrument - Vernier, Screw Gauge, Micrometer] CSC/N0304
7. Make different fit of components for assembling as per required tolerance observing principle of interchange ability and check for functionality. [Different Fit Sliding, Angular, Step fit, 'T' fit, Square fit and Profile fit; Required tolerance: ±0.04 mm, angular tolerance: 30 min.] CSC/N0304
8. Produce components involving different operations on lathe observing standard procedure and check for accuracy. [Different Operations facing, plain turning, step turning, parting, chamfering, shoulder turn, grooving, knurling, boring, taper turning, threading (external 'V' only)] CSC/N0110
9. Plan & perform simple repair, overhauling of different machines and check for functionality. [Different Machines Drill Machine, Power Saw, Bench Grinder and Lathe]
10. Read and apply engineering drawing for different application in the field of work.
11. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study.
12. Make & assemble components of different mating surfaces as per required tolerance by different surface finishing operations using different fastening components, tools and check functionality. [Different Mating Surfaces - Dovetail fitting, Radius fitting, Combined fitting; Different surface finishing operations Scraping, Lapping and Honing; Different fastening components Dowel pins, screws, bolts, keys and cotters; Different fastening tools-hand operated & power tools, Required tolerance -±0.02mm, angular tolerance ± 10 min.] CSC/N0304
13. Make different gauges by using standard tools & equipment and checks for specified accuracy. [Different Gauges - Snap gauge, Gap gauge; Specified Accuracy ±0.02mm] CSC/N0304
14. Apply a range of skills to execute pipe joints, dismantle and assemble valves & fittings with pipes and test for leakages. [Range of skills - Cutting, Threading, Flaring, Bending and Joining] CSC/N0304
15. Make drill jig & produce components on drill machine by using jigs and check for correctness. CSC/N0304
16. Plan, dismantle, repair and assemble different damaged mechanical components used for power transmission & check functionality. [Different Damage Mechanical Components - Pulley, Gear, Keys, Jibs and Shafts.] CSC/N0304
17. Identify, dismantle, replace and assemble different pneumatics and hydraulics components. [Different components - Compressor, Pressure Gauge, Filter Regulator Lubricator, Valves and Actuators.]
18. Construct circuit of pneumatics and hydraulics observing standard operating procedure& safety aspect.
19. Plan & perform basic day to day preventive maintenance, repairing and check functionality. [Simple Machines - Drill Machine, Power Saw and Lathe] CSC/N0304
20. Plan, erect simple machine and test machine tool accuracy. (Simple Machines - Drill Machine, Power Saw and Lathe]
21. Read and apply engineering drawing for different application in the field of work.
22. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study.

Syllabus for Training Officer
ENGINEERING DRAWING/MATHS
Paper code -08 (Post code 15 & 16)

Unit, Fractions 1 Classification of Unit System 2 Fundamental and Derived Units F.P.S, C.G.S, M.K.S and SI Units 3 Measurement Units and Conversion 4 Factors, HCF, LCM and Problems 5 Fractions - Addition, Subtraction, Multiplication and Division 6 Decimal Fractions --Addition, Subtraction, Multiplication and Division, Solving Problems by using calculator II. Square Root: Ratio and Proportions, Percentage, 1 Square and Square Root 2 Simple problems using calculator 3 Application of Pythagoras Theorem and related problems 4 Ratio and Proportions 5 Direct and Indirect proportion 6 Percentage 7 Changing percentage to decimal III. Material Science: 1 Types of metals 2 Physical and Mechanical Properties of metals 3 Types of ferrous and non-ferrous metals 4 Introduction of iron and cast iron 5 Difference between iron and steel, alloy steel and carbon

steel 6 Properties and uses of rubber, timber and insulating materials IV. Mass, Weight, Volume, and Density: 1 Mass, volume, density, weight & specific gravity 2 Related problems for mass, volume, density, weight & specific gravity V. Speed and Velocity, Work Power and Energy: 1 Rest, motion, speed, velocity, difference between speed and velocity, acceleration and retardation 2 Related problems on speed and velocity 3 Potential energy, Kinetic Energy and related problems with related problems 4 Work, power, energy, HP, IHP, BHP and efficiency VI. Heat & Temperature and Pressure 12 WORKSHOP CALCULATION & SCIENCE-15.1 Concept of heat and temperature, effects of heat, difference between heat and temperature 2 Scales of temperature, Celsius, Fahrenheit, Kelvin and Conversion between scales of temperature 3 Temperature measuring instruments, types of thermometer, pyrometer and transmission of heat Conduction, convection and radiation 4 Co-efficient of linear expansion and related problems with assignments 5 Problem of Heat loss and heat gain with assignments 6 Thermal conductivity and insulators 7 Boiling point and melting point of different metals and Nonmetals 8 Concept of pressure and its units in different system VII. Basic Electricity: 1 Introduction and uses of electricity, molecule, atom, how electricity is produced, electric current AC, DC and their comparison, voltage, resistance and their units 2 Conductor, Insulator, types of connections- Series and Parallel, Ohm's Law, relation between VIR & related problems 3 Electrical power, energy and their units, calculation with assignments 4 Magnetic induction, self and mutual inductance and EMF generation 5 Electrical Power, HP, Energy and units of electrical energy VIII. Mensuration: 1 Area and perimeter of square, rectangle and parallelogram 2 Area an Perimeter of Triangle 3 Area and Perimeter of Circle, Semi-circle, circular ring, sector of circle, hexagon and ellipse 4 Surface area and Volume of solids- cube, cuboids, cylinder, sphere and hollow cylinder 5 Finding lateral surface area, total surface area and capacity in liters of hexagonal, conical and cylindrical shaped vessels IX. Levers and Simple Machines 6 1 Simple machines, Effort and load, mechanical advantage, velocity ratio, efficiency of machine, relation between efficiency, velocity ratio and mechanical advantage 2 Lever and its types X. Trigonometry: 1 Measurement of Angie, Trigonometrical Ratios, Trigonometric Table 2 Trigonometry-Application in calculating height and distance (Simple Applications) Friction: 1 Advantages and disadvantages, Laws of friction, co- efficient of friction, angle of friction, simple problems related to friction 2 Friction - Lubrication 3 Co- efficient of friction, application and effects of friction in workshop practice II. Centre of Gravity: 1 Centre of gravity and its practical application III. Area of cut-out regular surfaces and area of irregular surfaces: 1 Area of cut-out regular surfaces - circle, segment and sector of circle 2 Related problems of area of cut out regular surfaces circle, segment and sector of circle 3 Area of irregular surfaces and application related to shop problems IV. Algebra, Addition, Subtraction, Multiplication & Divisions 2 Algebra Theory of indices, Algebraic formula, related problems V. Elasticity: 1 Elastic, plastic materials, stress, strains and their units and young modulus 2 Ultimate stress and working stress VI. Heat Treatment: 1 Heat treatment and advantages 2. Different heat treatment process - Hardening, Tempering, Annealing, Normalising, Case Hardening VII. Profit and Loss: 1 Simple problems on profit & loss: Simple and compound interest VIII. Estimation and Costing: 1 Simple estimation of the requirement of material etc., as applicable to the trade 2 Problems on estimation and costing

Engineering Drawing-Introduction to Engineering Drawing and Drawing Instruments - Conventions.

Viewing of engineering drawing sheets. Method of Folding of printed Drawing sheet as per BIS SP: 46-2003 2. Drawing Instrument Drawing board, T-square, Drafter (Drafting M/c), Set squares, Protector, Drawing Instrument Box (Compass, Dividers, Scale, Diagonal Scales etc.), pencils of different grades, Drawing pins/ Clips. 3. Free hand drawing of Lines, polygons, ellipse etc. Geometrical figures and blocks with dimension Transferring measurement from the given object to the free hand sketches.. Solid objects Cube, Cuboids, Cone, Prism, Pyramid, Frustum of Cone with dimensions. Free hand drawing of hand tools and measuring tools, simple fasteners (nuts, bolts, rivets etc.) trade related sketches 4. Lines Definition, types and applications in drawing as per BIS: 46-2003 Classification of lines (Hidden, centre, construction, extension, Dimension, Section) Drawing lines of given length (Straight, curved) Drawing of parallel lines, perpendicular line Methods of Division of line segment 5. Drawing of Geometrical figures: Definition, nomenclature and practice of Angle: Measurement and its types, method of bisecting. Triangle: different types Rectangle, Square, Rhombus, Parallelogram. Circle and its elements Different polygon and their values of included angles. Inscribed and circumscribed polygons 8 6. Lettering & Numbering Single Stroke, Double Stroke, Inclined. 7.. Dimensioning and its Practice Definition, types and methods of dimensioning (functional, nonfunctional and auxiliary) Position of dimensioning (Unidirectional, Aligned) 7 Types of arrowhead Leader line with text Symbols preceding the value of dimension and dimensional tolerance. 8. Sizes and layout of drawing sheets Selection of sizes Title Block, its position and content Item Reference on Drawing Sheet (Item list) 9. Method of presentation of Engg.Drawing Pictorial View.Orthographic. View Isometric View 10. Symbolic representation different symbols used in the trades. Fastener (Rivets, Bolts and Nuts) Bars and profile sections Weld, Brazed and soldered joints Electrical and. electronics element Piping joints and fitting 11. Projections Concept of axes plane and quadrant. Orthographic projections Method of first angle and third angle projections (definition and difference) Symbol of 1st angle and 3rd angle projection in 3rd angle. 12. Orthographic projection from isometric projection 13. Reading of fabrication drawing.

1. Construction of scales and diagonal scales 2. Conic sections (Ellipse and Parabola) 3. Sketches of nuts, bolt, screw thread, different types of locking devices e.g. Double nut, Castle nut, Pin, etc. 4. Sketches of foundation 5.Rivets and rivetted joints, welded joints 6.Sketches of pipes and pipe joints 7. Assembly view of Vee blocks,

Bush & Bearing, Different types of Coupling viz., Muff coupling, Half Lap Coupling, Flange coupling, etc. Simple work holding device e.g. vice Drawing details of two mating blocks and assembled view 8. Sketch of shaft and pulley, belt, gear, gear drives 1.Sign and Symbols of Electrical, Electronics and related trades 2. Sketch of Electrical and Electronics/trade related components 3. Electrical and Electronics wiring diagram/ trade related Layout diagram 4. Electrical earthing diagram Drawing the schematic diagram of plate and pipe earthing. 5. Electrical, Electronics/ trade related circuit diagram 6. Block diagram of Instruments/ equipment of related trades

Syllabus for Training Officer – Welder
Paper code -09 (Post code 17)

1. Set the gas plant and join MS sheet in different position following safety precautions. [Different position:-1F, 2F, 3F, 1G, 2G, 3G.)(NOS: CSC/N0204)
2. Set the SMAW machine and perform different type of joints on MS in different position observing standard procedure. (different types of joints Fillet (T-joint, lap & Corner), Butt (Square & V); different position-1F, 2F, 3F, 4F, 1G, 2G, 3G, 4G) (NOS: CSC/N0204)
3. Set the oxy acetylene cutting plant and perform different cutting operations on MS plate. [Different cutting operation-Straight, Bevel, circular) (NOS: CSC/N0201)
4. Perform in different types of MS pipe joints by Gas (OAW). [Different types of MS pipe joints-Butt, Elbow, T-joint, angle (45°) joint, flange joint) (NOS: CSC/N0204)
5. Set the SMAW machine and perform in different types of MS pipe joints by SMAW. [Different types of MS pipe joints Butt, Elbow, T-joint, angle (45) joint, flange joint](NOS: CSC/N0204)
6. Choose appropriate process and perform joining of different types of metals and check its correctness. (appropriate process OAW, SMAW; Different metal-SS, CI, Brass, Aluminium) (NOS: CSC/N0204)
7. Demonstrate arc gouging operation to rectify the weld joints. (NOS: CSC/N0204)
8. Test welded joints by different methods of testing. (different methods of testing- Dye penetration test, Magnetic particle test, Nick break test, Free band test, Fillet fracture test) (NOS: CSC/N0204)
9. Set GMAW machine and perform in different types of joints on MS sheet/plate by GMAW in various positions by dip mode of metal transfer. [different types of joints-Fillet (T-joint, lap, Corner), Butt (Square & V); various positions 1F, 2F, 3F, 4F, 1G, 2G, 3G)(NOS: CSC/N0209)
10. Set the GTAW machine and perform by GTAW in different types of joints on different metals in different position and check correctness of the weld. [different types of joints-Fillet (T-joint, lap, Corner), Butt (Square & V); different metals- Aluminium, Stainless Steel; different position-1F & 1G)(NOS: CSC/N0212)
11. Perform Aluminium & MS pipe joint by GTAW in flat position. (NOS: CSC/N0212) 12. Set the Plasma Arc cutting machine and cut ferrous & non-ferrous metals.(NOS: CSC/N0207)
13. Set the resistance spot machine and join MS & SS sheet. (NOS: CSC/N0206)
14. Perform joining of different similar and dissimilar metals by brazing operation as per standard procedure. [different similar and dissimilar metals- Copper, MS, SS] (NOS: CSC/N9410)
15. Repair Cast Iron machine parts by selecting appropriate welding process. (OAW, and SMAW] (NOS: CSC/N9411)
16. Hard facing of alloy steel components/ MS rod by using hard facing electrode. (NOS: CSC/N9412)
17. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)
18. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)

Syllabus for Training Officer – MECHANIC MOTOR VEHICLE
Paper code -10 (Post code 18)

1. Check & perform Measuring & marking by using various Measuring & Marking tools (Vernier Calliper, Micrometer, Telescope gauges, Dial bore gauges, Dial indicators, straightedge, feeler gauge, thread pitch gauge, vacuum gauge, tire pressure guage)following safety precautions. (NOS: ASC/N1404)
2. Plan & perform basic fastening & fitting operation by using correct hand tools, Machine tools &equipments. (NOS: ASC/N1405)
3. Test various electrical/ electronic components using proper measuring instruments and compare the data using standard parameters. (NOS: ASC/N1438)
4. Check & Interpret Vehicle Specification data and VIN and Select & operate various Service Station Equipments. (NOS: ASC/N1404)
5. Dismantle & assemble of Engine from vehicle (LMV/HMV) along with other accessories. (NOS: ASC/N1405)
6. Overhaul Engine and check functionality. (NOS: ASC/N1405)
7. Trace, Test & Repair Cooling and Lubrication System of engine. (NOS: ASC/N1404)

8. Trace & Test Intake and Exhaust system of engine. (NOS: ASC/N1405)
9. Service Fuel System and check proper functionality. (NOS: ASC/N1405)
10. Test Engine Performance and set idling speed. (NOS: ASC/N1405)
11. Monitor emission of vehicle and execute different operation to obtain optimum pollution as per emission norms. (NOS: ASC/N9435)
12. Carryout overhauling of Alternator and Starter Motor. (NOS: ASC/N9436)
13. Diagnose & rectify the defects in LMV/HMV to ensure functionality of vehicle. (NOS: ASC/N1404, ASC/N1405, ASC/N1438)
14. Read and apply engineering drawing for different application in the field of work. (NOS: ASC/N9420)
15. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: ASC/N9421)
16. Plan & perform maintenance, diagnosis and servicing of transmission system. (NOS: ASC/N1404, ASC/N1405)
17. Plan & perform maintenance, diagnosis and servicing of Vehicle Control System. (NOS: ASC/N9437)
18. Troubleshoot vehicle Engine components and ascertain repair. (NOS: ASC/N9438)
19. Plan & service Electronic Control Unit and check functionality. (NOS: ASC/N1438)
20. Diagnose & rectify the defects in vehicle to ensure functionality of vehicle. (NOS: ASC/N1438
21. Carryout overhauling of charging system. (NOS: ASC/N1438)
22. Carryout overhauling of starting system. (NOS: ASC/N1438)
23. Troubleshoot electrical components ofvehicle and ascertain repair. (NOS: ASC/N1438)
24. Overhaul, service and testing Vehicle Air Conditioning system, its parts and check functionality. (NOS: ASC/N1438)
25. Drive vehicle following Traffic Regulations and maintenance of good road conduct. (NOS: ASC/N14040)
26. Identify and study of Electric Vehicle components and Performance comparison of EV and IC engine vehicles. (Components of Electric Vehicle such as Motor, Motor Controller, Battery Pack, Battery Management System, Charging System etc.) (NOS: ASC/N9439)
27. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: ASC/N9421)

Syllabus for Training Officer – Solar Technician
Paper code -11 (Post code 19)

1. Prepare profile with an appropriate accuracy as per drawing following safety precautions. (NOS: PSS/N2001)
2. Prepare electrical wire joints, carry out soldering and crimping. (NOS: SGJ/N0104)
3. Construct and test various characteristics of electrical and magnetic circuits. (NOS: SGJ/N0104, ELE/N6001)
4. Assemble, install and test wiring system. (NOS: SGJ/N0104)
5. Use instruments for measurement of various electrical parameters. (NOS: SGJ/N0104, SGJ/N0105, SGJ/N0106)
6. Perform basic Electric energy calculations and understand transmission and distribution of electrical power. (NOS: SGJ/N0101)
7. Verify natural planetary movements and sunlight's path. (NOS: SGJ/N0101)
8. Demonstrate characteristics of Photovoltaic cells, Modules, Batteries and Charge controllers. (NOS: SGJ/N0102, SGJ/N0103, SGJ/N0104)
9. Construct and demonstrate Solar DC appliances. (NOS: SGJ/N0104, ELE/N5903)
10. Connect, test, undertakemaintenance and disposal of solar batteries. (NOS: SGJ/N0103)
11. Connect and test solar panel, Charge controller, Battery bank and Inverter. (NOS: SGJ/N0103, SGJ/N0104)
12. Prepare bill of materials for small, medium and mega solar PV projects. (NOS: SGJ/N0102)
13. Perform various tests and measurement pertaining to PV Modules and their installation as per IEC standards. (NOS: SGJ/N0104, SGJ/N0105)
14. Assist in Installation and commissioning of Solar PV plant and Hybrid plant. (NOS: SGJ/N0105)
15. Perform Operation & Maintenance of PV system with best practices. (NOS: SGJ/N0107, ELE/N6001)
16. Perform manufacturing of solar panel, prepare and commission marketable solar products. (NOS: SGJ/N0102, SGJ/N0101, ELE/N5903)
17. Read and apply engineering drawing for different application in the field of work. (NOS: PSS/N9401)
18. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: PSS/N9402)

Syllabus for Training Officer – Turner
Paper code -12 (Post code 20)

1. Plan and organize the work to make job as per specification applying different types of basic fitting operations & check for dimensional accuracy following safety precautions. [Basic Fitting Operation Marking, Hack sawing, filing, drilling, taping etc.] (NOS:CSC/N0304)
2. Set different shaped jobs on different chuck and demonstrate conventional lathe machine operation observing standard operation practice. [Different chucks: 3 jaws & 4 jaws, different shaped jobs: - round, hexagonal, square] (NOS: CSC/N0110)
3. Prepare different cutting tool to produce jobs to appropriate accuracy by performing different turning operations. [Different cutting tool V tool, side cutting, parting, thread cutting (both LH & RH), Appropriate accuracy: ±0.06mm, Different turning operation Plain, facing, drilling, boring (counter & stepped), grooving, Parallel Turning, Step Turning, parting, chamfering, U-cut, Reaming, internal recess, knurling. (NOS: CSC/N0110)
4. Test the alignment of lathe by checking different parameters and adjust the tool post. [Different parameters - Axial slip of main spindle, true running of head stock, parallelism of main spindle, alignment of both the centres.] (NOS: CSC/N0110)
5. Set different components of machine & parameters to produce taper/angular components and ensure proper assembly of the components. [Different component of machine: - Form tool, Compound slide, tail stock offset, taper turning attachment. Different machine parameters- Feed, speed, depth of cut.] (NOS: CSC/N0110)
6. Set the different machining parameter & tools to prepare job by performing different boring operations. [Different machine parameter- Feed, speed & depth of cut; Different boring operation - Plain, stepped & eccentric] (NOS: CSC/N0110)
7. Set the different machining parameters to produce different threaded components applying method/ technique and test for proper assembly of the components. [Different thread: - BSW, Metric, Square, ACME, Buttress.] (NOS: CSC/N0110)
8. Set the different machining parameter & lathe accessories to produce components applying techniques and rules and check the accuracy. [Different machining parameters: -Speed, feed & depth of cut; Different lathe accessories: Driving Plate, Steady rest, dog carrier and different centres.)] (NOS: CSC/N0110)
9. Plan and perform basic maintenance of lathe & grinding machine and examine their functionality. (NOS: CSC/N0110)
10. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)
11. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)
12. Plan & set the machine parameter to produce precision engineering component to appropriate accuracy by performing different turning operation. [Appropriate accuracy ±0.02mm/ (MT 3) (proof turning); Different turning operation Plain turning, taper turning, boring threading, knurling, grooving, chamfering etc.] (NOS: CSC/N0110)
13. Set & Produce components on irregular shaped job using different lathe accessories. [Different Lathe accessories: - Face plate, angle plate) (NOS: CSC/N0110)
14. Plan and set the machine using lathe attachment to produce different utility component/item as per drawing. [Different utility component/item Crank shaft (single throw), stub. arbour with accessories etc.] (NOS: CSC/N0110)
15. Set the machining parameters and produce & assemble components by performing different boring operations with an appropriate accuracy. (Different boring operation eccentric boring, stepped boring; appropriate accuracy ±0.05mm] (NOS: CSC/N0110)
16. Calculate to set machine setting to produce different complex threaded component and check for functionality. [Different complex threaded component- Half nut, multi start threads (BSW, Metric & Square)] (NOS: CSC/N0110)
17. Set (both job and tool) CNC turn centre and produce components as per drawing by preparing part programme. (NOS:CSC/NO115)
18. Manufacture and assemble components to produce utility items by performing different operations & observing principle of interchangeability and check functionality. [Utility item: - screw jack/vice spindle/ Box nut, marking block, drill chuck, collet chuck etc.; different operations: threading (Square, BSW, ACME, Metric), Thread on taper, different boring (Plain, stepped)] (NOS:CSC/NO115)
19. Make a process plan to produce components by performing special operations on lathe and check for accuracy. [Accuracy ±0.02mm or proof machining & ±0.05mm bore; Special operation - Worm shaft cutting (shaft) boring, threading etc.] (NOS:CSC/NO115)
20. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)
21. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)

Syllabus for Training Officer – SEWING TECHNOLOGY
Paper code -13 (Post code 21)

1. Make hand stitches in the given fabric following safety precautions: AMH/N1948
2. Stitch the following using the given fabric: (NOS: AMH/N1948)
Seams with seam finishes-Dart, leat Tucks, Gathers &Shears, Frills, Hems, Casing, Edge-Finishing, Neck line, Placket, Pocket, Collar Sleeve, Cuff
3. Fix the fasteners on the given fabric. (NOS: AMH/N1948)
4. Mend the given fabric. (NOS:AMH/N1949)
5. Draft a pattern for Ladies' Suit and Sew a Ladies' Suit with the help of the given pattern. (NOS: AMH/N 1947)
6. Sketch the following garments: (NOS: AMH/N1211)Ladies' Tops/Short kurties (NOS: AMH/N1211)Ladies 'Suit (NOS: AMH/N1211)Nightwear (one piece/two- (NOS: AMH/N1211)piece)Sari Blouse (NOS: AMH/N1211)Dresses for New Born (NOS: AMH/N1211)Dresses for Toddler (NOS: AMH/N1211)Dresses for Kids (NOS: AMH/N1211)
7. Construct the following garments with fitting and quality according to the sketched Gns.(NOS: AMH/NO701)Sari Petticoat (NOS:AMH/NO701)Ladies' Top/Short Kurties (NOS:AMH/NO701)
Ladies' Suit (NOS:AMH/NO701)Nightwear (One Piece with Yok (NOS:AMH/NO701)e)Nightwear (Two Piece - Night suit) (NOS:AMH/NO701)Sari Blouse (Simple Model - Plain) (NOS:AMH/NO701)
Dress for a New-born (Jhabla) (NOS:AMH/NO701)Dress for a Toddler (Sun Suit) (NOS:AMH/NO701)
Dress for Kids (Frock) (NOS:AMH/NO701)Gent's Kurta and Pyjamas (NOS:AMH/NO701)Gent's Casual-Shirt (NOS:AMH/NO701)Gent's Trousers (NOS:AMH/NO701)

Syllabus for Training Officer – MACHINIST COMPOSITE
Paper code -14 (Post code 22)

1. Plan and organize the work to make job as per specification applying different types of basic fitting operation and check for dimensional accuracy following safety precautions. (Basic fitting operation-marking, Hack sawing, Chiselling, Filing, Drilling, Taping and Grinding etc. Accuracy: ± 0.25mm] CSC/N0304
2. Produce components by different operations and check accuracy using appropriate measuring instruments. [Different Operations Drilling, Reaming, Tapping, Dieing; Appropriate Measuring Instrument - Vernier, Screw Gauge, Micrometer] CSC/N9405
3. Make different fit of components for assembling as per required tolerance observing principle of inter changeability and check for functionality. [Different Fit Sliding, Angular, Step fit, 'T' fit, Square fit and Profile fit; Required tolerance: ±0.2 mm, angular tolerance: 1 degree.] CSC/N0304
4. Set different shaped jobs on different chuck and demonstrate conventional lathe machine operation observing standard operation practice. [Different chucks: 3 jaws & 4 jaws, different shaped jobs: round, square, hexagonal] CSC/N0110
5. Prepare different cutting tool to produce jobs to appropriate accuracy by performing different turning operations. (Different cutting tool V tool, side cutting, parting, thread cutting (both LH & RH), Appropriate accuracy: ±0.06mm, Different turning operation Plain, facing, drilling, boring (counter & stepped), grooving, Parallel Turning, Step Turning, parting, chamfering, U-cut, Reaming, knurling.) CSC/N0110
6. Set different components of machine & parameters to produce taper/ angular components and ensure proper assembly of the components. [Different component of machine: Form tool, Compound slide, tail stock offset; Different machine parameters- Feed, speed, depth of cut.] CSC/N0110
7. Set the different machining parameters to produce metric-v threaded components applying method/technique and test for proper assembly of the components. CSC/N0110
8. Set the different machining parameters and cutting tool to prepare job by performing different slotting operation. (Different machining parameters - feed, speed and depth of cut. Different slotting operations-concave & convex surface, internal key ways, profiling, making internal sprocket with an accuracy of +/-0.04 mm] CSC/N9406
9. Set the different machining parameters and cutters to prepare job by performing different milling operation and indexing. [Different machining parameters - feed, speed and depth of cut. Different milling operations plain, face, angular, form, gang, straddle milling] CSC/N9407
10. Set the different machining parameters to produce square & "V" threaded components applying method/technique and test for proper assembly of the components. CSC/N0110
11. Produce components of high accuracy by different operations using grinding. [Different operations surface grinding, cylindrical grinding with an accuracy of+/- 0.01 mm] CSC/N0109
12. Read and apply engineering drawing for different application in the field of work.
CSC/N9401
13. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. CSC/N9402

14. Re-sharpen different single & multipoint cutting tool. [Different single point tools, slab milling cutter, side & face milling cutter, end mill cutter and shell end mill cutter.] CSC/N0109
15. Set different machining parameters and cutters to prepare job by different milling machine operations. (Different machining parameters - feed, speed, depth of cut, different machining operation - facing, drilling, tapping, reaming, counter boring, counter sinking, spot facing, and boring slot cutting.] CSC/N9407
16. Set the different machining parameters and cutters to prepare components by performing different milling operation and indexing. [Different machining parameters -feed, speed and depth of cut. Different components Rack, Spur Gear, External Spline, Steel Rule, Clutch, Helical Gear] CSC/N9407
17. Set (both job and tool) CNC turning centre and produce components as per drawing by preparing part programme. CSC/NO115
18. Set CNC VMC (Vertical Machining Center) and produce components as per drawing by preparing part programme. CSC/N9408
19. Plan and perform simple repair, overhauling of different machines and check for functionality. [Different Machines Drilling Machine, milling machine and Lathe] CSC/N9403
20. Set the different machining parameters and cutters to prepare components by performing different milling operation and indexing. [Different machining parameters -feed, speed and depth of cut. Different components end mill, bevel gear, cam, worm & worm wheel] CSC/N9407
21. Read and apply engineering drawing for different application in the field of work. CSC/N9401
22. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. CSC/N9402

Syllabus for Training Officer – CARPENTER

Paper code -15 (Post code 23)

1. Identify timber/wood/Plywood, apply measuring, marking and testing instrument, Cutting Saws, Shaving tools, paring Tools, Screwing Tools, Abrading tools and other holding and supporting devices with following safety precautions. (FFS/N2207)
2. Identify and apply portable power saw and Mitre saw and Jig saw machines for Ripping, cross cutting, oblique sawing and curve cutting, Mitring etc. (FFS/N9401)
3. Analyze the surface finish with exact sizing by planning operations, with identifying and applying various shaving tools or portable power planning machine. (FFS/N9402)
4. Identify and apply various paring tools, analyze and choose the positioning and employ holding device for chiselling with better finish. (FFS/N9403)
5. Identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance. (FFS/N2212)
6. Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM, WPC using various hardware. (FFS/N2213, FFS/N8203)
7. Analyze and identify various carving tools and convert a wooden block/ piece into a decorative article. (FFS/N9404)
8. Demonstrate Seasoning, Conversion and preservation of Timber, wooden item through surface finishing with various processes such as Painting, polishing & varnishing etc. (FFS/N9405)
9. Demonstrate ripping, cross cutting, curve cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter. (FFS/N9406)
10. Demonstrate different operations on Jointer/surface Planer/Thickness planer machine along with sharpening blades. (Range of operations - Surfacing, thickening, chamfering, edge bending etc.) (FFS/N9407)
11. Demonstrate working on pedestal grinding (Range of operations grinding of mushroom head, cutting edge of tools, drills, etc.) (FFS/N9408)
12. Demonstrate working on pedestal/potable drilling machine, use of different types of
drill bits, make holes of different sizes in correct location on woodwork. (FFS/N9408)
13. Demonstrate different operations on wood turning lathe along with sharpening of cutting tools. (FFS/N9409)
14. Demonstrate different operations on Tenon and mortise machine. (FFS/N9409)
15. Demonstrate different operations on Sanding machine. (FFS/N9409)
16. Demonstrate on Modular Kitchen (Domestic). (FFS/N2217)
17. Produce component involving different operations of fitting work and check for functionality. (FFS/N9410)
18. Demonstrate on Modular Furniture (office and Domestic). (FFS/N2217)
19. Prepare various roof truss, door and windows frame, shutters, assembling & fixing (wooden, aluminium & PVC). (FFS/N2214, FFS/N2218)
20. Paint various door, windows frame, stair and furniture (wooden or Aluminium). (FFS/N9411)
21. Prepare various type of wooden floor, partition wall, and stair etc. (FFS/N2215, FFS/N2216)
22. Check, identify, analyze the design, Installation and repair the wooden/Aluminium/PVC job. (FFS/N2219)
23. Read and apply engineering drawing for different application in the field of work. (CSC/N9401)
24. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (CSC/N9402)

Syllabus for Training Officer – MECHANIC TRACTOR
Paper code -16 (Post code 24)

1. Make choices to carry out marking of the components for basic fitting operations in the workshop following safety precautions. (NOS:ASC/N1404)
2. Perform precision measurements on the components in automotive workshop practices (NOS: ASC/N1406)
3. Use different types of fastening and locking devices in a vehicle. (NOS: ASC/N1405)
4. Use cutting tools in the workshop, following safety precautions while grinding. (NOS:PSC/N0136)
5. Use different types of tools and workshop equipment in the workshop. (NOS:AGR/N1126)
6. Perform basic fitting operations used in the workshop practices and inspection of dimensions. (NOS: ASC/N1438)
7. Produce sheet metal components using various sheet metal operations. (NOS:AGR/N9426)
8. Construct electrical circuits and test its parameters by using electrical measuring instruments. (NOS: ASC/N1420)
9. Perform basic electrical testing in a vehicle. (NOS:AGR/N1129)
10. Perform battery testing and charging operations. (NOS:AGR/N1129)
11. Construct basic electronic circuits and testing. (NOS: ASC/N1435)
12. Manufacture components with different types of welding processes in the given job. (NOS:AGR/N9429)
13. Inspect the auto component using Non-destructive testing methods. (NOS:AGR/N1126)
14. Identify the hydraulic and pneumatic components in a vehicle. (NOS:AGR/N1129)
15. Demonstrate Major Assemblies of Tractor. (NOS:AGR/N1130)
16. Overhaul Diesel Engine of Tractor. (NOS:AGR/N1128)
17. Perform servicing of Cooling and Lubrication system of Tractor in a workshop. (NOS:AGR/N1128)
18. Service Intake and Exhaust System of Tractor in a workshop. (NOS:AGR/N1128)
19. Service Fuel Feed System of Tractor in a workshop. (NOS:AGR/N1128)
20. Overhaul Clutch and Gearbox of Tractor in a workshop. (NOS:AGR/N1129)
21. Overhaul Differential and PTO Unit of Tractor in the workshop. (NOS:AGR/N1129)
22. Overhaul Steering System of Tractor in the workshop. (NOS:AGR/N1129)
23. Carryout Repair of Wheels and Tyres of Tractor in the Workshop. (NOS:AGR/N1129)
24. Overhaul Brake system of Tractor in the workshop. (NOS:AGR/N1129)
25. Overhaul Major Assemblies of Power Tiller and carryout Field Operation. (NOS:AGR/N1108)
26. Overhaul Implements of Tractor. (NOS:AGR/N1119)
27. Overhaul Charging and Starting System of Tractor. (NOS:AGR/N1129)
28. Read and apply engineering drawing for different application in the field of work. (NOS:CSC/N9401)
29. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)

Syllabus for Training Officer – FASHION DESIGN & TECHNOLOGY
Paper code -17 (Post code 25)

1. Interpret and illustrate importance of Fashion designing following safety precautions (NOS: AMH/N1204, AMH/NO103)
2. Sketch fashion croquie of female and design garments with the help of elements using principles of design and color scheme. (NOS: AMH/N1204)
3. Drape, illustrate Fabric rendering and drawing texture. (NOS: AMH/N1204)
4. Apply surface ornamentation with embroidery. (NOS: AMH/N1010)
5. Apply basic Stitches, Seams and Edge finishes with operation on Sewing machine. (NOS: AMH/N1211)
6. Identify different Fibers and Fabrics along with Weaves and Knits. (NOS: AMH/N1201)
7. Create and Design Garments and Accessories in Corel Draw using tools and commands. (NOS: A MH/N9403)
8. Create Bodice Block Set & Patterns and construct samples of Design Details. (NOS: AMH/N1204)
9. Apply garment details in fashion illustration. (NOS: AMH/N1204)
10. Illustrate Male and Female wear on Croquie and develop designer Wears based on draping Technique/sketches as per fashion & style. (NOS: AMH/N1204)
11. Analyse human anatomy with Eight Head theory and different types of body contour. (NOS: AMH/N1947)
12. Ensure the Quality of production. (NOS: AMH/N1948, AMH/N0103)
13. Analyse fashion merchandising, fashion scope and Career Prospect. (NOS: AMH/N1203) (NOS:AMH/N1201)
14. Create and Design Fashion accessories as per latest trend. (NOS: AMH/N9404)

Syllabus for Training Officer – SURVEYOR
Paper code -18 (Post code 26)

1. Concept of drawing & sheet layout following safety precautions. (NOS: CON/N9002)
2. Draw lettering & numbering applying drawing instruments. (NOS: IES/N9402)
3. Draw plain geometrical figures, curves & conics. (NOS: IES/N9402)
4.Construct plain scale, diagonal scale, comparative scale, vernier scale. (NOS: IES/N9402)
5. Draw conventional signs & symbols used in surveying. (NOS: IES/N9441)
6. Perform site survey using chain/tape & prepare a site plan. (NOS: CON/N0904
7. Perform the site survey using prismatic compass. (NOS: IES/N9418)
8. Perform Auto Cad drawing. (NOS: CON/N0907)
9. Perform the site survey using plane table. (NOS: IES/N9412)
10. Perform theodolite survey. (NOS: CON/N0906)
11. Perform traverse survey by theodolite & prepare a site map. (NOS: CON/N0906)
12. Determine of R.L & heights of different points by levelling instruments. (NOS: CON/N0905)
13. Perform a road project survey. (NOS: IES/N9442)
14. Perform AutoCAD drawing (single story building). (NOS: CON/N1302)
15. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: IES/N9423)
16. Performing tachometric survey using tachometer. (NOS: IES/N9443)
17. Make topography map using level instrument with contours. (NOS: CON/N0907)
18. Concept & set out of curves. (NOS: IES/N9444)
19. Perform survey work using modern survey instruments (Total station) for prepare a map. (NOS: CON/N0906)
20. Concept of cadastral survey & make a site plan. (NOS: IES/N9445)
21. Perform survey work to prepare a topographical map, cadastral map (mouza map), road Project (Survey camp in a suitable hilly/undulated area). (NOS: IES/N9446)
22. Perform AutoCAD drawing from field survey data. (NOS: IES/N9447)
23. Concept & draw cartographic projection. (NOS: IES/N9448)
24. Plan and prepare setting of GIS & GPS, techniques in various fields. (NOS: IES/N9449)
25. Perform Hydrographic survey (cross section & velocity determination) using hydrographic survey instruments. (NOS: IES/N9450)
26. Perform transmission line site survey & prepare a site plan. (NOS: IES/N9451)
27. Perform railway line site survey line survey using modern survey instruments. (NOS: IES/N9452)
28. Draw a double storied building by AutoCAD & prepare a detail estimate of the building. (NOS: CON/N1302)
29. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: IES/N9423)

Syllabus for Training Officer – PLUMBER
Paper code -19 (Post code 27)

1. Identify and comply with the safe working practices, environmental regulation and housekeeping. (NOS: PSC/N9444)
2. Test various electronic components using proper measuring instruments and prepare electrical wire joints, carry out soldering, crimping. (NOS: PSC/N9445)
3. Identify different tools, equipment's, and fittings for plumbing. (NOS: PSC/N9446)
4. Test and measure equipment's in plumbing. (NOS: PSC/N9447)
5. Interpret plumbing system and plumbing terminology. (NOS: PSC/N9448)
6. Read the plumbing drawings. (NOS: PSC/N9449)
7. Interpret water distribution system & demonstration of water meter. (NOS: PSC/N9450)
8. Install and maintain pressure in boosting pumps. (NOS: PSC/N9451)
9. Reduce water wastage and increase water efficiency. (NOS: PSC/N9452)
10. Identify, select and perform cutting of Pipes. (NOS: PSC/N9453)
11. Carry out joining, fitting and laying of different types of PVC Pipes. (NOS: PSC/N9454)
12. Install, fix and maintain different taps, valves, etc. (NOS: PSC/N9455)
13. Perform installation of different types of faucets, water closet and its repair. (NOS: PSC/N9456)
14. Carry out testing of water pressure in plumbing system. (NOS: PSC/N9457)
15. Install, fix and maintain sanitary ware systems and their components. (NOS: PSC/N9458)
16. Install, fix and maintain kitchen sink, wash basin, bathtub, etc. (NOS: PSC/N9459)
17. Perform rainwater, gray water harvesting and conservation. (NOS: PSC/N9460)
18. Carry out repairing and maintenance of plumbing system. (NOS: PSC/N9461)
19. Prepare and maintain the records of plumbing system. (NOS: PSC/N9462)

20. Construct various brick bond for inspection chamber with multi inlet gradients adopted for conveyance of Black Water and grey water without any obstruction various vent pipes for ventilation provided to arrest foul gas with various traps. (NOS: PSC/N9463)
21. Read and apply engineering drawing for different application in the field of work. (NOS: PSC/N9401)
22. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: PSC/N9402)

Syllabus for Training Officer – BASIC COSMETOLOGY
Paper code -20 (Post code 28)

1. Develop good appearance and behaviour, practice tasks as per industry standard and express good communication skill following safety precautions. (NOS: BWS/N9002, BWS/N9003)
2. Prepare and maintain work area and maintain health and safety at the workplace. (NOS: BWS/N9001)
3. Carry out epilation and depilation services. Illustrate and explain hair structure & hair growth cycle. (NOS: BWS/N0105)
4. Carry out manicure and pedicure services. Explain anatomy of nail. Differentiate and identify nail disease nail disorders. (NOS: BWS/N0401)
5. Carry out facial treatments for common skin problems. Illustrate and explain skin structure. (NOS: BWS/N0104, BWS/N0128)
6. Carry out hair treatment for common hair problems. Illustrate and explain structure of hair. (NOS: BWS/N2207, BWS/N0206)
7. Create basic haircuts using special cutting techniques. (NOS: BWS/N0207, BWS/N0205)
8. Demonstrate basic yogic exercises for stamina building and correcting body posture. (NOS: BWS/N2201)
9. Demonstrate day, evening, party & bridal makeup and explain effects of light on makeup. (NOS: BWS/N0106, BWS/N0301)
10. Create traditional hair styles & hair designing with artificial aids and thermal gadgets. (NOS: BWS/N0208, BWS/N0205)
11. Demonstrate hair colouring, perming, straightening, re-bonding & smoothening. Explain the knowledge of bonds. (NOS: BWS/N0209, BWS/N0210, BWS/N0211)
12. Create bindi, heena& temporary tattoo designing, drape saree in different styles. (NOS: BWS/N0127)
Syllabus for Training Officer –COMPUTER HARDWARE & NETWORK MAINTENANCE
1. Demonstrate implementation of safe working practices, environment regulation, and housekeeping. (NOS: SSC/N0101, SSC/N0202)
2. Demonstrate testing and troubleshooting for power supplies in I/O devices and trace circuit of PC SMPS. (NOS: SSC/N0101, SSC/N0202)
3. Advance Computer Hardware. (NOS: SSC/N0101, SSC/N0202)
4. Preventive Maintenance and Troubleshooting of PC. (NOS: SSC/N0101, SSC/N0202)
5. Assemble and repair Desktop Computer with all its hardware components. (NOS: SSC/N0101 and SSC/N0202)
6. Install different Operating System and all other application software. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
7. Customize Operating System and maintenance of system application software. (NOS: SSC/N0101, SSC/N0202)
Assemble and repair Laptop and its hardware components. (NOS: SSC/N0101, SSC/N0202) 8.
Perform the operations of office package (word, excel, power point). (NOS: SSC/N0305, SSC/N0901, SSC/N0922) 9.
10. Install Printer, Scanner and troubleshoot their faults. (NOS: SSC/N0101, SSC/N0202)
11. Set up and configure Networking System using various network devices. (NOS: SSC/N0101, SSC/N0202)
12. Share and control resource and Internet connection through network. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
13. Collaboration, surveillance and maintenance through network. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
14. Implement Network Security to protect from various attacks on networking. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
15. Install and configure Windows and Linux server. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
16. Browse internet and communicate through email. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
17. Explain Virtualization, Cloud concepts & services. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)

Syllabus for Training Officer – COMPUTER HARDWARE & NETWORK MAINTENANCE
Paper code -21 (Post code 29)

1. Demonstrate implementation of safe working practices, environment regulation, and housekeeping. (NOS: SSC/N0101, SSC/N0202)
2. Demonstrate testing and troubleshooting for power supplies in I/O devices and trace circuit of PC SMPS. (NOS: SSC/N0101, SSC/N0202)
3. Advance Computer Hardware. (NOS: SSC/N0101, SSC/N0202)
4. Preventive Maintenance and Troubleshooting of PC. (NOS: SSC/N0101, SSC/N0202)
5. Assemble and repair Desktop Computer with all its hardware components. (NOS: SSC/N0101 and SSC/N0202)
6. Install different Operating System and all other application software. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
7. Customize Operating System and maintenance of system application software. (NOS: SSC/N0101, SSC/N0202)
8. Assemble and repair Laptop and its hardware components. (NOS: SSC/N0101, SSC/N0202)
9. Perform the operations of office package (word, excel, power point). (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
10. Install Printer, Scanner and troubleshoot their faults. (NOS: SSC/N0101, SSC/N0202)
11. Set up and configure Networking System using various network devices. (NOS: SSC/N0101, SSC/N0202)
12. Share and control resource and Internet connection through network. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
13. Collaboration, surveillance and maintenance through network. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
14. Implement Network Security to protect from various attacks on networking. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
15. Install and configure Windows and Linux server. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
16. Browse internet and communicate through email. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)
17. Explain Virtualization, Cloud concepts & services. (NOS: SSC/N0305, SSC/N0901, SSC/N0922)

Syllabus for Training Officer – OFFICE ASSISTANT CUM COMPUTER OPERATOR
Paper code -22 (Post code 30)

occupational health and environment. History of Shorthand, Knowledge of Transcription from the shorthand to long hand (in addition to shorthand theory paper), Sitting Posture.Safety and occupational health.Cramped room and ill-light working environment damage the eyesight and develop stress symptoms.Proper sitting posture.Proper lifting posture of heavy monitor, computer, printer and other office machineries may cause back pain.When direct physical telephone line is used for Internet connections make sure it is being detached whenever there is thundering.Environment:Pollution of environment due to e-waste like junk key board, components of computer and other office machineries. Waste recovery facilities through inter industry exchange.History of Computers & Different Type of Computers.Functions of Computer Peripherals.Introduction of Personal Computer /Microcomputer and Operating System (UNIX, WINDOWS, MS DOS, NETWARE)
etc. Profiling an Operating System. Booting Sequence: Operating System files and command Processor file. Definition of a file; File names.Booting from CD and HDD. Warm and Cold reboot
About Windows Explorer.Knowing about "My Computer". Knowing about "My Documents"Microsoft - Word Processing. Package Text selection. Opening Documents and Creating Documents
Saving Documents / Quitting.Documents Cursor Control.Printing Documents.Using the Interface (Menu, Toolbars).Editing Text (copy, Delete, Move etc.)Spell Check Feature/Auto CorrectFinding and Replacing Text Feature, Grammar Facility Auto text, Character formatting, and page formatting.
English Grammar - Parts of Speech, Articles, Words, Sentences. Punctuations, TenseTense, Sentence FormationSentence FormationIdioms & PhrasesSimilar WordsParagraph Writing & ComprehensionLetter WritingReport WritingWhat is an Office?What is the role of an Office Assistant?Office AutomationWorking EtiquettesImportance of Record KeepingMinutes of the Meeting PreparationSecretarial functions:Meaning, qualities of a secretary.Role and scope of secretarial work.Duties of a private secretary.Office practices:Filing, and its importance and classification.Mailing: procedure, for handling inward and outward mail and time and date stamps, franking machine, dispatch book, peon book and post office services.Office machines: Photocopier, duplicating machine, Fax, scanner.Handling of telephone.Etiquettes in handling telephone and mobile, Intercom system, EP ABX, telephone answering machine.General introduction of usage different types of office related forms: i.e. sales tax forms, central excise and taxation forms, vouchers, invoices and bank forms.Statutory compliances.Industry related laws. Taxation & Insurance.Connect using a dial-up modem. Connect using a Broadband connection with username and password.Internet Explorer and its features.ImportantUl functions

within IE. Internet Options- IE Security and Privacy Options.Introduction to the uses of World Wide Web and Internet Browser
Introduction to Mozilla Firefox Interface.Learning the functions of Menu bar, Navigation Tool bar, Web pages, Bookmark tool bar, Status bar and side bar in Mozilla Firefox & Internet Explorer
Introduction to the Search Engine Google.How to search information in search engine Google.
How to save the searched information.Procedure to save the website with a new name in bookmarks.Using Navigation tool bar and searching for more information and saving needed information in files.Using the help of search engine to locate the saved websites.Knowing about the "Outlook Express"Creating an email IDOutlook Express configuration.Outlook Express features.
Important functions within Outlook Express.Sending mail through outlook express.File attachment with the email.Knowing about the "Control Panel".Its usage and important options.Add Hardware.
Add or Remove Programs.Folder Options.Fonts.Mouse.Sounds and Audio Devices.User Accounts
Sample installation of an application software.Sample uninstallation of an application software.
Knowing about maintenance of Windows XPDisk Cleanup.Check Disk (Error-checking of a Local Disk).Disk Defragmenter.Backup.Format.Knowing about System Properties of the computer
Short Overview of all the options.Detailed explanation about "General"Detailed explanation about "System Restore"Detailed explanation about "Automatic Updates".Detailed explanation about
"Hardware"-Device Manager.Data Entry in cells, entry of numbers, text and FormulaeMoving data in a WorksheetMoving around in a worksheetSelecting Data rangeUsing the interface (Toolbars, Menus)Editing basicsWorking with workbooksSaving and QuittingCell ReferencingCalculations and Worksheets-Using Auto fillWorking with formulaeEfficient Data Display with Data Formatting, Number formatting etc.Working with rangesWorksheets printingWorking with Graphs and Charts
Adding/Formatting Text data with Auto formatCreating Embedded Chart using Chart wizardSizing and moving partsUpdating ChartsChanging Chart TypesCreating Separate Chart SheetAdding Titles, legends and GridlinesPrinting chartsDatabase ManagementFinding Records with Data Form
Adding/Deleting RecordsFiltering Records in a worksheetXbase packageConcept of data base Management SystemDifference between data files and database filesCreating Data Base Files and
StructuresEditing Data base Files.Record pointer positioning featuresSpecific record locating featuresInformation display commands Indexed filesCreate, delete, Save and recall memory variablesUsing table facilityFormat filesUsing various functions and set commands available
Handling of multiple database filesDeveloping programmes for Commercial Application using Windows based, X-base package.How to Start Microsoft PowerPoint.How to make PowerPoint
How to Save Your PowerPointImportant PowerPoint definitions.Menu Bar, Scrollbars, Toolbars
Adding slides, back ground change,Custom animation, slide transitionAdding sound from clip art, filesAdding movie fileHyperlink on slideGraphical lay out, word artFormat of slide show
, Panel, System menu, Help, Date, time Workplace switcher etc in LinuxIntroduction to Linux login screen Gnome applications and components of Gnome applications.Learning about using the username and password in the Linux Login screen, Linux desktop and its components.Application menu, Places menu, Panel, System menu, Help, Date, time Workplace switcher etc in LinuxUses of Mouse in Linux and various uses of MenusLearning about files and folders in Linux, also about Nautilus file manager and functions of cut, copy and paste ill Linux.Managing Files and Folders in Linux Functions and uses of Nautilus File Manager.Function and uses of Cut, Copy and Paste files and folders in LinuxIntroduction to Folder creation in LinuxHow to create a folder in Gnome DesktopHow to Rename a folder in GnomeDesktopHow to Delete a folder in Gnome
Desktop in LinuxHow to retrieve a deleted folder in.Gnome DesktopHow to Save a file in Linux
How to search a file in a computer in LinuxHow to use Help in Linux (Short Note)How to use Help in Linux (Explained in details)Installation of Antivirus SoftwareCase study on Modem CRM & bad CRM scenarioRole PlayMock practice on managing angry customerPracticing e-Mail etiquettes
Business mailingPracticing conversation among a small batch of 5 membersRole play on different mode of body languageGroup discussion on best practice in an officeRole PlayMovie
Mock sessionMock InterviewsPresentationWriting ResumesPractical training on financial packages

Syllabus for Training Officer – FOUNDRYMAN TECHNICIAN
Paper code -23 (Post code 31)

1. Categorize different types of tools, equipment & raw material used in foundry following safety precautions. (NOS: ISC/N9453)
2. Prepare sand mix for moulding. (NOS: ISC/N9454)
3. Perform different types of sand testing & find out result. (NOS: ISC/N9455)
4. Produce green sand moulds by using appropriate hand tools. (NOS: ISC/N9454)
5. Produce different casting components by different metal with different moulding process and finish the casting as per requirement. (NOS: ISC/N9457)
6. Make pattern and repair defective pattern and boxes. (NOS: ISC/N9458)

7. Prepare mould with loose piece pattern and loose piece core box. (NOS: ISC/N9454)
8. Perform metal working such as marking, sawing, filling, grinding, drilling etc. (NOS: CSC/N0304)
Make casting of aluminium/ magnesium by melting on Induction furnace & identify defects. (NOS: ISC/N9457)
9.
10. Prepare mould by different moulding process, make cast iron castings identify defects. (NOS: ISC/N9454)
11. Make a casting, fettle the casting & calculation yield percentage. (NOS: ISC/N9457)
12. Prepare complete core by joining half cores. (NOS: ISC/N9464)
13. Make mould by various types of gate to produce different type of metal casting. Find out defects & visit industry to show different operation for casting making. (NOS: ISC/N9465)
14. Make an extra thick casting & finish it. (NOS: ISC/N9457)
15. Reline & prepare different types of furnaces for melting cast metals. (NOS: ISC/N9467)
16. Make core by using linseed oil & IVP oils. (NOS: ISC/N9464)
17. Prepare mould without pattern & with sweep pattern. (NOS: ISC/N9458)
18. Make casting by die casting process & yield percentage of casting. (NOS: ISC/N9457)
19. Make casting by investment casting process & binder less process. (NOS: ISC/N9457)
20. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)
21. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)

Syllabus for Training Officer – FLORICULTURE & LANDSCAPING
Paper code -24 (Post code 32)

1. Identify metrological instruments and understand the diversity within the profession of Floriculture following safety precautions. (NOS: AGR/N9401)
2. Identify Plant morphology, different plant varieties and plant families. (NOS: AGR/N9402)
3. Identify different Soil types, Methods of soil sampling and collection, detection on physical and chemical properties of soil, Interpret soil test reports for proper rectification. (NOS: AGR/N8101, AGR/N8108)
4. Measure Soil fertility and apply soil fertility management for improvement of fertility of soil. (NOS: AGR/N0701)
5. Apply integrated nutrient Management system (INMS) in the field. (NOS: AGR/N0701)
6. Identify and select different propagation methods, handling of seed, bulbs, cut flowers, Nursery plants, pot plants. (NOS: AGR/N0718)
7. Identify and apply method of vegetative propagation and its management. (NOS: AGR/N0718)
8. Identify Commercial Flowers and their packaging.
(NOS: AGR/N0701, AGR/N0715, AGR/N0720, AGR/N0721, AGR/N0722, AGR/N0723, AGR/N0714, AGR/N0803, AGR/N0842, AGR/N0801)
9. Identify the diseases and apply the pesticide as per requirement. (NOS: AGR/N0702)
10. Plan and execute Survey for landscaping and various types of indoor gardening. (NOS: AGR/N0802, AGR/N0803, AGR/N0707, AGR/N0708)
11. Carry out Protected cultivation of flower. (NOS: AGR/N1013)

Syllabus for Training Officer – MECHANIC COMPUTER HARDWARE
Paper code -25 (Post code 33)

Hand tools and basic fitting,Introduction to atomic structure and basics of electricity,Resistors, soldering and de-soldering, Primary and secondary batteries, Electromagnetism, AC fundamentals, Oscilloscope, Semiconductor. Diode and rectifier, Transistors and amplifier, Power supplies, Pulse and wave shaping circuit, Oscillator, Mod/De-mod/ Transmitter, Special semicomductor, DC and AC motors, Digital Electronics, Microprocessors and semiconductor memory, Interfacing IO devices, DOS, Introduction to computer, Windows, MS office, Installation of basic I/O devices (Device manager), PC cabinet main devices, FDD, HDD and HDSD, Monitor (installation and adjustment), Multimedia devices, SMPS, UPS, Mother board and CMOS Setting, Disassembly and reassembly of system, Formatting, Partitioning of HD and loading software, Networking, Preventive Maintenance and trouble shooting, Monitor trouble shooting, Maintenance and trouble shooting with printer

Syllabus for Training Officer – STENOGRAPHER SECRETARIAL ASSISTANT (English)
Paper code -26 (Post code 34)

1. Acquire knowledge about the computer hardware & stenography introduction. (NOS: MEP/N0201, MEP/N0216)
2. Identify the various joining Consonants, vowels and its application. (NOS: MEP/N9429)
3. Construct the various words to maintain the position of long, short, dot, dash, preceding, following & intervening vowels. (NOS: MEP/N0201)

4. Recognize the various types of computer keys & Prepare a complete sentence with use of logograms grammalogues, contractions, tick 'The' & punctuation. (NOS: MEP/N0201, MEP/N0216)
5. Use Window operating system on computer. (NOS: MEP/N0216)
6. Identify the strokes R &H, Abbreviated W and explain the sitting posture on computer. (NOS: MEP/N0201, MEP/N0216)
7. Identify small circle for S & Z, Large circle for SW/large loop & small loop /understand MS-Word by using all tools. (NOS: MEP/N0201, MEP/N0216)
8. Recognize the direction of SHR, SHL and alternative forms. (NOS: MEP/N0201)
9. Use curved hook and compound consonant. (NOS: MEP/N0201)
10. Recognize different types of hook. (NOS: MEPP/N0201)
11. Develop new sentences applying halving principles & Doubling Principles. (NOS: MEP/N0201
12. Apply the prefixes. (NOS: MEP/N0201)
13. Apply the suffixes. (NOS: MEP/N0201)
14. Identify the monetary units & use it. (NOS: MEP/N1203)
15. Form words with advance phrases, intersections and write simple letter. (NOS: MEP/N0243)
16. Translate all types of sentences. (NOS: MEP/N9430)
17. Practice on MS-Excel. (NOS: MEP/N0216)
18. Label the office layout. (NOS: MEP/N9431)
19. Name the dispatch and diary register &detect computer virus. (NOS: MEP/N9432)
20. Identify all types of file requirements & implement the same on MS-Power point. (NOS: MEP/N0216)
21. Demonstrate features of MS Power Point. (NOS: MEP/N0216)
22. Prepare MS power Point Presentation. (NOS: MEP/N0216)
23. Create E-Mail ID. (NOS: MEP/N0216)
24. Identify all types of official tools &equipments. (NOS: MEP/N0216, MEP/N0241)
25. Observe all types of postal services. (NOS: MEP/N9433)
26. Prepare all types of letter. (NOS: MEP/N0241, MEP/N0243, MEP/N1201, MEP/N0216)

Syllabus for Training Officer - Social Study/Employability Skills
Paper code -27 (Post code 35)

Introduction to Employability Skills
To be competent, the individual must be able to:
1. Understand the significance of employability skills in meeting the current job market requirement and future of work.
2. Identify and explore learning and employability relevant portals
3. Research about the different industries, job market trends, latest skills required and the available opportunities.
4. Identify employability skills required for jobs in various industries
Constitutional values - Citizenship
5. Follow personal values and ethics such as honesty, integrity, caring and respecting others, etc.
6. Follow and promote environmentally sustainable practices
7. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc. for personal growth and the nation's progress
Becoming a Professional in the 21st Century
8. Recognize the significance of 21st Century Skills for employment
9. Adopt a continuous learning mindset for personal and professional development.
10. practice the 21st Century Skills such as Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life
Basic English Skills
11. Use English as a medium of formal and informal communication while dealing with topics of everyday conversation in different contexts
12. Speak over the phone in English, in an audible manner, using appropriate greetings, opening, and closing statements both on personal and work front
13. Read and understand routine information, instructions, emails, lettersetc, written in English.
14. Write short messages, notes, letters, e-mails etc., using accurate English
15. Use basics English for everyday conversation in different contexts, in person and over the telephone
Career Development & Goal Setting
16. identify career goals based on the skills, interests, knowledge, and personal attributes
17. Understand the difference between job and career
18. Prepare a career development plan with short- and long-term goals, based on aptitude Communication Skills

19. Follow verbal and non-verbal communication etiquette while communicating in professional and public settings
20. Use active listening techniques for effective communication
21. Communicate in writing using appropriate style and format based on formal or informal requirements
22. Work collaboratively with others in a team
23. Follow verbal and non-verbal communication etiquette and active listening techniques in various settings
24. Ensure personal behavior, conduct, and use appropriate communication by taking gender into consideration.
26. Escalate any issues related to sexual harassment at the workplace in accordance with the POSH Act
27. Communicate and behave appropriately with all genders and PWD
Financial and Legal Literacy
28. Identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.
29. Carry out offline and online firiancial transactions, safely and securely, using various methods and check the entries in the passbook
30. Identify common components of salary and compute income, expenses, taxes, investments etc.
31. Identify relevant rights and laws and use legal aids to fight against legal exploitation Essential Digital Skills
32. Operate digital devices and use their features and applications securely and safely
33. Carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.
34. Display responsible online behavior while using various social media platforms
35. Create a personal email account, send and process received messages as per requirement
36. Carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications
37. Utilize virtual collaboration tools to work effectively
38. Use e-mail and social media platforms and virtual collaboration tools to work effectively
39. Use basic features of word processor, spreadsheets, and presentations
Entrepreneurship
40. Identify different types of Entrepreneurship and Enterprises
41. Use research and networking skills to identify and assess opportunities for potential business
42. Develop a business plan and a work model, considering the 4Ps of Marketing- Product, Price, Place and Promotion
43. Identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity
Customer Service
44. Identify different types of customers
45. Identify and respond to customer requests and needs in a professional manner
46. Use appropriate tools to collect customer feedback
47. Follow appropriate hygiene and grooming standards.
Getting ready for apprenticeship & Jobs
48. Create professional Curriculum vitae (Résumé)
49. Search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively
50. Apply to identified job openings using offline /online methods as per requirement
51. Answer questions politely, with clarity and confidence, during recruitment and selection.
52. Identify apprenticeship opportunities and register for it as per guidelines and requirements.

Syllabus for Training Officer – DRAUGHTSMAN MECHANICAL
Paper code -28 (Post code 36 & 37)

1. Construct different Geometrical figures using drawing Instruments following safety precautions. (CSC/NO402)
2. Draw orthographic Projectionsgiving proper dimensioning with title block and heading using appropriate line type and scale. (CSC/NO402)
3. Construct free hand sketches of simple machine parts with correct proportions. (CSC/NO402)
4. Construct plain scale, comparative scale, diagonal scale and vernier scale. (CSC/NO402)
5. Draw Sectional views showing orthographic projections. (CSC/NO402)
6. Develop surface and interpenetration of solid in orthographic projection. (CSC/NO402)
7. Draw isometric projection from orthographic views (and vice-versa) anddraw oblique projection from orthographic views. (CSC/NO402)
8. Draw and indicate the specification of different types of fasteners, welds and locking devices as per SP-46:2003(CSC/NO402)

9. Acquire basic knowledge on tools and equipment of Allied trades viz. Fitter, Turner, Machinist, Sheet Metal Worker, Welder, Foundry man, Electrician and Maintenance Motor Vehicles. (CSC/NO402)
10. Construct different types of gears, couplings and bearings with tolerance dimension and indicating surface finish symbol. (CSC/NO402)
11. Perform computer application and Create 2D objects on CAD drawing space using commands from ribbon, menu bar, toolbars and by typing in command prompt. (CSC/NO402)
12. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (CSC/NO402)
13. Construct projection views of geometrical figures with dimension and annotation on CAD in model space and viewport in layout space. (CSC/NO402)
14. Draw in CAD detail and assembly drawing of machine parts viz., Pulleys, Pipe fittings, Gears and Cams applying range of cognitive and practical skills. (CSC/NO402)
15. Construct drawing of engine parts with detailed and assembly in template layout applying quality concept in CAD. (CSC/NO402)
16. Create 3D solid by switching to 3D modeling workspace in CAD, generate views, Print Preview and Plotting. (CSC/NO402)
17. Construct detailed and assembled drawing applying conventional sign &symbolsusing CAD. (CSC/NO402)
18. Prepare drawing of machinepart by measuring with gauges and measuring instruments. (CSC/NO402)
19. Draw a machine shop layout considering process path and ergonomics (human factor). (CSC/NO402)
20. Create and plot assembly and detail views of machine part with Dimensions, Annotations, Title Block and Bill of materials in SolidWorks/AutoCAD Inventor/ 3D Modeling. (CSC/NO402)
21. Create production drawing of machine part. (CSC/NO402)
22. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study (CSC/NO402)