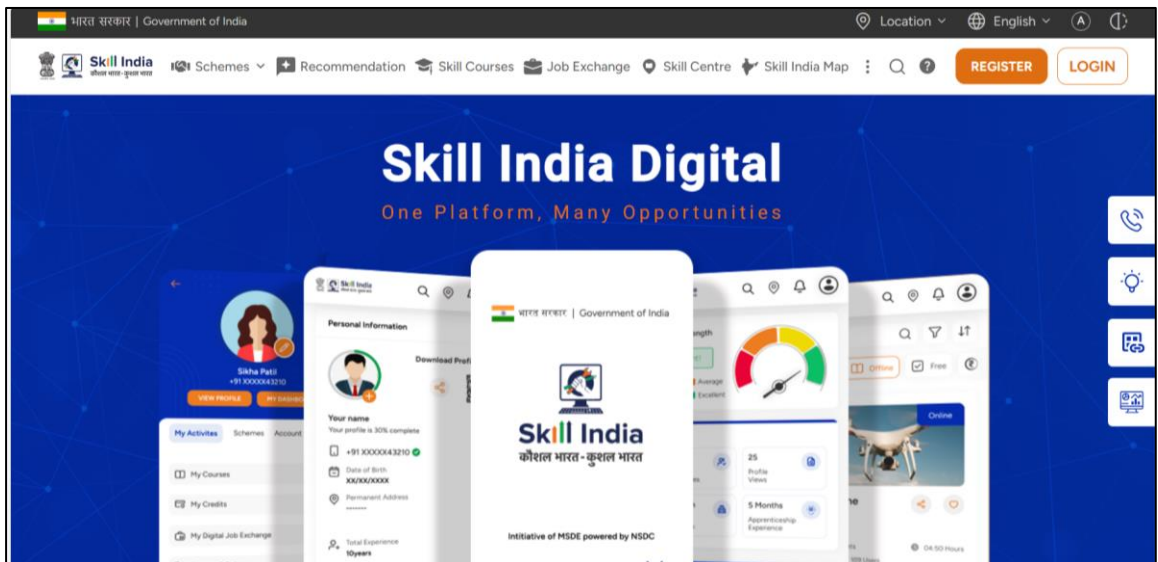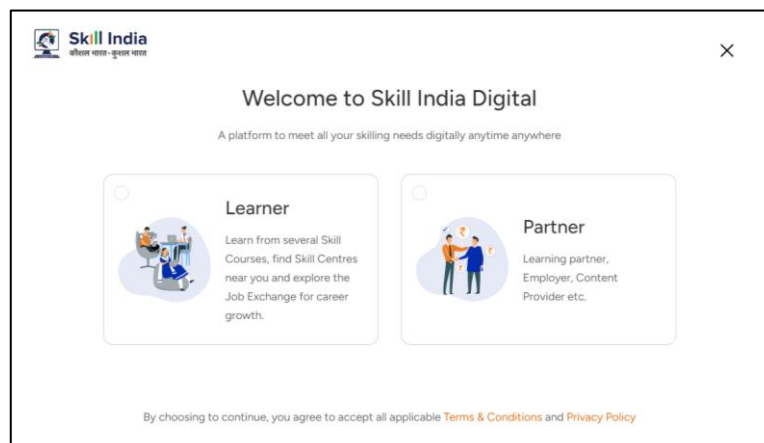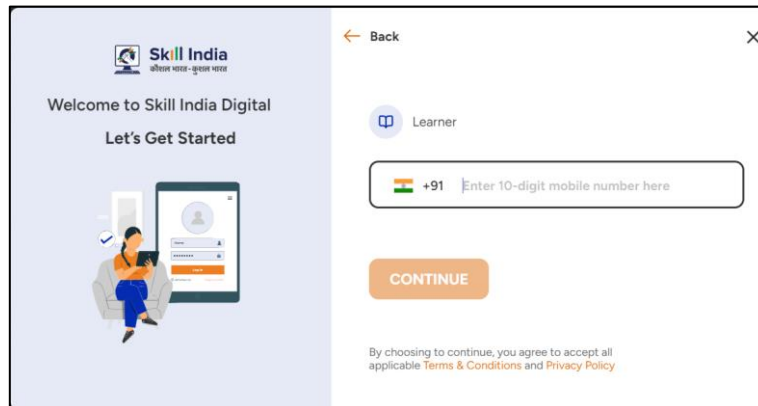# HOW TO REGISTER FOR INDIASKILLS 2023 – USER MANUAL

1. Begin: Scan QR Code and open Skill India Digital at www.skillindiadigital.gov.in on your browser.

2. Tap: Look for the 'Register' button on the top right section and click on it.

3. Click on Learner

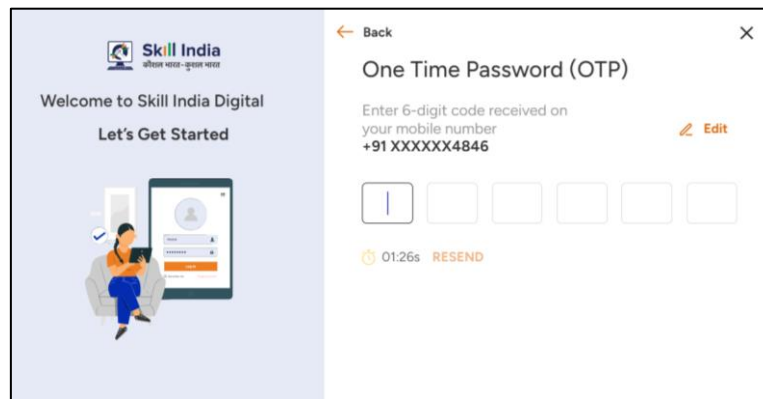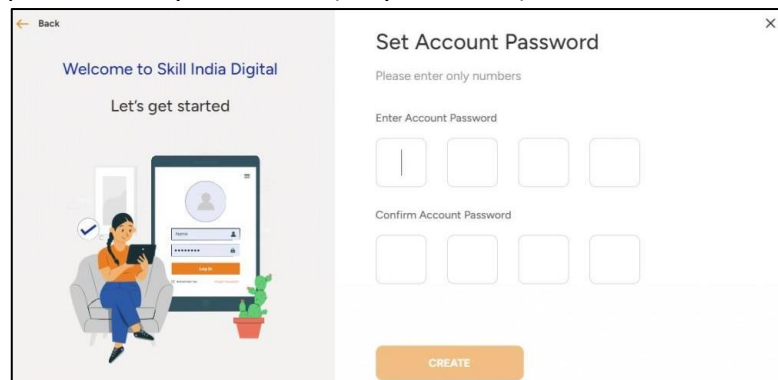4. Enter your 10-digit mobile number

5. Enter the One Time Password (OTP) you received on your mobile.

6. Set a 4-digit password of your choice (only numbers)

7. Enter your 12-digit Aadhaar number.

8. Check on "I agree to validate my Aadhaar Details."

9. Click on the 'Verify' button.

Enter your 12-digit Aadhaar number to start your skilling
journey with Skill India Digital

XXXX-XXXX-

••••••••••••

1. I understand that my Aadhaar number, photograph and demographic
information, as understood under the Aadhaar (Targeted Delivery of Financial
and Other Subsidies, Benefits and services) Act, 2016 (18 of 2016) and
regulations framed there under, is being collected by the Government of India
for the following Purposes:

☑ I agree to validate my Aadhaar Details

VERIFY

10. Enter the One Time Password (OTP) received on the mobile linked with your
    Aadhaar.

← **Back**   ✕

Enter OTP to Verify Aadhaar

Enter six digit number received on your mobile

STILL DIDN'T GET THE OTP?   🕐 00:59 RESEND

VERIFY

11. On your Dashboard, refer menu bar on the left-hand side and click on IndiaSkills 2023
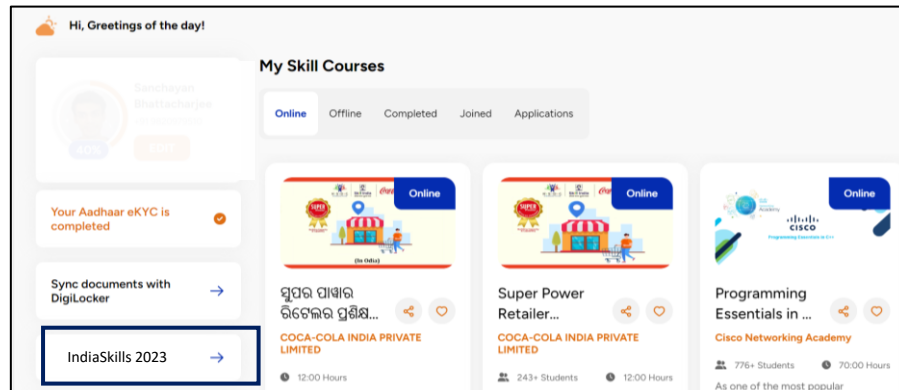
12. Fill all the details and click on 'NEXT.'

13. After filling all the three sections of the form click on **'SUBMIT'**

"Know Your Skill" - IndiaSkills 2023

Sl.	Sector	Skill name	No. of Competitors	Eligibility for WSC 2024
1	Construction and Building Technology	Wall and Floor Tiling	1	Born on or after 1st January 2002
2		Plumbing and Heating	1	Born on or after 1st January 2002
3		Electrical Installations	1	Born on or after 1st January 2002
4		Bricklaying	1	Born on or after 1st January 2002
5		Plastering and Drywall Systems	1	Born on or after 1st January 2002
6		Painting and Decorating	1	Born on or after 1st January 2002
7		Cabinetmaking	1	Born on or after 1st January 2002
8		Joinery	1	Born on or after 1st January 2002
9		Carpentry	1	Born on or after 1st January 2002
10		Refrigeration and Air Conditioning	1	Born on or after 1st January 2002
11		Concrete Construction Work	2	Born on or after 1st January 2002
12		Digital Construction	1	Born on or after 1st January 1999
13	Creative Arts and Fashion	Jewellery	1	Born on or after 1st January 2002
14		Floristry	1	Born on or after 1st January 2002
15		Fashion Technology	1	Born on or after 1st January 2002
16		Graphic Design Technology	1	Born on or after 1st January 2002
17		Visual Merchandising	1	Born on or after 1st January 2002
18		3D Digital Game Art	1	Born on or after 1st January 2002
19	Information and Communication Technology	Information Network Cabling	1	Born on or after 1st January 1999
20		IT Software Solutions for Business	1	Born on or after 1st January 2002
21		Web Technologies	1	Born on or after 1st January 2002
22		Cloud Computing	1	Born on or after 1st January 1999
23		Cyber Security	2	Born on or after 1st January 1999
24		Mobile Applications Development	1	Born on or after 1st January 2002
25	Manufacturing and Engineering Technology	Mechatronics	2	Born on or after 1st January 1999
26		Mechanical Engineering CAD	1	Born on or after 1st January 2002
27		CNC Turning	1	Born on or after 1st January 2002
28		CNC Milling	1	Born on or after 1st January 2002
29		Welding	1	Born on or after 1st January 2002
30		Electronics	1	Born on or after 1st January 2002
31		Industrial Control	1	Born on or after 1st January 2002
32		Autonomous Mobile Robotics	2	Born on or after 1st January 2002
33		Chemical Laboratory Technology*	1	Born on or after 1st January 2002
34		Water Technology	1	Born on or after 1st January 1999
35		Industrial Design Technology	1	Born on or after 1st January 1999
36		Renewable Energy	1	Born on or after 1st January 2002
37		Robot Systems Integration	2	Born on or after 1st January 1999
38		Industry 4.0	2	Born on or after 1st January 1999
39		Manufacturing Team Challenge	3	Born on or after 1st January 1999

Sl.	Sector	Skill name	No. of Competitors	Eligibility for WSC 2024
40		Additive Manufacturing	1	Born on or after 1st January 1999
41	Social and Personal Services	Hairdressing	1	Born on or after 1st January 2002
42		Beauty Therapy	1	Born on or after 1st January 2002
43		Pâtisserie and Confectionery	1	Born on or after 1st January 2002
44		Cooking	1	Born on or after 1st January 2002
45		Restaurant Service	1	Born on or after 1st January 2002
46		Health and Social Care	1	Born on or after 1st January 2002
47		Bakery	1	Born on or after 1st January 2002
48		Hotel Reception	1	Born on or after 1st January 2002
49	Transportation and Logistics	Autobody Repair	1	Born on or after 1st January 2002
50		Automobile Technology	1	Born on or after 1st January 2002
51		Car Painting	1	Born on or after 1st January 2002
52		Logistics & Freight Forwarding*	1	Born on or after 1st January 2002
53	Exhibition Skills	Shoe Making	1	Born on or after 1st January 1999
54		Garment & leather accessories Making	1	Born on or after 1st January 1999
55		Textile Weaving – Handloom	1	Born on or after 1st January 1999
56		Woven Fabric Design Development	1	Born on or after 1st January 1999
57		Yoga	1	Born on or after 1st January 1999
58		Costume Design	1	Born on or after 1st January 1999
59		Prosthetic & Make up	1	Born on or after 1st January 1999
60		Augmented Reality/Virtual Reality	1	Born on or after 1st January 1999
61		Drone Film Making	1	Born on or after 1st January 1996

"Know Your Skill" – IndiaSkills 2023

1. **Bricklaying**

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill - A bricklayer generally works on commercial and residential projects. They are responsible for building or repairing associated structures in accordance with the construction plans. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the bricklayer has a continuing responsibility to work professionally in order to meet the requirements of the customer and thus maintain and grow the business. This includes working harmoniously with other trades to optimize efficiency and minimize mistakes.

From working safely and tidily with resilience and endurance through to exceptional planning and scheduling, concentration, precision, accuracy, and attention to detail to achieve an excellent finish every step in the process matters and mistakes are largely irreversible and very costly. With the international mobility of people, the bricklayer faces rapidly expanding opportunities and challenges. For the talented bricklayer there are many commercial and international opportunities; however, these carry with them the need to understand and work with diverse cultures and trends. The diversity of skills associated with bricklaying is therefore likely to expand.

Competitor must have to:

- Construct projects in accordance with drawings provided
- Construct template or arch supports to meet the design requirements
- Select bricks which are true to shape and angle and reject bricks which are chipped
- Construct brickwork, maintaining accuracy in dimension to within a given tolerance
- Check dimensions regularly and correct where necessary
- Transfer levels accurately and ensure top courses are flat and smooth
- Check the undersides of projecting brickwork are level
- Maintain accuracy in plumb to within given tolerances
- Check the quality of materials
- Maintain accuracy of horizontal, vertical, or diagonal alignments to within given tolerances
- Produce brick cuts which are straight and free of chips
- Apply joint finishes: raked, round ironed, flushed, and recessed with all joints full, no holes, and smooth finishes
- Produce straight lines which provide sharp edges and crisp appearance
- Clean brickwork to remove any trowel marks, smudges, and debris from surfaces
- Leave work areas in a suitable condition for inspection and subsequent work

2. Cabinet Making

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitor - 1

About the Skill - Cabinetmaking covers the manufacture of free-standing and built-in furniture and units, using wood at the sole or main material. It may include the design of furniture, but normally comprises the creation of furniture and units from designs prepared by others. Cabinetmaking differs from joinery through the quality of the wood and associated materials used, and the intricacy and aesthetic quality of the finished items. There is, however, some overlap between cabinetmaking and joinery.

A cabinetmaker generally works on commercial and residential assignments of a high quality and value. They will therefore exhibit very high standards of skill and professionalism in order to justify clients' expectations and willingness to pay. Most cabinetmakers work in small companies which have to be very sensitive to their reputation and market in order to sustain their businesses' viability.

The cabinetmaker will produce furniture and fittings in a workshop, at least until installing fitted items. However, in order to meet clients' needs, including for the items to add to the aesthetic qualities of their environment they are placed in, they will know intimately where bespoke items are intended to be placed. For items produced speculatively rather than for known clients, the cabinetmaker will have a clear view of the types of location and setting that will show the items at their best.

Competitor must have to:

- The characteristics and uses of hardwood and softwood, board materials, veneers methods for identifying defects and limitations in the materials selected.
- Select fittings for use and appearance and set out materials in order to determine all the measurements, sections, angles, mitres, and joints.
- Use geometric methods to determine complex angles, joints, and intersections
- Use woodworking machines or a combination of machines and hand tools to produce woodworking joints of various types
- Position and fit hinges
- Control the fit around door edges, drawers and other moving items into carcases to achieve a glide fit.
- Produce surfaces that are free from defects, complete assemblies that are free from defects Produce soft edges to components or assemblies
- Polish components or assemblies

3. Carpentry

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill A carpenter generally works on commercial and residential projects predominantly undertaking tasks using timber and timber related products. Carpentry is closely associated with other trades that make up the construction industry, working both individually and as part of a team to complete projects. A carpenter undertakes work both internally and externally within homes of customers and on construction sites in all weather conditions.

They are expected to interpret drawings, set out and measure, cut, form joints using both hand and power tools, assemble, and install finishes to a high standard. Carpenters also construct and install components that are seen on the inside and outside of residential or commercial buildings such as sidings, shutter, and roofing materials. They also make moulds for concrete formwork (called shuttering in some countries). Carpenters may also be involved in the design and construction of timber-framed buildings such as commercial buildings, dwellings, garages, sheds, gazebos, pergolas, and playhouses.

Work organization, self-management, communication, and interpersonal skills are integral parts of a carpenter's skill set along with problem solving, innovation and creativity. The ability to work precisely and accurately are fundamental attributes of an outstanding carpenter. Whether the carpenter is working alone or in a team, the individual takes on a high level of personal responsibility and autonomy.

Competitor must have to:

- Work with timber and timber-based materials
- Select and safely use hand and power tools to cut joints safely and accurately
- Identify and cut joints as specified, or where required select and cut task appropriate joints
- How to assemble and erect structures, without damage to components, personal risk, or risk to others or property
- Accurately assemble and erect structures without damage to components, personal risk, risk to others, or to property Select and use specified fasteners, or where required, can select and use appropriate fasteners and hardware
- Finish to a specification, with attention to surface finishes and avoidance of damage or unsightly marking of components Produce accurate joints and intersections with no gaps

4. Concrete Construction Work

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 2

About the Skill: A Concrete Construction Worker generally works on commercial and residential projects. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the Concrete Construction Worker has a continuing responsibility to work professionally in order to meet the requirements of the customer and thus maintain and grow the business.

Concrete Construction Work is closely associated with other parts of the construction industry, and with the many products that support it, normally for commercial purposes.

The Concrete Construction Worker works internally and externally, including on the homes of customers and on building sites, in all weather conditions and on small and major projects. They will interpret drawings, set out, measure, and construct which includes formwork, reinforcement and concrete, and finish to a high standard.

From working safely and tidily with resilience and endurance through to exceptional planning and scheduling, concentration, precision, accuracy, and attention to detail to achieve an excellent finish, every step in the process matters and mistakes are largely irreversible and very costly.

Competitor must have to:

- How to use and apply tools, equipment, construction machinery, and working aids (e.g. instruments, measuring devices, etc.) in accordance with operating and handling instructions
- How to use and handle manual tools such as hammers, saws, planes, etc., to work with materials such as wood, metal, and plastic
- How to use and handle machinery such as drills, saws, sanders, etc., to work with materials such as wood, metal, and plastic, in compliance with safety guidelines
- Work manually with materials such as wood, metal, and plastic (for separating, reshaping, connecting) Measure, lay out and cut wood and work with it manually and using machinery
- Make various joints in combination with the appropriate joint sealants (profiles, sealing strips, expansion joint tapes)
- Produce unreinforced and reinforced concrete (mix and transport formula concrete = site-mixed concrete)
- Order ready-mixed concrete for the site and transport it using concrete pumps, crane buckets, or conveyors.
- Apply means of separation before concreting, depending on the formwork lining, using high pressure sprays, brushes, cloths, or mechanically.
- Apply concrete in prepared formwork, Compress concrete using various compressors and Process concrete surfaces by smoothing/removing/levelling, using the tools required to do this

5.   Digital Construction

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill: Digital Construction using Building Information Modelling (BIM) is a process for creating and managing information on a construction project across the project lifecycle. One of the key outputs of this process is the digital Building Information Model, the digital description of every aspect of the built asset. This digital model draws on information assembled collaboratively and updated at key stages of a project. Creating a digital Building Information Model enables those who interact with the building to optimise their actions, resulting in a more excellent whole life value for the asset.

With the new Digital Construction era, the design and construction industry is embracing new software technologies that collectively come under the heading of BIM. As a result, existing processes in the design, engineering, and construction (AEC) industry are changing exponentially. This means that existing professions are facing new challenges and new workflows which require new skills. New industry roles are emerging with more commonly used titles of BIM Manager, BIM Coordinator, and BIM Technician.

Competitor must have to:

- Computer operating systems in order to use and manage computer files and software.
- The importance of organising BIM objects into meaningful groups of disciplinary information that can be managed visually.
- How to create Building Information Models (BIMs), (Structural and Architectural).
- Principles of Technical Design and how to access and use documentation in a BIM project.
- The use of 3D visualisation tools.
- Update Project Information Models from the published directory Ensure all required assets have the required data populated as per the latest standard.
- Incorporate sustainability considerations into the data creation and management process.
- Use BIM to support decision-making that reduces the environmental impact of construction projects.
- Carry out lifecycle analysis as part of the BIM process to support sustainable decision-making.

6. Electrical Installations

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: An electrician works on commercial, residential, agricultural, and industrial projects. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the electrician has a continuing responsibility to work professionally in order to meet the requirements of the customer and thus maintain and grow the business. Electrical installation is closely associated with other parts of the construction industry and with the many products that support it, normally for commercial purposes.

The electrician works internally or in teams, in the homes of customers and on small and major projects. They will plan and design, select and install, commission, test, report, maintain, fault find, and repair systems to a high standard. Work organization and self-management, communication, and interpersonal skills, problem solving, flexibility and a deep body of knowledge are the universal attributes of the outstanding electrician.

Competitor must have to:

- Computer operating systems in order to use and manage computer files and software.
- Ducting and wiring systems for commercial, domestic, residential agricultural, and industrial use and when and where to use a specific ducting and/or wiring system.
- The range of electrical switchboards used for commercial, domestic, residential, agricultural, and industrial uses and when and where to use a specific switchboard system
- Types of electric lighting and heating systems for commercial, domestic residential, and industrial use
- Control devices and socket outlets used for commercial, domestic, residential, agricultural, and industrial uses, including smart building technologies.
- Select and install equipment and wire ways as per drawings and documentation provided.
- Install ducting and cabling systems on different surfaces as per manufacturer's instructions and current industrial standards.
- Select and install single and double insulated cables inside ducts, conduits, and flexible conduits.
- Install and securely fix double insulated cables onto cable ladders, cable trays and different surfaces as per manufacturer's instructions and current industrial standards.
- Install metal and plastic ducting (trunking); accurately measure and cut ducts at specified lengths/angles; assemble without distortion to joints and to specified tolerances!
- Install metal and plastic conduits/flexible conduits and accessories and attach securely onto surfaces, maintaining even radius bends, without distortion to conduits if manually bent. Correct termination adaptors used for entry of conduits into boxes, boards, and ducts.

7. Joinery

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: A joiner generally works on commercial and residential projects. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the joiner has a continuing responsibility to work professionally to meet the requirements of the customer and thus maintain and grow the business. Joinery is closely associated with cabinet making and carpentry plus other parts of the construction industry and with the many products that support it, normally for commercial purposes.

The joiner is usually based in a workshop because the formation of various joints requires specialist machinery, but sometimes undertakes installations in the homes of customers and on building sites. He or she will produce and interpret drawings, set out and measure, cut, form joints, assemble, install, and finish to a high standard. The joiner usually produces items such as interior and exterior doors, windows, stairs, tables, and bookshelves.

Competitor needs to know and understand:

- Different types of joint to include mortice-and-tenon, dovetail, biscuit, lap, and spline
- The close fitting joints to form a good surface area for gluing
- The importance of not fitting joints too tightly, requiring excessive force during assembly
- The importance of correct joints and proportions
- Check and confirm internal joint geometry conforms with the working drawing including length of tenon and depth of mortice
- Accurately produce tight fitting joints without gaps
- Produce joints which are parallel and clean
- Produce joints to the correct size in the drawing Ensure faces, edges, and all shoulders are square straight and to the drawing
- The need for perfect fitting joints to make the connection
- Different types of glue and their purpose Reactions of some woods to glue and negative impacts
- How to make pieces of joinery to the correct specifications How to interpret the working drawing to check the measurement of a project Use of correct measurement tools

8. Painting and Decorating

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Painting and decorating is closely associated with other parts of the construction industry, and with the many products that support it. The painter and decorator work internally and externally in very diverse environments, for example in companies, factories, schools, hotels, the homes of clients, and on building sites in all weather conditions. They may offer a range of services, from interpreting client requirements to the environmental and sustainability of materials/drawings, advising on designs/colours, painting, spraying, decorative coatings, wallpapering, gilding, and sign writing to a high standard.

Work organization and self-management, communication and interpersonal skills, problem solving, innovation, creativity, and the ability to prepare surfaces thoroughly with meticulous care including hazardous surfaces such as lead and asbestos. These are the universal attributes of an outstanding painter and decorator. In a mobile labour market, the painter and decorator may work in teams, or alone, or in both from time to time. Whatever the structure of the work, the trained and experienced painter and decorator takes on a high level of personal responsibility and autonomy. From carefully determining the requirements of the client, working safely and tidily, exceptional planning and scheduling, precision and attention to detail to the fine gilding of objects and finishing of furniture, every process matters and mistakes are largely irreversible and costly.

Competitor needs to know and understand:

- The details required for floor plans in construction drawings including sections, datum levels, wall constructions, material codes, depth dimensions, heights, schedules, and specifications.
- Symbols e.g., for materials
- The purposes of painting: protection, preservation, sanitation, decoration, and identification, e.g., colour coding
- The significance of following manufacturers' guidelines.
- Impacts of materials on the public and necessary precautions
- The range of brushes, rollers, and trowel/texturing tools
- The variety of surface coatings e.g., water and solvent borne; wood treatments

9. Plastering & Drywall Systems

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The skilled plasterer may work on both internal and external plastering and rendering work. Much modern internal work is completed using drywall systems which involve the plasterer creating metal frames and installing plasterboard before the application on the final surface. These constructions can be complex and include curves and openings for doors and windows. Traditional plastering involves the preparation of the background prior to application of the plaster surface. The plasterer will prepare materials for use and be fully aware of legislation and official guidance relating to the preparation and use of materials. In addition to plastering flat surfaces, the skilled plasterer will create and install decorative mouldings. Plasterers will also be required to make repairs.

The plasterer may work on large construction sites for domestic, commercial, or industrial use, in single domestic and commercial premises or on historic buildings and heritage sites. Much plastering work on larger sites is sub-contracted and as such many skilled plasterers will be self-employed, meaning that they have to take responsibility for tax and other earnings-related regulation.

A high degree of accuracy, care, and skill is required. Preparation for plastering work will include complex mathematical calculations. The practitioner needs to be able to read, interpret, and analyse complex specifications describing the work required and be able to convert these plans into reality.

Competitor needs to know and understand:

- Set out the different elements of walls and ceilings.
- Measure accurately
- Accurately cut metal profiles
- Framing with inserts for windows and doors – square, plumb, and levelled
- Screw, fix, or crimp metal components
- Channel and stud metal profiles Install curved metal work such as archways, barrelled ceilings.
- Cut and fix with adhesives and screws plasterboard sheets, fibre cement boards.
- Construct frames using Expanded Metal Lath (EML)

10. Plumbing and Heating

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: A plumbing and heating technician works on commercial, residential, agricultural, and industrial projects. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the practitioner has a continuing responsibility to work professionally in order to meet the requirements of the customer and thus maintain and grow the business. Plumbing and heating is closely associated with other parts of the construction industry, and with the many products that support it, normally for commercial purposes.

The plumbing and heating technician works internally and externally, including the homes of customers and on small and major projects. He or she will plan and design, select and install, commission, de-commissioning, test, report, maintain, fault find, and repair systems to a high standard. Work organization and self-management, communication and interpersonal skills, problem solving, flexibility, and a deep body of knowledge are the universal attributes of the outstanding practitioner.

Whether the plumbing and heating technician is working alone or in a team, the individual takes on a high level of personal responsibility and autonomy. From working to provide a safe and reliable plumbing and heating service, in accordance with relevant standards, through to diagnosing malfunctions, and commissioning plumbing and heating systems and components, precision, accuracy and attention to detail every step in the process matters and mistakes are largely irreversible, costly, and potentially life threatening.

Competitor needs to know and understand:

- Read and interpret drawing for a range of systems and appliances
- Interpret drawings to facilitate pipe-work fabrication and the installation of appliances
- Modify the area and surfaces, as required, to permit fixing and assembly take and transfer measurements and angles from given drawings to surfaces and piping materials
- Select suitable fixing methods for the available surfaces, appliances, and environment Fix an appropriate number and diameter of pipe brackets/clips in the correct or specified configuration
- Determine the optimal way to use given materials to complete assembly and installation of systems in a sustainable manner
- Install systems to ensure they provide access to safe water, sanitation and hygiene standards
- Determine and use the correct positions for cutting the piping material
- Measure, set out, and mark the materials and pipework
- Determine the correct positions for bending the piping material
- Select an appropriate and safe method for handling, cutting, installing, and jointing the piping material.

11. Refrigeration and Air Conditioning

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: A plumbing and heating technician works on commercial, residential, agricultural, and industrial projects. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the practitioner has a continuing responsibility to work professionally in order to meet the requirements of the customer and thus maintain and grow the business. Plumbing and heating is closely associated with other parts of the construction industry, and with the many products that support it, normally for commercial purposes.

The plumbing and heating technician works internally and externally, including the homes of customers and on small and major projects. He or she will plan and design, select and install, commission, de-commissioning, test, report, maintain, fault find, and repair systems to a high standard. Work organization and self-management, communication and interpersonal skills, problem solving, flexibility, and a deep body of knowledge are the universal attributes of the outstanding practitioner.

Whether the plumbing and heating technician is working alone or in a team, the individual takes on a high level of personal responsibility and autonomy. From working to provide a safe and reliable plumbing and heating service, in accordance with relevant standards, through to diagnosing malfunctions, and commissioning plumbing and heating systems and components, precision, accuracy and attention to detail every step in the process matters and mistakes are largely irreversible, costly, and potentially life threatening.

Competitor needs to know and understand:

- Interpret diagrams, plans, and specifications to determine appropriate piping and electricity routes.
- Itemize the required tools, components, and materials required for installations.
- Take and transfer measurements and angles from given drawings to surfaces and piping materials.
- Identify, check, and use various types of gases and equipment used for joining materials in the RAC industry.
- Fabricate and install mechanical materials and components according to drawings and specifications.
- Install electrical materials components and control devices according to drawings and specifications Install ancillary components and systems found in refrigeration and air conditioning systems such as condensate drainage, and leak detection systems.

12. Wall and Floor Tiling

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The tiler will interpret drawings, set out and measure, remove any existing covering, prepare surfaces, lay the tiles in the desired pattern, grout, and finish to a high standard. Work organization and self-management, communication and interpersonal skills, problem solving, innovation and creativity, and working accurately are the universal attributes of the outstanding tiler. Whether the tiler is working alone (many are self-employed or sub-contractors) or in a team on large projects, the individual takes on a high level of personal responsibility and autonomy. Experienced tilers may also specialize in one area of work such as mosaics and they can work for specialist tiling firms specializing for example in artistic work or competition swimming pools.

From working safely and tidily through to exceptional planning and scheduling, concentration, precision, accuracy, and attention to detail to achieve an excellent finish, every step in the process matters. Mistakes are largely irreversible and can be very costly.

With the international mobility of people, the tiler faces rapidly expanding opportunities and challenges. For the talented tiler there are many commercial and international opportunities; however, these carry with them the need to understand and work with diverse cultures and trends. The diversity of skills associated with tilers is therefore likely to expand.

Competitor needs to know and understand:

- Install tiles to flat, inclined, and curved surfaces.
- Cut and shape tiles needed for edges, corners, and to fit around fittings and pipes.
- Apply correct adhesive evenly to tiles, avoiding excess.
- Accurately space tiles, checking level, plumb and square to ensure aligned and levelled.
- Prepare and apply seal and grout to joints ensuring symmetrical and equal.
- Remove excess seal and grout, clean and polish to provide a good finish which meets the specification/customer requirements.
- Finish edge and corners with appropriate finishing methods and strips.
- Inspect equipment, structures, and/or material to identify the nature and causes of errors, defects, or problems.
- Think critically by using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- Identify actual and potential problems Analyse information and evaluate options to choose and use the best solution.

13. 3D Digital Game Art

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The games development sector comprises three occupations or work roles: the designer, the artist, and the programmer. The 3D Digital Game Artist takes a designer's brief and, through a combination of conceptualization, creativity, selectivity, technical, and specialist skills, completes the brief to the satisfaction of clients. The 3D Digital Game Artist receives, conceptualizes, and interprets design briefs on the basis of their market knowledge and skill sets, and the given scope and limits of the briefs. The skills required of the 3D Digital Game Artist can be broken down further into 2D concept art, texture painting, 3D modelling, rigging, and animating.

After interpreting a brief, the 3D Digital Game Artist must produce a 2D digital concept of the required assets for the game, which could include objects, characters, and environments. This requires the development of enabling the designs can be recognized immediately without detail, with greyscale values that highlight the important details of an asset, to define a colour scheme based on the Artist's knowledge of colour balance, saturation, and mixing.

Competitor needs to know and understand:

- Geometric principles in determining how to build the assets.
- Symmetry in creating a base model that allows for efficient use of materials later on in the process.
- Polygon counts that are proportional to detail and focus on the asset/s.
- Use innovative and optimisation techniques on the 3D game models to ensure the scalability and sustainability of the game production
- Select appropriate 3D modelling software to begin models
- Utilise skills in sculpting, edge modelling, or box modelling to produce the basic form of models
- How to paint colour and details to represent a variety of physical materials like wood, plastic, metal, and fabrics.
- Diffuse colour maps that represent the base colours of materials.
- Specular maps that represent shine in order to produce realistic metal, plastic, or wet and oily surfaces.
- Opacity maps that use alpha maps to produce complex objects on a 3D flat plane, e.g. grass, hair, branches, wire
- Normal maps and the production of high-resolution models, to project, using cages onto low resolution models Ambient occlusion that uses the 3D information to render shadows onto flat texture based on the proximity of polygons.

14. Fashion Technology

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The design of a garment requires innovation, creativity, artistic talent, and design skills which incorporate aesthetics as well as function and other design practicalities. The practitioner must apply the rules and theory of composition including design elements and principles as well as excellent construction technique. They are often creative and artistic, with a good eye for design and the ability to create pleasing and functional garments, suitable for their purpose. In addition, a thorough knowledge and understanding of specialist equipment and its use is essential. Another requirement is a high level of technical knowledge in patternmaking and construction techniques. Different fabrics will have in various ways regarding design, as well as react in various ways to the manufacturing process and these characteristics must be considered throughout the design, preparation, and production process.

There is a wide range of practice in the fashion sector. Some practitioners produce small ranges for retail outlets or high-class fashion houses or prepare bespoke garments ordered by individual clients. At the other end of the professional spectrum, the practitioner may work in an industrial setting, producing prototypes for mass production. Practice also varies across the world. The fashion industry is truly global: for example, a garment may be designed and prototyped in one country and sub-contracted for manufacture in another.

Competitor needs to know and understand:

- Accurately measure fabrics according to the pattern
- Correctly prepare and mark a layout to optimize fabric utilization and follow pattern instructions.
- Cut fabrics accurately using the most appropriate tool or equipment.
- Use various types of industrial equipment used in the fashion industry, such as sewing machines, overlocking machines, irons, and a fusing press.
- Select the appropriate tool or equipment for the task Use all machinery safely and in accordance with the manufacturer's instructions.
- Conduct trials to ensure that the machine settings are appropriate for fabrics being used and the application.
- Apply fusing appropriately and effectively to different parts of the design.
- Construct and apply facings, interfacing, interlining, and lining appropriately.
- Handle and care for fabrics to ensure that they are not damaged and remain in good condition
- Sew accurately by machine various types of garments or parts of garments
- Use a variety of different stitches and finishes on garments or parts of garments according to the specification sheet, technical drawing, or pattern Finish fashion garments professionally Finish parts of garments with hand sewing Proficiently execute specialist sewing skills and techniques Press garments effectively both during and at the end of production Present finished garments professionally.

15. Floristry

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Floral designs, whether for a small bouquet or a large installation for a major event, require the florist to be innovative, creative and to demonstrate artistic and design knowledge that incorporates aesthetics and practicalities. The florist must apply principles and elements of design to composition and colour, additionally demonstrating ideas by the expert use of appropriate techniques.

The florist will use their expertise and knowledge of flowers, plants, botanical, non-botanical materials, and accessories to produce floral projects. There is a diverse range of practice within the floristry industry. Some florists will work in retail outlets, and preparing bouquets and arrangements for sale, and must therefore be keenly aware of their market and commercial restraints. At the other end of the professional spectrum, a florist may be commissioned to provide floral displays for major high-profile international events. Such events require interpretation of themes and effective working within large teams, collaborating with other professions in high-pressure situations with tight time constraints.

Competitor needs to know and understand:

- Create floral designs that interpret particular themes
- Create floral designs appropriate for particular occasions
- Create floral designs that take account of the need for sustainable practice Create floral designs to suit the locations and environments where they will be situated
- Create floral designs that are conventional and/or innovative
- Use colour theory effectively, for example by building colour, positioning colour, and using tints, tones, and shades

16. Graphic Design Technology

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Graphic Design Technology involves working with external and internal clients to create unique solutions to their needs; these may also include printing or online publication production or integrating digital media capabilities for visual communication. People working in this industry often work closely with their clients and must be effective communicators so that they can achieve the client's objectives successfully. They require strong interactive, research, design, and technical skills in art and design to meet industry standards. In order to achieve these, they need to understand the target audience, markets, trends, cultural differences, and what the client wants. They must be able to work in either formal or informal teams, or independently.

There are various employment opportunities within the global creative industry. This may include becoming a freelancer, business owner, or being employed by an advertising, marketing, design, or printing company. They may also be employed by a company with a design department or as a stand-alone in-house designer. Practitioners may have a broad role, or specialize as a graphic designer, graphic artist, prepress operator, typographer, typesetter, type designer, image manipulation specialist, illustrator, art director, production manager, digital printer, information designer, publisher, brand or packaging specialist.

Competitor needs to know and understand:

- Create, analyse and develop visual responses to communication problems, including understanding hierarchy, typography, aesthetics, composition and illustration.
- Create (including photography), manipulate, and optimize images for both print and digital publishing
- Take into consideration the impact of each element that is added during the design process
- Create animations using software
- Select and create animating elements and links
- Technological trends and developments in the industry
- Different input and output processes for print and other media: their limitations, techniques and relevant professional practice Image input, manipulation and editing

17. Jewellery

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The skill of jewellery manufacturing consists of the making of fashion accessories using precious metal. A jewellery manufacturer can make exclusive individual pieces for use, pieces ready to be set with precious gemstones or prototypes for reproduction in numbers through lost-wax casting. A jeweller may also be required to replicate a piece directly, use jewellery making skills to refashion or repair an existing piece. A jewellery manufacturer will usually work from detailed drawings created through direct consultation with a client or by a jewellery designer.

These designs can be developed by the jeweller through the use of hand sketching.

Jewellers work with highly valuable materials, therefore must act with complete honesty and integrity. They must be fully aware of security and the regulations relating to the purchase, production and sale of precious metals, gemstones, and finished pieces. Whether working as part of a production team, or in the capacity of a sole manufacturer, a jeweller must have a thorough understanding of production costs, to enable them to arrive at an acceptable selling price, while maintaining profitability

Competitor needs to know and understand:

- Transform precious metal alloy sheet, wire into simple jewellery components employing bending, shaping, and forming to conform to any shape pre-determined by technical drawing or sample component
- Drill precious metals accurately to conform to any shape predetermined by technical drawings or sample component
- Transform simple jewellery components employing abrasive techniques such as milling, grinding, filing, ajour-sawing etc. to conform to any shape pre-determined by technical drawings or sample components.
- Hammer, emboss, shape or dome precious metal sheets of appropriate thickness into low relief, to conform to any shapes predetermined by technical drawings or sample components using appropriate doming tools
- Manufacture settings for precious gemstones to conform to shapes or designs pre-determined by technical drawings or sample components
- Manufacture functioning mechanisms for jewellery such as hinges, clasps, articulations, pressure snaps riveting and screw threads as determined by technical drawings or sample components, or of their own design
- Ensure that manufactured functioning components can withstand constant use without sacrificing any mechanical properties

18. Visual Merchandising

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The skill of jewellery manufacturing consists of the making of fashion accessories using precious metal. A jewellery manufacturer can make exclusive individual pieces for use, pieces ready to be set with precious gemstones or prototypes for reproduction in numbers through lost-wax casting. A jeweller may also be required to replicate a piece directly, use jewellery making skills to refashion or repair an existing piece. A jewellery manufacturer will usually work from detailed drawings created through direct consultation with a client or by a jewellery designer.

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- Manufacture settings for precious gemstones to conform to shapes or designs pre-determined by technical drawings or sample components
- Manufacture functioning mechanisms for jewellery such as hinges, clasps, articulations, pressure snaps riveting and screw threads as determined by technical drawings or sample components, or of their own design
- Ensure that manufactured functioning components can withstand constant use without sacrificing any mechanical properties

19. Information Network Cabling

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill: Information network cabling comprises the construction of the infrastructure of telecommunication networks such as those for data centres, mobile networks, Local Area Networks (LANs), Cable TV (CATV), industrial automation, and building automation. With the progress of the information society in recent years, the scope of work has expanded greatly, and expertise in the Internet of Things (IoT), and in Industrial Internet of Things (IIoT) connectivity is also becoming ever more important.

The role of the information network cabling technician is complex, and requires detailed specialized knowledge in order, independently to design and install networks that meet clients' needs and conform to recognized industry standards. The technician will create the foundations for the network, install cables appropriate for the intended use, maintain, test, and commission the network.

Communications networks are crucial to the efficiency of business and commerce. Network failure can result in wasted time and lost revenue. Robust and reliable communications networks are therefore critical to business success.

Competitor needs to know and understand:

- Optical fibre cables and connecting hardware
- Properties and types of optical fibre cables
- The uses of various connectors for optical fibre cables
- Processes for installing optical fibre cables
- The cabling appropriate for commercial and domestic use
- Overview of optical fibre cabling system and related applications (FTTH, PON, Access network, outside plant cabling system, etc.)
- Optical fibre structured cabling system
- Wi-Fi configurations Smart home/office/factory applications and equipment configurations
- Security system applications and equipment configurations IoT and IIOT applications and equipment configurations
- Carry out Wi-Fi network fault-finding.
- Complete troubleshooting and fault-finding log sheets thoroughly and clearly Install updates to ensure systems meet emerging business needs
- Label systems for users' information and guidance
- Complete all records and documentation Provide customers with advice and guidance on use of the systems, their features, and limitations

20. Cloud Computing

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill: The positions responsible for the design and implementation of information technology infrastructure in a public cloud environment can span multiple roles including, Systems Administrators/Engineers, Database Administrators, Network Administrators/Engineers, Storage Administrators/Engineers, Systems/Network/Solutions/Enterprise Architects, programmers/ developers, and similar technology-driven roles which shoulder the business and functional responsibilities for architecting infrastructure design. Due to the ever-expanding features and capabilities of public cloud providers, this list of associated infrastructure specialists is also expanding.

Competitor needs to know and understand:

- Skills involves in designing and implementing information technology infrastructure in a public cloud environment and features multiple roles including systems engineers, database administrators, Network Engineer, storage administrator, programmers, developers etc.
- Deep understanding and working knowledge of problem-solving using programming (Python/JS/Go/Rust/Java, etc)
- Good understanding of Databases (Relational, Non-relational - key-value, in-memory, document, etc), SQL, DBMS (MySQL/MariaDB/MSSQL/Oracle/MongoDB/Cassandra, etc)
- Working knowledge in Operating Systems (Linux, Windows), Understanding of Servers and Web Servers, File System
- Working knowledge of computer Networking (IP Address basics, subnetting, DHCP, VPN, WAN, etc)
- Hands-on experience building any full-stack application (Web, desktop, mobile), including databases
- Exposure to multiple cloud computing platforms (AWS/GCP/Azure/IBM, etc) with hands-on experience in at least one cloud platform
- Exposure to web technologies and web development frameworks. Good understanding of HTML, CSS, JS, etc

21. Cyber Security

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 2

About the Skill: A Cyber Security Professional works to protect an organization's computer systems networks, to ensure their robustness and prevent hackers from accessing and/or stealing sensitive information and data. The role typically involves configuring firewalls, IPS/IDS, server roles/services and web security solutions to protect confidential information.

A Cyber Security Professional also monitors security breaches and investigates violations. They may conduct penetration testing by simulating attacks to search for vulnerabilities in their networks before they can be exploited for malicious reasons. Their forensic tasks include gathering, preserving, processing, analysing, and presenting computer-related evidence to mitigate networks' vulnerability to criminal, fraud, and other hostile activities. They have a range of tactics, techniques, and procedures, using a full range of investigative tools and processes.

Competitor needs to know and understand:

- File system implementations
- System files (e.g., log files, registry files, configuration files) contain relevant information and where to find those system files.
- Network security architecture concepts including topology, protocols, components, and principles (e.g., application of defence in-depth)
- Industry-standard and organizationally accepted analysis principles, methods, and tools to identify vulnerabilities.
- Cyber intelligence/information collection capabilities and repositories
- Cyber threats and vulnerabilities Basics of network security (e.g., encryption, firewalls, authentication, honey pots, perimeter protection)
- Vulnerability information dissemination sources (e.g., alerts, advisories, errata, and bulletins) Which system files (e.g., log files, registry files, and configuration files) contain relevant information and where to find those system files.
- Structure, approach, and strategy of exploitation tools (e.g., sniffers, keyloggers) and techniques (e.g., gaining backdoor access, collecting/exfiltrating data, conducting vulnerability analysis of other systems in the network)
- Identify and assess the capabilities and activities of cyber security criminals or foreign intelligence entities.
- Produce findings to help initialize or support law enforcement and counterintelligence investigations or activities
- Analyse collected information to identify vulnerabilities and potential for exploitation
- Analyse threat information from multiple sources, disciplines, and agencies across the intelligence community
- Synthesize and place intelligence information in context, draw insights about the possible implications

22. IT Software Solutions for Business

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: IT software solution professionals represent a wide spectrum of software developers as computer programmers, computer systems designers, analysts, and full stack developers. They always work closely with clients to modify existing systems or create new systems. They may modify "off the shelf" software and integrate it into the existing systems. They often work as part of a team of software professionals responsible for the requirement specification, writing algorithms, system analysis and design, construction, testing, training, and implementation, as well as maintenance of a business software system. Their work is often more oriented towards the backend.

Competitor needs to know and understand:

- Develop software solutions by studying information needs, conferring with users, and studying systems flow, data usage, and work processes.
- Use database management systems to construct, store and manage the data for the required systems.
- Use latest software development environments and tools to modify existing codes and write new codes of client-server-based software solutions.
- Evaluate and integrate appropriate libraries and frameworks into the software solutions.
- Build multi-tier applications.
- Construct web enabled or native mobile interfaces for client server-based systems.
- Plan testing activities (e.g., unit testing, volume testing, integration testing, and acceptance testing)
- Design test cases with data and check results of test cases Debug and handle errors Report on test processes.
- The implementation of black and white box testing.

23. Mobile Applications Development

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Mobile Applications Development refers to applications development for mobile communication terminals. With the onset of the mass global information age, the market for these applications is booming, since "apps" are widely and increasingly used in people's work, life, and entertainment. The development of mobile applications is overtaking more traditional communication, improving the efficiency of work, and massively extending services and benefits for users. This is leading to new opportunities for employment and self-employment in organizations of all sizes, entrepreneurship and contracting. These roles especially appeal to young adults, due to their confidence and expertise with new technologies.

Competitor needs to know and understand:

- Characteristics and advantages of various development platforms (e.g. iOS, Android)
- The behaviours of mobile application users Impact of the features on mobile application products (e.g. size and various parameters)
- Principles and applications of design thinking processes
- The design methods of user interface (UI)
- The design methods of user experience (UE/UX) Principles and applications of framework design
- Principles and applications for flow diagrams
- The principles and applications of version control
- The design of test plans and procedures
- A range of testing methods and tools (e.g. unit test, functional test, performance test, etc.)
- Specifications for writing codes Methods for writing detection program documentation

24. Web Technologies

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Web technology encompasses many different skills and disciplines in the design, development, production, and maintenance of websites and web applications. The skills required of a web developer are diverse, often to the point where it is difficult for a developer to excel in all aspects. As a result, a team may cover the web design process, with each member of the team having their own strengths, specialities, and role in the development process.

Web technologies involve implementing specific solutions by using web technologies that follow the business rules and objectives outlined by the client. Web developers develop a professional relationship with their clients, interacting with them to develop a deep understanding of the requirements, and convert these into a website specification. Strong communication skills, coupled with research techniques and a grasp of target audiences, markets and trends, will ensure client satisfaction.

Competitor needs to know and understand:

- Create, analyse, and develop visual response to communication problems including understanding hierarchy, typography, aesthetics, and composition
- Create, manipulate, and optimize images for the internet
- Identify target markets and create concept for designs
- Implement responsive designs that function correctly on multiple screen resolutions and/or devices
- Critique draft concepts, colour, and typography choices
- Create wireframes, interactive prototypes, and design of user interfaces that consider user experience
- Create website animations and functionalities to assist in context explanations and add visual appeal
- Create and update JavaScript code to enhance websites' functionality, usability, and aesthetics Manipulate data and custom media with JavaScript Create modular and reusable JavaScript code
- Write documentation including comments in code Use open-source JavaScript libraries Manipulate graphical elements and content elements using JavaScript

25. Additive Manufacturing

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill: Additive manufacturing allows us to redesign many objects around us, and rethink approaches to the design of new ones. In this way it is potentially transformative and disruptive across the manufacturing process. While the layer-on-layer process is relatively slow, additive manufacturing's overall impact on design and manufacture will be to shorten the production cycle, improve quality, and improve customer benefits.

An additive manufacturing technician requires a wide range of knowledge, skill, and generic attributes. In relation to 3D, their role covers 3D scanning, metrology, scan-to-CAD redesigning, CAE, build process analysis, and post-processing. Beyond these, the role requires an appreciation of their properties and characteristics of materials, applied mathematics, and geometry in particular, and the ability to take advantage of the future possibilities of this new technology.

Competitor needs to know and understand:

- Select the right type of optimization for the task in hand.
- Define and apply correct boundary conditions
- Carry out component optimizations by applying the given optimization objectives
- Evaluate the results of the optimizations with reference to quality and compliance with the given input variables
- Convert the optimized components into printable components with adapted geometry
- Design components according to given manufacturing processes and exploit the potential of the process for design
- Optimise designs with regard to the required number of components
- Create editable CAD models by digitized data (polygonal models)
- Change the geometry of created models according to task
- Consider the features of AM and subsequent finishing processing
- Analyse and optimize the structure of the model in accordance with the terms of reference

26. CNC Milling

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Computer Numerical Control (CNC) technology has become omnipresent. Most people cannot imagine how important these technologies are in their lives. There is nothing that we use that hasn't in its manufacturing utilized CNC technology. It is present in products and objects of everyday life, such as cars, airplanes, components of machines of all types, moulds for tools used for household machines, medical prosthetics, cell phones, and toys.

CNC milling machines are machine tools used for the shaping of metal and other solid materials. These machines exist in two basic forms: horizontal and vertical. This refers to the orientation of the cutting tool spindle. Early milling machines were manually or mechanically automated, but technological advances have led to the development of Computer Numerical Control, such as the CNC machining centre. CNC refers to a computer-controlled device to read and store instructions. This numerical information, generally "G and M" codes (a programming language) is then used to control and drive a machine tool which is a powered mechanical device ("machining centre"). A machining centre is used to fabricate components using cutting tools for removing the material

Competitor needs to know and understand:

- Select the best methods according to the production type and part specification
- Use skill specific software and related hardware
- Generate programs by using the CAD/CAM system with the format of the initial data
- Start with drawings in paper format to create the geometry in wireframe and/or surface and/or solid
- Identify and designate the different machining processes on a CNC milling machine
- Optimize the machining strategy
- Define and adjust the cutting parameters as a function of the operation sequence, material type, type of operation, and CNC machine tool
- Start the cutting process from the raw material

27. CNC Turning

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The CNC Turning machinist uses a computer to tell the lathe how to move the tools and cut the part to the desired shape. They must also set up the lathe with all the necessary clamping devices, support devices, and cutting tools. These tools can cut almost every material (stainless steel, plastic, soft steel, aluminium, bronze, and so on). But the machinist has to choose well to avoid temperature variations, tool wear or vibration. Those factors influence the product and it can result in poor quality.

When the machine starts cutting material, the machinist makes sure that the dimensions exactly fit the customer specifications. For this, very accurate inspection tools are used. Once the machine is set up, the CNC-Turning machinist also monitors and optimizes the processes, to achieve even faster and better results for all the following parts.

Competitor needs to know and understand:

- Appraise and follow a given process-strategy when using
- Upload generated CNC programs to CNC lathes and perform test runs
- Identify and designate the different machining processes on CNC lathes
- Mount and align selected tools
- Mount and align selected work holding devices
- Mount and align selected accessories (Tailstock, Parts-catcher, etc.)
- Set measures to avoid vibration in machining sequences Apply efficient burr-removal techniques on work pieces
- Optimize machining strategies
- Quickly react to problems and emergencies
- Obtain dimensions, geometries, surface roughness etc.
- Make all necessary corrections to get the final part to conform to the blueprint Report health, safety, and environmental issues to the appropriate personnel.

28. Electronics

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Electronics Technicians also rely on Schematic Capture and Layout software to create/verify/ simulate schematic circuits and printed circuit boards. This is a specialised occupation in its own right and involves the creation of production documents such as Bills of Material, Gerber Files, Excellon drill files and other automated equipment files.

Electronics specialists work in a wide range of industries supported by highly technical specialist equipment. Almost every aspect of today's world relies on, or directly uses, electronic technology. It can be said that all technologies today use Electronics in one form or another.

Electronics Technicians must work with a high degree of accuracy and precision, conforming to detailed specifications and international quality standards and demonstrating extensive technical ability. Due to the constant developments in technology, the Electronics Technician needs to be proactive in ensuring that their skills and knowledge are up-to-date and meet industry standards and expectations.

Competitor needs to know and understand:

- Calculate and select component values that are fit-for-purpose
- Implement heatsinking principles
- Design modifications to given basic electronics blocks
- Design circuits that meet specification and are fit for purpose.
- Use computer circuit simulation software to test that circuit designs are fit for purpose.
- Discuss and interpret design briefs and specifications
- Draw schematic circuits using schematic capture and PCB layout software
- Use the 3D capabilities of PCB Layout software.
- Lay out PCBs using industry best practices
- Generate fit-for-purpose PCB manufacturing data
- Assemble components onto PCBs to create functional circuits
- Test prototypes and adjust as required Implement rework and repair mistakes in design to industry standards
- Design, write, debug, download/upload, and verify/test programs to solve/perform specified tasks
- Use and/or write interrupt handlers (ISRs) and/or polling techniques where appropriate
- Use generally accepted best practices when writing code
- Use pre-written code and/or design and write code that implements power management techniques

29. Industrial Control

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Industrial Control contains elements of both electrical installations and automation installations, with greater emphasis on automation installation. The industrial control practitioner requires a wide range of technical skills, such as installing conduits, cables, instruments, I/O devices and Programmable Logic Controllers. The industrial control practitioner also designs electrical circuits, programs Programmable Logic Controllers, parametrizes bus systems and configures Human Machine Interfaces.

The working environment is likely to be one that is potentially very dangerous and hazardous. The industrial control practitioner proactively promotes best practices in health and safety and rigorously adheres to health and safety legislation.

Troubleshooting is an important skill of the industrial control practitioner and includes identifying problems during equipment installations in a new plant or remedying problems within an existing plant.

The industrial control practitioner has a wide range of industrial settings in which to work. They may be employed in one particular plant and install and maintain production equipment; or they may be employed by a sub-contractor and work in a number of industrial settings.

Competitor needs to know and understand:

- Measure and calculate the correct positions for the components to be installed
- Prepare and install wire trays within given tolerances
- Install conduits, cables, devices, instruments, and control centre fittings
- Install complex cabling systems that combine power and communications
- Plan work effectively to meet time schedule requirements
- Use all tools effectively and safely without risk to self or others in the workplace
- Create programmes according to written specifications and diagrams
- Configure HMI-screens according to written specifications and diagrams
- Configure HMI-screens to switch automatically to customised start screens
- Configure the VSD or Servodrive as required in the function descriptions
- Configure VSDs or Servodrives to startup without error messages
- Test functions thoroughly and safely
- Demonstrate functions to users and provide expert advice and guidance
- Conform to IEC sequence programming specifications

30. Industry 4.0

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 2

About the Skill: Information and communication technologies (ICT) are impacting on manufacturing and production processes to the extent that their effects are likened to a "fourth industrial revolution"; hence the term "Industry 4.0". Others use terms such as "smart production". The business case for introducing ICT is most immediately clear with large scale, complex manufacturing, where significant gains can result from early adoption.

The role of the Digital Production Systems Technician is to understand the business case for enhancement, and to design and implement technical responses accordingly. Assembled and commissioned hardware in virtual and real context using various digital tools and technology provide the basis for programming, and the design and implementation of cyber security measures on real and virtual production processes. Responding to the business need, smart maintenance may be a universal enhancement. Optimization may be more business specific and take several paths, especially in relation to the role of hardware, connectivity, the location of data points, and the purposes and types of information and intelligence.

A flexible and open approach, combined with strong technical expertise, alertness to risk and security needs, and a recognition of the endless possibilities for optimization, are the hallmark of the outstanding and successful Digital Production Systems Technician.

Competitor needs to know and understand:

- Measure and calculate the correct positions for the components to be installed
- Prepare and install wire trays within given tolerances
- Install conduits, cables, devices, instruments, and control centre fittings
- Install complex cabling systems that combine power and communications
- Plan work effectively to meet time schedule requirements
- Use all tools effectively and safely without risk to self or others in the workplace
- Create programmes according to written specifications and diagrams
- Configure HMI-screens according to written specifications and diagrams
- Configure HMI-screens to switch automatically to customised start screens
- Configure the VSD or Servodrive as required in the function descriptions
- Configure VSDs or Servodrives to startup without error messages
- Test functions thoroughly and safely
- Demonstrate functions to users and provide expert advice and guidance
- Conform to IEC sequence programming specifications

31. Mechanical Engineering CAD

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: Mechanical engineering computer aided design (CAD) is the use of computer systems to assist in the creation, modification, analysis, or optimization of an engineering design. CAD software is used to increase the productivity of the designer, improve the quality of design, improve communication through documentation, and create a database for manufacturing. CAD output is often in the form of electronic files for print, manufacturing documentation, or other manufacturing processes.

The technical and engineering drawings and images must convey information such as materials, processes, dimensions and tolerances according to application-specific conventions. CAD may be used to design curves and figures in two-dimensional (2D) space or curves, surfaces and solids in three-dimensional (3D) space. CAD is also used to produce computer animation for the special effects used in, for example, advertising and technical manuals.

CAD is an important industrial art and is the way projects come true. It is extensively used in many applications, including automotive, ship building and aerospace industries, and in industrial design. The CAD process and outputs are essential to successful solutions for engineering and manufacturing problems.

Competitor needs to know and understand:

- Model components, optimizing the constructive solid geometry
- Create families of components
- Ascribe characteristics to the materials (density)
- Ascribe colours and textures to the components
- Produce assemblies from 3D models of components Structure assemblies (sub-assemblies)
- Review base information to plan work effectively
- Access information from data files
- Model and assemble base components of project pieces
- Estimate approximate values for any missing dimensions
- Assemble modelled parts into sub-assemblies as required
- Apply graphics decals such as logos as required onto images
- Standards for conventional dimensioning and tolerancing and geometric dimensioning and tolerancing appropriate to the ISO standard
- Rules of technical drawing and the prevailing latest ISO standard to govern these rules
- The use of manuals, tables, list of standards, and product catalogues

32. Mechanical Engineering CAD

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

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33. Chemical Laboratory Technology

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The work of laboratory chemical analyst is the basis of the product quality in many industries. Chemical analysis is necessary to control the compliance of the properties of raw materials, intermediate stages of the technological process, and finished products with current standards.

Laboratory chemical analysts should be ready to determine the optimal tools and methods for the analysis of various natural and synthetic materials, to perform qualitative and quantitative tests using modern chemical, bioanalytical and physicochemical analytical methods. They should be able to act logically and systematically, complying with sanitary and hygienic requirements and occupational safety and health standards.

Usually, laboratory chemical analysts work in the chemical laboratories of quality control departments, research and development departments, or in environmental departments in plants in various industries: chemical, petrochemical, pharmaceutical, food, bioproducts and the supply of construction materials, paint and varnish, polymers, defence and many others

Competitor needs to know and understand:

- Log and document laboratory work, including by using given house style, IT and statistical methods
- Process and collate digital information from automated digital machines
- Produce reliable, accurate data Present the results of laboratory work and problem solving clearly and concisely in written and oral form
- Write technical reports, using graphs and charts as appropriate
- Check own work for codification, categorization, calculations, tabulations, and completeness
- Acknowledge errors, inaccuracies, and shortcomings promptly
- Use creative thinking and problem solving to challenge assumptions, innovate, make new proposals, and build on existing ideas
- Seek advice from senior colleagues as appropriate
- Make recommendations for improved workflows or scientific solutions
- Support new investigations and follow-up experiments for routine and non-routine analytical tasks
- Take responsibility for personal development, demonstrating commitment to learning and self-improvement.
- Install, commission and test automated laboratory systems

34. Mechatronics

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 2

About the Skill: Mechatronics combines skills in mechanics, pneumatics, hydraulics, electrics, electronics, computer technology, production digitalization technology (industrial ioT: RFID, NFC, wireless communication, PLC web-server, Cyber Security, Vision Systems, Augmented reality, etc), robotics and systems development. The computer technology element covers the programming of PLC's, robots and other handling systems and information technology applications, programmable machine control systems, and technology which enable communication between machines, equipment, and people.

Mechatronics technicians design, build, commission, maintain, repair, and adjust automated industrial equipment, and also program equipment control systems and human machine interfaces (HMI). They are also able to handle fluids in the field of industrial applications. Outstanding mechatronics technicians are able to meet a variety of needs within industry. They carry out mechanical maintenance and equipment building. They also deal with equipment for information gathering, components (sensors), and regulating units.

Competitor needs to know and understand:

- Integrate and connect PLCs to mechatronics systems
- Set-up an industrial network/bus system for communication between industrial controllers, HMI device, other electronics and distributed devices as well with a PC via OPC-UA
- Make the necessary configurations of industrial controllers Configure all aspects of PLCs as required, together with the associated control circuitry for correct operation
- Set-up proper communications between and among controllers
- Write programmes to control a mechatronic system
- Visualize the process and operation using software
- Programme PLCs, including digital and analogue signal processing and industrial field buses
- Programme HMI devices Programme useful and correct handshakes between PLCs
- Optimize the operation of mechatronic systems through analysis and problem solving
- Optimize the operation of each module of mechatronics systems
- Optimize the operation of mechatronic systems as a whole
- Present assemblies to clients and respond to questions
- Measure consumed energy with sensors and measuring devices

35. Autonomous Mobile Robotics

Eligibility Criteria – Competitor must be born on or after 1ˢᵗ January 2002

Number of competitors - 2

About the Skill: Mobile Robotics is a fast evolving, solutions orientated, industry within which the robotics/ technologist is a significant and growing work role. Mobile robotics is an important part of the future, with applications in everyday life, diverse industries, including autonomous vehicles, manufacturing, agriculture, aerospace, mining, and medicine.

A robotics technologist works in offices, manufacturing plants or laboratories; he or she designs, maintains, develops new applications, and conducts research to expand the potential for robots. The role begins with a strong focus on a specific business problem, in a particular sector. For example, in manufacturing there may be a need to increase capacity by creating robots for tasks that can be automated. Mobile robots may also be designed to explore areas that are inaccessible or dangerous for human beings.

Competitor needs to know and understand:

- Test each part of a mobile robot against agreed operating criteria.
- Test mobile robots' overall performance against agreed operating criteria.
- Optimize the operation of each part of systems, and the systems, through analysis, problem solving, and refinement Undertake final test runs to commission systems.
- Review each part of the process of design, fabrication and assembly, and operation, against established criteria, including accuracy, consistency, time and cost.
- Ensure that all aspects of a design stage meet the required industry standards.
- Finalize and present portfolios to clients, the portfolios to include all essential documentation required in business transactions.
- Present mobile robots and portfolios to clients and respond to questions

36. Renewable Energy

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: The Renewable Energy Technician's environment is challenging, requiring both technical and nontechnical skills. Working indoors and outdoors, they can face adverse conditions including heights, inclement weather, and remote locations, requiring close attention to health and safety legislation. Furthermore, technicians must have the strength to lift heavy equipment and the manual dexterity to handle power tools. These challenges relate particularly, but not entirely, to the installation, commissioning, and maintenance of the structures and equipment for generating and collecting energy sources.

Currently, at the early stages of renewable energy supply, Renewable Energy Technicians tend to have experience and skills in one or two forms of renewable energy. However, as technology and supply grow, their role and focus will broaden to follow consumer choice and demand based on location, availability, need, and price. The ability to grow technically and professionally, in line with the development of the sector, will mark out the future exceptional Renewable Energy Technician.

Competitor needs to know and understand:

- Select and install equipment and cable lines supplied drawings and documentation.
- Install ducting and cable systems on different surfaces according to manufacturers' instructions and current industry standards
- Select and install single and double insulated cables inside ducts, conduits, and flexible conduits
- Install and securely fix double insulated cables onto cable ladders, cable trays, and different surfaces, according to manufacturers' instructions and current industry standards
- Install metal and plastic ducting (trunking): accurately measure and cut duct at specified lengths/angles; and assemble without distortion to joints and to specified tolerances
- Assemble different termination adaptors, including cable glands onto ducts and securely connect ducts of different types to surfaces Install metal and plastic conduits/flexible conduits and attach securely onto surfaces, maintaining even radius bends, without distortion to conduits
- Choose the correct termination adapters used for entry of conduits into boxes, boards, and ducts Install and securely attach different types of cable ladder and cable tray to surfaces
- Connect equipment as per provided instructions and current industry standards and regulations, and including structured cabling systems
- Set installations to fully functioning and ensure operators can safely, effectively, and efficiently perform required functions to meet customer/employer satisfaction
- Set installations to fully functioning according to design parameters
- Advise and assist customers for proper operation and maintenance procedures
- Compile test results data and complete detailed commissioning reports, including recommendations on optimization.

37. Robot Systems Integration

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 2

About the Skill: The robot system integrator must be aware of technological developments in the manufacturing process, control systems, multi-articulated arm, and the evolution of regulations for robotization. Preliminary study, implementation, electrical connection for power and other automated systems, integration of peripheral equipment, and programming, as well as documentation, maintenance, and troubleshooting, are all essential tasks.

Across the globe, small and medium-sized enterprises (SMEs) outnumber large corporations. Collectively, they employ more people. SMEs represent the majority of businesses that have yet to realize the advantages of automation and robotics, as the big companies like the automobile industry have already done. SMEs can automate by investing in "custom" or "hard" automation, where the automation is designed and built for a specific purpose, or in flexible robot systems. Robot automation offers advantages of increased flexibility for meeting changing production requirements typically found in SMEs as well as lower investment through the use of standard industrial robots.

Competitor needs to know and understand:

- Develop diagrams or flow charts of systems operations
- Write, analyse, review and rewrite programs, using flow charts and diagrams
- Create application software programs that are easy to document, understand and maintain
- Conduct trial runs of programs and software applications to ensure they will produce the desired robot and cell performance
- Write, update, and maintain computer programs or software packages to handle specific jobs
- Optimize robot motion performance and I/O handling to minimize cycle time/maximize throughput while retaining reliable operation
- Correct errors by making appropriate changes and rechecking the program to ensure that the desired results are produced
- Consult with other personnel to identify problems and suggest changes.
- Implement new additional software and hardware options based on standard functionality.
- Investigate whether the robot and its peripheral equipment are responding to the programs' instructions.
- Revise, repair or expand existing programs to increase operational efficiency or adapt to new requirements
- Repair or replace components as required
- Develop Human-Machine-Interface (HMI) applications for the users of the robot system, using HTML or other web technologies
- Advise on maintenance regimes to maximize efficiency and minimize disruption

38. Water Technology

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill: Water Supply Technicians work in local water supply facilities and industrial water treatment plants. They carry out their work independently based on technical documents, rules, and legal requirements. Water Supply Technicians collect information, plan, and coordinate their own work. They document their work and take measures to ensure quality assurance, safety, health, and environmental protection. They may work in large or small facilities for processing drinking water, performing a range of technical duties or management roles in the plants.

Wastewater Technicians work within sewer networks, for wastewater and sludge treatment in local or industrial wastewater treatment plants. As with Water Supply Technicians, they carry out their work independently based on technical documents, regulations, and legal requirements. They acquire information, plan, and coordinate their work. They document their work and take measures to ensure quality assurance, safety, good health, and environmental protection at work. They may be electro-technically qualified personnel. They may work in local or industrial wastewater treatment facilities in a wide range of technical roles, or as the manager.

Competitor needs to know and understand:

- Prepare any kind of chemical reactants or solutions
- Execute analytical measurement using the proper glassware, equipment, and instrument, according to specific assay protocols
- Clean and calibrate equipment and instruments before starting an assay protocol
- Take samples, including their preservation and pre-treatment
- Select and use laboratory equipment according to their function
- Follow chemical and biological analysis protocols and quality
- Clean and store the equipment and instruments used
- Estimate the concentration of unknown samples, using proper analytical methods, protocols, and statistical analysis
- Document results/findings Provide information about water or wastewater quality, in order to identify any kind of problem within the water or wastewater treatment steps
- Acquire information about water or wastewater quality, in order to identify and execute preventative or corrective actions along the treatment steps
- Provide information about water or wastewater quality in order to fulfil laws and regulations, aiming to keep the population safe and healthy

39. Welding

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill: A welder prepares, assembles and joins a wide range of metals and metal alloys using various welding processes including manual metal arc welding, shielded metal arc welding, metal arc gas shielded welding, gas metal arc welding, tungsten arc gas shielded welding, gas tungsten arc welding, and flux cored arc welding. A welder will use mainly processes where the heat utilized for welding will be an electric arc to join a range of materials including the commonly joined and fabricated materials – carbon steel, stainless steels, aluminium and copper and their associated alloys. They must be able to select the correct equipment, process variables, and welding technique, depending upon the material being joined.

Welders may use thermal cutting processes and should be able to identify the correct preparation for joining as applied to the type, thickness and intended use of the joint. They use grinding and cutting equipment to prepare welded joints. Modern methods of joining, as well as those noted above, include mechanized processes such as submerged arc, plasma arc, stud welding, and laser welding.

Competitor needs to know and understand:

- Make welded joints in relation to international specifications
- Interpret welding terminology to complete task to specification
- Perform welding of carbon steel material in all positions (except vertical down) on pipe and plates deposit single sided full penetration root pass welds Deposit full penetration butt and fillet welds on pipe and plate.
- Produce welds to meet drawing and legislative specifications
- Recognize weld defects and take appropriate action to rectify them
- Utilize correct techniques to ensure weld metal cleanliness is maintained
- Dress welds using wire brushes, scrapers, chisels, etc.
- Check completed work against drawing requirements to reflect accuracy, square and flatness where necessary
- Carry out basic non-destructive testing and be familiar with more advanced testing methods
- Complete pressure vessels capable of withstanding hydrostatic pressure testing

40. Industrial Design Technology

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill: Industrial design technology combines two disciplines: design, and engineering, in order to innovate with success as measured by the customer's response and the producer's viability and profit. It is essentially disruptive to current ways of doing and making things. This means that the industrial designer must stay constantly alert to new materials, technologies, markets, and consumer demand and benefit.

In summary: the sequence of steps, starting with market research, ideas development, and design, before physically making and testing, often many times, distinguishes industrial design from craftbased design. This is a very important difference to the process of the craft-based designer, whose creativity is embedded in the act of making. Good industrial design technicians respect the importance of inspiration and ideation as a separate set of activities, before testing, improvement, and manufacture.

Competitor needs to know and understand:

- Research production specifications, costs, production materials, and manufacturing methods
- Provide cost estimates and itemized production requirements.
- Build models, patterns, or templates
- Fabricate models or samples in a range of materials, using hand and power tools
- Monitor processes, materials, and surroundings to detect or assess problems
- Collect and process information by compiling, categorizing, calculating, and verifying information and data
- Select and use suitable and robust testing equipment, tools, methods, and techniques
- Analyse and evaluate information to determine compliance with standards
- Estimate or quantify sizes, numbers, or amounts, of items relevant to production Determine time, costs, resources, or materials needed for production Present designs and reports to clients or managers for approval Raise and discuss the needs for and benefits of modification Techniques for optimizing manufacture and distribution

41. Bakery

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill The baker is a highly skilled professional, with high level of knowledge about food and nutrition, who produces a wide range of bread and pastry items.

The baker produces all varieties of fresh and tasty bakery products, made of any kind of grains. Different types of fermentation and other processes will be used to turn the raw material in to sweet or savoury products. For example, wheat bread, rye bread, artisan bread, enriched breads, laminated products, and ingredients to flavour their bakery products.

These items will appear in a large number of bakeries. Bakers may also produce elaborate displays of decorative breads using creative skills and knowledge.

 A high degree of specialist knowledge and skill is required. Bakers have undergone years of training in order for them to develop the level of skill required and a good understanding of sustainability. Bakers will be proficient in a wide range of specialist techniques and technology to develop and create a variety of bakery products. An artistic talent and artisan skills with the attention to detail are required, alongside the ability to work effectively and economically in order to achieve outstanding results within set timeframes.

Competitor needs to know and understand:

- The factors that impact on the performance of yeast
- The use of yeast in its various forms
- The stages in the bread producing process
- The range of large and small bread products
- The range and characteristics of bread products from around the world
- The importance of appearance, texture, and taste
- The influence of different working techniques to produce bakery products
- The importance of the dough temperature
- The importance of developing gluten structure in wheat doughs
- How the different doughs must be handled and stored
- The science of fermentation such as types of fermentation, substances involved in the fermentation process, and acidification

42. Beauty Therapy

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill A beauty therapist generally works in the commercial sector, offering specialist services, treatments and advice for the skin, body care, massage, and make-up of individual clients. There is a direct relationship between the nature and quality of the service required, and the payment made by the client. Therefore, the beauty therapist has a continuing responsibility to work professionally and interactively with the client in order to give satisfaction and thus maintain and grow the business. Beauty therapy is closely associated with other parts of the service sector, such as hairdressing, fashion, and media and with the many products and services that support it, normally for commercial purposes.

Beauty therapy also has an important therapeutic role in supporting individual's self-esteem and confidence. It may help to ameliorate the effects of illness and can aid recovery.

Competitor needs to know and understand:

- The methods of client and station preparation for all facial treatments
- The anatomy, physiology and dermatology of the face and head
- Contra indications and actions, plus how to modify treatments
- The importance of following safety procedures in using and maintaining electrical instruments
- Different skin types and conditions and how they should be treated
- The problems relating to the use of chemicals near the eyes
- The different face, eye, and lip shapes
- The different types and colours of make-up products needed to achieve desired outcomes
- The different Eyebrow treatments and trends
- The different Eyelash treatments and trends
- Current trends and fashions in make-up
- The importance of being able to solve problems independently
- The importance of maintaining environmentally sustainable practices
- Provide client services in a professional, safe, and hygienic manner
- Understand and follow manufacturers' instructions
- Identify correct methods of client preparation for facial treatments, taking into consideration client comfort and modesty

43. Cooking

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill The professional chef can work in a wide range of establishments including high-class and casual restaurants, hotels, welfare caterings such as hospitals and residential homes, theme parks, airlines, ships, clubs, retail HMR and Food To-Go, Fast Food outlets, and industrial canteens; providing catering services to both guests and staff. The range of skills and customer expectations will vary according to the workplace. There is also a direct relationship between the nature and quality of the service provided and the payment made by the customer.

The professional chef can also deliver different styles of dining such as fine dining, banqueting, casual dining, cocktail dining, canteen and take-away dining, as well as different styles of food service including plated, a la carte, and set menu service, buffet self-service, silver service, canteen counter service, and breakfast service. As well as the skill of cooking, the role of a chef will also demand further skills that relate to cooking in a commercial setting and therefore working towards a budget or expected profit margin. These skills include menu compilation, food costing, purchasing, storage, utilization of food commodities and minimizing wastage, as well as the control, work/time organization, planning, and communication required in managing a kitchen brigadecan.

Competitor needs to know and understand:

- The importance of using environmentally sustainable and locally sourced meat, poultry, game, offal, seafood, eggs, dairy, fruit, and vegetables currently in season
- The importance of ordering and preparing only what is needed to produce sufficient output for a menu
- The structure of a carcass and whole poultry or game bird
- Methods of butchering and preparing meat for cooking with minimal wastage
- The range of meats, game, and poultry and their best uses
- Cuts of meat, poultry and game commonly used in cookery and the re-use of wastage and trimmings
- The range of offal and their suitable uses
- The range of fish and shellfish available and their suitable uses
- Cuts of fish used in cookery, and the re-use of wastage and trimmings
- Methods of preparing fish and shellfish for cooking
- Methods of preparing and using eggs
- The range of dairy products available and their suitable uses and re-uses
- The range of fruits, salad ingredients, and vegetables available, their methods of preparation and the re-use of wastage and trimmings

44. Hairdressing

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill A hairdresser generally works in the commercial sector, offering a range of services and treatments to the hair for individual clients. There is a direct relationship between the nature and quality of the service required, and the payment made by the client. Therefore, the hairdresser has a continuing responsibility to work professionally and interactively with the client in order to give satisfaction and thus maintain and grow the business. Hairdressing is closely associated with other parts of the service sector, and with the many products that support it, normally for commercial purposes.

 Hairdressing also has an important therapeutic role in supporting individuals' self- esteem and confidence. It also helps to relieve the effects of illness, and can aid recovery

Competitor needs to know and understand:

- Analyse the hair for its capacity to respond to the application of chemicals without adverse effects
- Recognize and acknowledge the situations where colouring/ decolouring and bleaching is not an option
- Assess the feasibility of clients' wishes or brief and offer feedback and advice
- Settle clients and protect the clothes, body, and skin throughout the treatments
- Administer skin and allergy tests as required, and factor in the results
- Select and use chemicals and products to lighten, darken, add, and remove colour, including for colour correction
- Take account of the available time in determining the treatments
- Determine the number and range of colours and bleaching treatments to complement each other, the style and the cut
- Apply colouring/decolouring and bleaching products through the process of selection, mixing and preparation, application, development, testing, appraisal, and removal, in conformity with manufacturers' instructions

45. Health and Social Care

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill A health and social care practitioner offers a range of support to individual clients and their family and has a continuing responsibility to work professionally and interactively with the client in order to ensure their holistic care needs are met. Whilst the health and social care practitioner may work directly for the client they are normally employed by an organization within the health and social care sector. Health and social care is closely associated with the medical profession.

The health and social care practitioner works in diverse environments, including the homes of clients, hospitals, community day care, and residential and nursing homes. He or she manages health, physical, and psychosocial well-being, support of growth and development, caring and rehabilitation. The support provided is based on assessing planning, delivering, and evaluating a care programme.

 Work organization and self-management, communication and interpersonal skills, problem solving, innovation and creativity, the ability to understand, empathize and work with clients to improve the quality of their life, are the universal attributes of the outstanding practitioner.

Competitor needs to know and understand:

- The importance of establishing and maintaining client confidence
- Rules and regulations for confidentiality and privacy related to the delivery of care
- Coaching styles and techniques to support client recovery, growth, development and health education
- Negotiation methods within the scope of health promotion
- Techniques for resolving misunderstandings and conflicts
- Techniques and ways to communicate with clients who have disabilities in communication, e.g. dementia and hearing problems
- The importance of accurately recording information
- Professional interaction between practitioner and client and practitioner with other health personnel
- The roles, competences, and requirements of colleagues and professionals involved in the care of the client
- The importance of building and maintaining productive working relationships

46. Hotel Reception

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill Globalization, social and demographic changes, the evolution in transport and the rise of new technologies are decisive factors in the evolution of the tourism industry and travel for business. Travel and tourism therefore plays an important role in social and economic growth throughout the world. The industry needs to take into consideration the importance of sustainability and global environment.

Hotels of many types, sizes and ownership are an essential part in this industry, providing accommodation and associated services to guests from across the globe. They may be part of international hotel chains which market their services on consistency and familiarity for the frequent or regular guest. Alternatively, they may promote distinct characteristics based on their locality, history, architecture, and targeted clientele. Quality and price generally go together; for reserving accommodation, an international rating system of stars can provide a reasonable indication of what might be expected within the range of prices associated with a locality.

The role of Hotel Receptionist is key to every hotel establishment. At the hotel's reception area guests receive their first impression of the hotel and therefore of their probable hotel experience. This is where the primary communication with the hotel staff is established. The quality, courtesy and promptness of service can make a great difference, positively or negatively, to the guest's relationship with the hotel and their satisfaction during their stay. This in turn affects the hotel's reputation and repeat business.

Competitor needs to know and understand:

- The importance of effective communications with guests and other departments (team members, managers)
- Procedures and guidance for communicating with guests and other departments of the hotel
- Barriers to effective communication and how to overcome them using creative problem-solving techniques
- Hotels' policies regarding uniform and personal appearance
- The importance of personal presentation
- The importance of hotel reception areas in creating a first impression
- The use of correct titles and protocols
- The links between hotel reception functions and other departments
- The role of reception as the hub for communications between departments
- The difference in cultures, religions, genders, ethnicities
- The importance of public relations
- The role and importance of the new technologies in communication
- The importance of verbal and non-verbal communication

47. Patisserie and Confectionery

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill The Pâtisserie and Confectionery trades have highly skilled professionals who produce a wide range of intricate and predominantly sweet items. They produce various confectionery products such as hand finished chocolates, candies, and miniatures for service in hotels and restaurants or for retail in specialist shops and outlets. Pâtissiers/Confectioners produce a full range of hot and cold desserts, cakes, biscuits, and iced products for service in luxury/boutique hotels, restaurants, and pastry shops for retail sale. They may also produce elaborate display pieces using chocolate, sugar, ice, marzipan, or other decorative materials and ingredients. Some may specialize in producing decorated and themed cakes for special events.

A high degree of specialist knowledge and skill is required.

 Pâtissiers/Confectioners will have undergone years of training in order for them to develop the levels of skill required. They are proficient in a wide range of specialist techniques to produce and decorate confectionery and sweet items. An artistic talent and gastronomic flair are required alongside the ability to work effectively and economically to achieve outstanding results within set timeframes, budgets and dietary constraints.

 In some circumstances the Pâtissiers/Confectioners will need to work directly with clients, so good customer service skills are required alongside the ability to discuss a client's needs and to offer advice and guidance. The ability to work on their own initiative is essential.

Competitor needs to know and understand:

- Basic principles involved in accurately combining ingredients to achieve optimum results and troubleshooting when results are not as planned.
- The manipulation of raw materials through production techniques Range of ingredients used in pastry work and confectionery including seasons, availability, costs, storage, and use
- Colour applications, taste combinations and texture co-ordination
- Finesse and artistic appreciation in finishing products
- The importance of minimization of waste and of sustainability and respect for all ingredients
- The importance of effective teamwork and effective communication within the team and with customers
- Responsiveness to unexpected situations and demands
- Planning for good time managemen

48. Restaurant Service

Eligibility Criteria – Competitor must be born on or after 1ˢᵗ January 2002

Number of competitors - 1

About the Skill The restaurant service practitioner provides high quality food and drink service to guests. A food service practitioner generally works in the commercial sector, offering a range of services to customers. There is a direct relationship between the nature and quality of the service required and the payment made by the guest. Therefore, the practitioner has a continuing responsibility to work professionally and interactively with the guest in order to give satisfaction and thus maintain and grow the business. The

practitioner is likely to work in a hotel or restaurant. However, the size, nature and quality of these establishments can vary enormously from internationally renowned hotel chains to smaller, privately-owned, more intimate restaurants. The quality and level of service provided and expected by guests will also vary. The styles of service will be dependent on the targeted customer and can range from simple self-service operations to elaborate service styles where dishes can be prepared at the guests' table. In its more elaborate form, food, and drink service can be likened to a form of theatre.

High quality food and drink service requires the practitioner to have extensive knowledge of international cuisine, beverages, and wines. They must have a complete command of accepted serving rules and must know the preparation of speciality dishes and drinks at the guests' table or in the bar. The food server is the most important person in attending to the guests and providing the meal experience. Skill and resourcefulness, good manners, excellent interaction with guests, aplomb, excellent personal and food hygiene practices, smart appearance, and practical ability are all essential.

Competitor needs to know and understand:

- The history of food service and advanced service techniques
- National and international food and beverage service styles and techniques
- When and in what circumstances various food service techniques would be used
- Ingredients, method of cookery, presentation, and service for all dishes on the menu, sufficient to advise guests
- Current and future trends in restaurant service
- A range of highly specialized and international cuisines and their styles of restaurant service
- Manage the service cycle for different styles of service
- Use specialist equipment correctly and safely
- Correct covers as required for dishes to be served

49. Autobody Repair

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill Autobody repairers realign both the structure and the panelling of both light and heavy-duty vehicles after they have been involved in collisions. This can often be a complex process as each collision will present different degrees and directions of damage. The repaired vehicle must conform to the stringent specifications established by the vehicle manufacturer and meet both their tolerances and Their safety specifications. An autobody repairer needs to be familiar with MET (mechanical/electrical/trim) components and their function as well as the specific and often complex safety restraint systems (SRS) fitted to modern vehicles. The autobody repairer returns the vehicle to a condition where it is ready for refinishing.

An autobody repairer works in a facility dedicated to repair and is equipped with the machinery and equipment suitable to repair a wide variety of modern passenger cars. An autobody repairer's work is often divided between major and minor collision damage; however, skills in both areas may often be used on the same vehicle. In a major collision repair the autobody repairer will mount the vehicle onto a specialized body jig with which he or she can diagnose the direction and extent of the misalignment to the car body structure. He or she then attaches heavy hydraulic pulling equipment to the body and uses this pulling force to reverse the damaging force.

Competitor needs to know and understand:

- The importance of following manufacturers'recommended repair methods and warranty procedures
- Suitable methods of identifying fixing types weld positions and weld types
- Methods of safely and cleanly removing fastenings to free damaged panels for replacement
- Use, setting and maintenance of pneumatic tools used for panel removal and replacement
- Principles of operation and adjustment of welding systems used for panel replacement including MAGS, Resistance spot and MIG brazing
- Processes and procedures for preparing replacement panel work and panel fixing positions
- The importance of realigning structural parts and assemblies to reinstate vehicle integrity and driving characteristics
- Principles of reinstating suitable corrosion protection to replaced parts
- The importance of working within agreed time schedules

50. Automobile Technology

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill The Light Vehicle Automotive Technician will work in the service, diagnosis and repair sector of light vehicles in either independent workshops or the vehicle manufacturers' affiliated workshops.

The independent workshops will work on a range of vehicles that are usually more than three years old, with the manufacturers' affiliated workshops dedicated to working on their current range of vehicles.

In addition to learning within the workplace, the Light Vehicle Automotive Technician may be trained by government training organizations, independent training organizations, or vehicle manufacturers' training departments.

The Light Vehicle Automotive Technician will be able to service, diagnose, and repair a range of light vehicles using service and repair information, and a wide range of diagnostic and service tools. Success is measured in productivity, efficiency, correct diagnosis, repair, and repeat business.

The Light Vehicle sector is rapidly changing. This is being influenced by the wider economy, technological advances, and environmental concerns. The Light Vehicle Automotive Technician needs to have stamina, coordination, and kinaesthetic skills, and to keep themselves abreast of the continuous changes in the industry with an understanding of light vehicle systems and their applications.

Competitor needs to know and understand:

- The principles and applications of repair and overhaul procedures
- The use and operation of relevant tools, special tools and equipment
- The repair methods and procedures of the following systems:
- Spark ignition engine management
- Compression ignition engine management
- Engine mechanical
- Cooling
- Hybrid/electric vehicles
- Forced induction

51. Car Painting

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill Car painters (refinishers) are responsible for reinstating the pre-accident paint finish to cars after the structure and/or the panels have been repaired or replaced. They may also be asked to completely repaint a whole vehicle either to change its colour or reinstate its newness. Car painters may also become involved in matching colours to an original colour no longer available or to colours that prove difficult to match. A car painter must match the colour, shade, and texture of the adjoining panels that are not being painted.

Car painters can work in various work environments from an autobody repair shop to an aircraft hangar, dependent upon what vehicle or transport system they are painting. They work to apply paints inside an enclosed spray booth/oven in order to protect the environment from harmful products.

Car painters prepare panels or vehicles to receive paint. They may carry out minor panel repairs and apply undercoats, colour coats, and clear sealant coats which provide the high gloss levels required. They may be required to identify a colour code using various methods, mix the correct amount of colour to pre-determined formulae, and spray test cards to test the suitability of this colour match to the original colour and shade

Competitor needs to know and understand:

- Retrieve colour and application information from printed and electronic sources
- Use appropriate equipment and technology to access colour formulations (computer based and photo spectrometer)
- Use colour swatches/chips to identify the correct colour and shade and variant
- Apply the electronic information to mix required colour and shade
- Follow the correct procedure to spray out a test paint card and compare with the original standard, adjust as necessary
- Mix and apply straight/solid colours, metallic, pearls, multi-stage effect colours, fine metallics and special effect colours
- Apply base/ground coats to metal and non-metal parts
- Follow the Original Engineering Manufacturer (OEM) or paint manufacturer's (Technical Data Sheet – TDS) recommendations
- Measure materials to minimize the environmental and cost factors

52. Logistics & Freight Forwarding

Eligibility Criteria – Competitor must be born on or after 1st January 2002

Number of competitors - 1

About the Skill Logistics services are focused on International Transportations and Services. The Logistician / Freight Forwarder manages the movement of goods from one location to another on behalf of a customer. They generally do this on a commercial basis and within a strong legal and financial framework. The modes of transport may include road, rail, air or sea, or a combination of these. The Logistician/Freight Forwarder requires specific expertise to ensure that all necessary documentation conforms to the requirements of customs, insurance and the law (IATA Conventions, Maritime Law, ICC Codes, and any international regulations governing international transportation).

This work role may be part of a large or small logistics organization with the main purpose of moving freight on behalf of other organizations and individuals. It may also be situated within a national or international supply chain.

The work environment for the Logistician/Freight Forwarder is normally an office equipped with ITC services. The scope of the role will be determined by the size of the organization; generally, the larger the organization the more specialized the role will be. Specialist functions may also be outsourced or subcontracted to agents. However broad or narrow the role, its core is the preparation of quotations, the processing of orders and the calculation of costs and price. The Logistician/Freight Forwarder deals with written and telephone correspondence, sometimes using two or more languages, normally including English. They also prepare delivery notes and deal with complaints. In smaller, less compartmentalized organizations the Logistician/Freight Forwarder may also need to coordinate transport and warehousing. Increasingly this role operates in a paperless environment.

Competitor needs to know and understand:

- Use the framework of the law:
- Communicate with the customer verbally
- Communicate with the customer in writing
- Maintain clarity both ways during interactions
- provide the customer with confidence and value for money within the available flexibilities
- Prepare the customer for associated risks and uncertainty where these apply
- Acquire new customers and business through visits, presentations and value-added services

Exhibition Skills

53. Garments and Leather Accessories Making

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors – 1

About the Skill - Leather garment & accessories making skills involve the expertise needed to design and create a wide range of clothing items using leather as the primary material. These skills encompass Designing, Pattern Making, Cutting, Stitching, and Finishing techniques specific to leather garments. Professionals in this field must be adept at working with different types of leather, including genuine and synthetic varieties. Participation in programs such as India Skills 2023 for leather garment making helps showcase and advance these skills, contributing to the growth and innovation within the Indian leather and fashion industry.

From working safely and tidily with resilience and endurance through to exceptional planning and scheduling, concentration, precision, accuracy, and attention to detail to achieve an excellent finish every step in the process matters and mistakes are largely irreversible and very costly. With the international mobility of people, the Leather garment & accessories faces rapidly expanding opportunities and challenges. For the talented Leather garment & accessories there are many commercial and international opportunities; however, these carry with them the need to understand and work with diverse cultures and trends. The diversity of skills associated with Leather garment & accessories Making is therefore likely to expand.

Competitor must have to:

- Design the project according to the provided drawings/models.
- Participants must create a pattern to create a garment that fits perfectly.
- Participants must create a pattern larger than 10 inches.
- Participants will be able to cut, paste, sew, and fuse approved patterns using provided raw materials and equipment.
- Participants must wear PPE during this process
- Finish your products by finishing garments and accessories.
- Keep the work area suitable for inspection and follow-up work.

54. Shoe Making

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors – 1

About the Skill - Shoe making Skill refers to the expertise required in crafting various types of footwear. These skills encompass tasks like Designing, Pattern Making, Material Selection, Stitching, Sole Attachment, and Finishing. Proficiency in shoe making involves a deep understanding of materials, tools, and techniques to create high-quality and stylish footwear. This includes mastery of different styles and awareness of sustainable practices. Participation in India Skills 2023 for shoe making promotes the development of these skills, contributing to the growth of the Indian footwear industry and the skilled workforce.

From working safely and tidily with resilience and endurance through to exceptional planning and scheduling, concentration, precision, accuracy, and attention to detail to achieve an excellent finish every step in the process matters and mistakes are largely irreversible and very costly. With the international mobility of people, the Shoe Makers faces rapidly expanding opportunities and challenges. For the talented Shoe Makers there are many commercial and international opportunities; however, these carry with them the need to understand and work with diverse cultures and trends. The diversity of skills associated with Shoe Making is therefore likely to expand.

Competitor must have to:

- Design a projects in accordance with drawings/model provided
- Mask the tape on the last and convert the design to last.
- Create the patterns from the last or from a standard pattern
- Construct the upper using materials and tools available using patterns
- Finish the upper
- Construct the sole from the raw material as fit with the last and model of shoe
- Attach the sole with the upper and finish the shoe
- Leave work areas in a suitable condition for inspection and subsequent work

55. Woven Fabric Design Development - CAD

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors – 1

About the Skill - Woven fabric design development using Computer-Aided Design (CAD) software is a modern and efficient way to create intricate and customized woven fabric patterns. CAD software provides designers with powerful tools to design, modify, and visualize woven fabric patterns before actual weaving takes place. Some popular CAD software for this purpose includes NedGraphics, Pointcarre, Textronics, Digibunai, Arahne, and others.

Competitors must have to:

- Open a new project and set the parameters for your fabric, such as repeat size, EPI, PPI, yarn count, color palette, etc.
- Use the software's tools to create the fabric pattern as per the provided specification. This may include geometric shapes, motifs, textures, and color combinations.
- Create a seamless repeat pattern as per the provided specifications.
- Create simulation and visualization of the created woven fabric pattern as per the provided specification.
- Save the design project, and export it in the necessary file format (e.g., .TIFF, .JPEG) for further use.
- Create design specification sheet, including color codes, thread counts, and other technical details, which will be crucial for the actual weaving process.

56. Textile Weaving - Handloom

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors – 1

About the Skill - Handloom weaving is a traditional method of producing fabric in which cloth is woven by hand on a manually operated loom. This method has been practiced for centuries and is still prevalent in various cultures around the world. Handloom weaving involves a series of intricate steps to create textiles of various patterns, colors, and designs.

Competitors must have to:

- Demonstrate the steps involved in setting up the handloom. This includes assembling the Heald frame, attaching the warp (lengthwise threads), and preparing the weft (crosswise threads) for weaving.
- Adjust the treadle straps as per the required shed height
- Demonstrate fundamental weave patterns, such as plain weave.
- Carry out the primary, secondary, and auxiliary weaving operations on the handloom.
- Maintain constant warp tension during weaving by adjusting the 'let-off' and 'take-up' functions as and when required
- Illustrate the method of creating patterns within the fabric by manipulating the weft threads.
- Mend the broken warp using weavers' knot to continue the weaving activity.
- Draw the mended warp yarn through the heald, reed dent as per the prescribed weave drawing order using drawing hook
- Mend the broken weft yarn to continue the weaving activity.
- Produce neat selvedge during the weaving operation.
- Carry out quality checks at specified intervals according to the specifications
- Handle materials, machinery, equipment and tools as per standard procedure
- Maintain hygienic working condition
- Collect and store the waste generated during the weaving operation at the designated areas.
- Leave work areas in a suitable condition for inspection and subsequent work

57. Yoga

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill - A Yoga professional is responsible to demonstrate the yoga postures, asanas, pranayamas, meditation and relaxation techniques for the clients. The individual must exhibit knowledge of the principles and practices of basic Yogic techniques for holistic wellbeing. This job requires an individual to demonstrate a range of basic asanas for holistic wellbeing in a safe and hygienic working environment. The individual must exhibit a pleasant personality and proficiency in interpersonal and communication skills, conduct yoga sessions in individual or group settings for asana, pranayamas, relaxation techniques, loosening asanas, meditation, etc. for holistic well-being in accordance with the approved organizations standards of performance and sequence of services.

Competitors must have to:

- Standing Purnanatarajasana / Natrajasana, Paschimottanasana, Baddha/Ardhamatsyendrasana
- Parivrita Janu Shirsasana, Samakonasana, Kakasana/Bakasana, Chakrasana, Shalabhasana
- Nadi Shodhan, Bhastrika, Bhramari, Sheetali, Sheetkari, Surya Bedha, Chandra Bedha
- Yujir Yoge, Samathvam Yoga Uchyatte, Yoga Karmasu Kaushalam, 3 bodies, 5 koshas, Meditation

58. Costume Design

Eligibility Criteria – Competitor must be born on or after 1st January 1999

Number of Competitors – 1

About the Skill - Costume Designers designs a complete ensemble for a drama/television artist or a film character. The role of the costume designer is to create the characters' outfits or costumes and balance the scenes with texture and colour, etc. They may also collaborate with a hair stylist, wig master, or makeup artist to create the look. Costume Designers typically seek to enhance a character's personality, and to create an evolving plot of colours, changing social status, or period through the visual design of garments and accessories and make-up. The designer must possess strong artistic capabilities and a thorough knowledge of pattern development, draping, drafting, textiles and fashion history. The designer must understand historical costumes and the movement style and poise that period dress may require

Competitor must have to:
- Design skills
- Knowledge of Pattern Making and Garment Construction
- Knowledge of Historic Costumes
- Understands the requirement of the scene/period for which costume is required
- Design costume as per size
- Prepare template / pattern with necessary details
- Cut and sew the garment
- Finish the costume with accessories and embellishments

Modules:
- Sketching
- Pattern Making and Garment Construction
- Embellishment
- Accessories

59. Drone Film Making

Eligibility Criteria – Competitor must be born on or after 1st January 1996

Number of competitors - 1

About the Skill - Drone flying has become an indispensable skill in the realm of filmmaking, revolutionising the way filmmakers capture stunning visuals and tell compelling stories. The ability to skilfully operate a drone opens up a myriad of creative possibilities, allowing filmmakers to achieve shotsthat were once challenging or impossible.

 Here are some key aspects of the skill of drone flying for filmmaking:

1. Aerial Cinematography:

Dynamic Perspectives: Drones provide filmmakers with the ability to capture dynamic and breathtaking aerial perspectives, adding a new dimension to storytelling.

Seamless Transitions: Smooth transitions between ground and aerial shots can be achieved, enhancing the overall visual flow of a film.

2. Precision Control:

Flight Stability: Mastering the control of a drone is crucial for obtaining stable shots. This involves understanding how to navigate the drone in various weather conditions and environments.

Accurate Framing: Precise control allows filmmakers to frame shots with precision, ensuring that the subject or landscape is captured exactly as intended.

3. Technical Proficiency:

Camera Settings: A skilled drone pilot understands the technicalities of camera settings, such as aperture, shutter speed, and ISO, to achieve optimal image quality.

Real-time Monitoring: Monitoring the live feed from the drone's camera helps in making on-the-fly adjustments, ensuring the desired composition is maintained.

4. Legal and Safety Compliance:

Regulatory Awareness: Drone pilots must be well-versed in local regulations governing drone flights. Compliance with airspace restrictions and permits is essential for legal and safe operations.

Risk Management: Understanding potential risks and mitigating them is part of the skill set. This includesanticipating environmental challenges and ensuring the safety of both the equipment and people on the ground.

5. Creative Storytelling:
Enhanced Narratives: Drone shots can be used to create visually engaging sequences that enhance the narrative of a film. This skill involves knowing when and how to incorporate aerial footage to evoke specific emotions or convey a particular message.

Artistic Vision: A skilled drone pilot doesn't just capture images; they contribute to the overall artistic vision of the film, collaborating with directors and cinematographers to achieve a cohesive visual language.

The skill of drone flying for filmmaking extends beyond mere technical proficiency. It encompasses a combination of technical expertise, creative vision, and adherence to legal and safety standards. As drones continue to play a pivotal role in the film industry, the mastery of this skill becomes increasingly valuable for filmmakers aiming to push the boundaries of visual storytelling.

Competitor must comply with the following:

• Eligibility: All drone pilots can only use micro drones under 350g.

• Safety: Safety is paramount. All drone flights must adhere to local aviation regulations and safety guidelines. Footage of sensitive areas like Defense, Dams, Govt. buildings will not be accepted.

• Storytelling: Aerial films are often judged not just on technical skills but also on storytelling and creative expression. Competitors may need to adhere to a specific theme or subject matter for their films.

• Editing and Post-Production: Competitors may be required to edit their aerial footage into a final film for submission as per Rules.

• Copyright and Music: Competitors must ensure they have the rights to use any music or copyrightedmaterial in their films and provide proper attribution if required.

Regional Filmmaking

ChallengeCategories:

• Professional: Team Leaders who have made 3 or more short films in the past

• Amateur: Open for Everyone

Rules:

• The Drone Filmmaking Challenge is open for participants from across India

• Participants need to submit their film through the upload link provided.

• The entire film must be shot within the filmmaking 1 year period and the team needs to provide proofof the same as and when needed.

• The finished film must be a maximum of 3 minutes in duration — not including end credits.

• Genres will be provided. Teams are free to choose any one genre.

• Film can be in any language of your comfort. All films, irrespective of their language, should have English subtitles. The subtitles must be provided separately in a properly formatted SRT file (Use this tool – aegisub.org or any other free tool to create Subtitles).

• All category, teams have to use under 350g drones with at least 1080p video capture. The film shouldbe edited on computers only.

- Teams are encouraged to work with local composers and musicians to write and compose music for the films. Teams can use pre-recorded music if they have the rights to it. No Copyrighted tracks can be used.

- Teams cannot use stock footage or footage created earlier. Photographs can be used in a film, only if the team has the rights to use them.

- End credits at the end of each film are limited to a maximum of 60 seconds. These 60 seconds are overand above the maximum length of 3 minutes.

- The teams should use the 'Opening Slide' ie. Drone Film Festival (DFF) Title Slate provided to the team leaders along with the theme. Opening titles are considered to be part of the film, and hence count in the total duration of your film.

- Order:

    - - DFF Title Slate (provided to you at the beginning of the challenge)

    - 1 second of blank

    - 3 seconds of black slate with Film Name

    - Your movie

- Along with uploading the film, the teams are required to sign and submit the Creator's agreement online which can be downloaded from the micro site.

- The final video must be uploaded in MP4/MOV/MPEG-4 format. The uploaded video should be in 1080p and strictly below 2 GB. All the file names should be your team name + Film name.

- For being eligible for the challenge, the film must not contain any material that hurts or violates someone's personal rights, religious beliefs, incites violence or creates derogatory remarks about someone's sexuality or belief. The film must not invade privacy or other rights of a person, firm or entity.

- DFF team may add to or amend these rules at any time prior to the beginning of the filmmaking period, without informing the participants.

- DFF and Project parties, in their sole discretion, can disqualify any film deemed to be inappropriate or otherwise non-compliant.

60. Augmented Reality/Virtual Reality

Eligibility Criteria - Competitor must be born on or after 1st January 1999

Number of competitors - 1

About the Skill - This Competition is a Lens creation challenge presented by Snap AR. This competition unleashes your creative potential using Lens studio to showcase the power of augmented reality.

1. Entrants must leverage the front or back camera to create a publicly published Lens using the power of Lens Studio to create novel, delightful, and unique experiences (each a "Project").

   Important Notes:

- Your Lens must only use public features within the Snap AR ecosystem.
- Your Len must meet the lens publishing guidelines (https://docs.snap.com/lens-studio/references/guides/publis hing/submitting /submitting-your-lens)

2. **Functionality**: The Project must be capable of being successfully installed and running consistently on Snapchat and must function as depicted in the video and/or expressed in the text description.

3. **Platforms**: A submitted Project must run on Snapchat.

4. **New & Existing**: Projects must be either newly created by the Entrant or, if the Entrant's Project existed prior to the Competition Submission Period, may use the newest features and must have documented significant changes after the start of the Competition Submission Period.

5. **Third-Party Integrations**: If a Project integrates any third-party SDK, APIs and/or data, Entrants must be authorized to use them.

6. **Testing:** The Entrant must make the Lens available free of charge and without any restriction, for testing, evaluation and use by the Sponsor, Administrator and Judges until the Judging Period ends.

Competitor must have to:

- Include a Project built with the required developer tools and meets the above Project Requirements.

- Include the Lens ID and Include the Lens name.

- Include a text description that should explain the features, functionality, and value of your Lens.

- Include a preview video of the working Lens that is less than ten seconds and not utilizing any Lens Studio models.

- Be the original work of the Submitter, be solely owned by the Submitter, and not violate the IP rights of any other person or entity.

- Access must be provided to an Entrant's working Project for judging and testing by providing a link to the Lens URL.

- Must adhere to all guidelines:

    https://docs.snap.com/lens-studio/references/guides/publishing/submissio n-guidelines

61. Prosthetic & Makeup

Eligibility Criteria - Competitor must be born on or after 1st January 1999

Number of Competitors – 1

About the Skill - The   Prosthetic and Make Up competition challenges participants to showcase their expertise in prosthetic makeup artistry. From basic to advanced techniques, competitors will create realistic characters for media and entertainment, collaborating with various professionals in the industry.

Occupational Standards (OS) - The competition is designed to reflect international best practices in technical and vocational performance. Competitors will be assessed on various sections, each assigned a percentage of the total marks, covering work organization and management, professional demeanor, client care, makeup, prosthetics, hair, feet, hands, nails, skin, and temporary hair removal.

Project Requirements:

1. Work Organization and Management - 10%
- Knowledge of health, safety, and hygiene regulations.
- Use and maintenance of tools, equipment, and electrical instruments.
- Adherence to environmental sustainability practices.

2. Professional Demeanor - 3%

- Importance of attention to detail.
- Building positive client and colleague relationships.
- Managing stress effectively and maintaining a balanced lifestyle.

3. Client Care - 7%
- Record-keeping and preforming analysis.
- Cultural sensitivity and communication skills.
- Offering aftercare advice and recommendations.

4. Make-Up - 30%
- Knowledge of facial anatomy and skin types.
- Application of makeup products for various looks.
- Historical understanding of makeup and current trends.

5. Prosthetics - 30%
- Creation of prosthetic pieces based on design briefs.
- Life casting and application of prosthetics on performers.
- Knowledge of materials, techniques, and environmental factors.

6. Hair - 12%
- Understanding different hair types and styles.
- Execution of technically demanding hairstyles.
- Application of hair ornaments and extensions.

7. Feet, Hands, and Nails - 8%
- Knowledge of nail and skin infections.
- Basic manicure and pedicure procedures.
- Application of nail art designs.

8. Skin - 2%
- Facial skin analysis and skincare techniques.
- Application of eyebrow and eyelash tinting.

9. Temporary Hair Removal - 2%
- Hair and skin type assessment.
- Correct hygienic procedures for hair removal.

Competitors must adhere to all guidelines provided by the competition, ensuring the originality of their work and compliance with Snap AR ecosystem features for evaluation. The Lens created must be publicly published on Snapchat, meeting the Lens publishing guidelines. Competitors must provide a working Project for judging and testing, adhering to all guidelines specified in the competition rules.