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India **skills**



N · S · D · C
National
Skill Development
Corporation

Transforming the skill landscape

Sample Test Project

Regional Skill Competitions - Level 3

Skill- Car Painting

Category: Transportation & Logistics

Table of Contents

A. Preface	3
B. Test Project	4
C. Marking Scheme.....	6
D. Infrastructure List.....	7
E. Instructions for candidates.....	9
F. Health, Safety, and Environment	10

SAMPLE

Section - A

A. Preface

Skill Explained:

Car painters work in various work environments from an Auto body repair shop to an aircraft hangar, 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. They can also carry out minor panel repairs and apply undercoats, colour coats, and clear sealant coats which provide the high gloss levels required.

Eligibility Criteria (for IndiaSkills 2018 and WorldSkills 2019):

Competitors born on or after 01 Jan 1997 are only eligible to attend the Competition.

Total Duration: 7:00 Hours

Task A	:	4:00 Hours
Task B	:	2:00 Hours
Task C	:	1:00 Hour

Section - B

B. Test Project

Task A – Standard Paint Application – Door Area (2 Layers)

Competitor Instruction Sheet

You have **4 Hours** to complete this task

1. Small dent on the panel will be given on the new ED coated door and competitor must repair the damage with the help of relevant Tools & equipments and fillers like polyester putty and then entire panel (Outside & Inside area) must be primed with primer surfacer and further it must be sanded well to make ready for base coat. After the preparation competitor, must apply correct Base coat and Clear coat on both the sides (outside & inside) of the panel.
2. Inside area need to mask to make sure paint are applied in the designated area only and no over spray beyond the masking line indicated.
3. Dry Film Thickness (DFT) of primer surfacer should be within the range given by Paint Supplier as per Technical data sheet (TDS).
4. Panel should be painted in the vertical position.

Task B – Spot Repair on Pre-painted panel

Competitor Instruction Sheet

You have **2 Hours** to complete this task

1. A scratch on the pre-painted panel will be given to the competitor
2. Repair the scratch from the panel using the appropriate tools
3. Apply the primer, base coat & clear coat on the panel using Spot repair technique
4. The panel should be completed within the boundary / limit indicated for the task given by the jury.
5. Dry the panel using IR lamp and polish the panel.
6. Stop and have your work judged by the Jury.

Task C – Plastic panel repair

Competitor Instruction Sheet

You have **1 Hour** to complete this task

1. A small scratch on the plastic panel / bumper will be given to the competitor
2. Repair the scratch from the panel using the appropriate tools.
3. Apply the sanding primer on the panel and sand it.
4. The panel should be completed within the boundary / limit indicated for the task given by the jury.
5. Stop and have your work judged by the Jury.

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Section – C

C. Marking Scheme

Marking Scheme: The Assessment is done by awarding points by adopting two methods, Measurement and Judgments

- Measurement - One which is measurable
- Judgment - Based on Industry expectations

Aspects are criterias which are judged for assessment.

Example-Judgment Marking

If maximum marks for Judgement criteria are 1 and if all 3 Experts (Juries) give 3 points to a candidate, the candidate will get 1 mark for that aspect. If 2 Experts give 3 and 1 Expert gives 2 points, then candidate will get $(3+3+2)/9*1 = 0.89$ marks for that aspect out of 1 mark.

The Marking Scheme of the mentioned Tasks is attached in Annexure - 1

1. Standard Paint Application
2. Spot Repair on Pre-painted panel
3. Plastic Bumper Repair

TBD

Section - D

D. Infrastructure List

Equipment / Tools:

S.No	Items	Quantity
1	Paint Booth setup	1
2	Infra-Red Dryer	2
3	Putty applicator knife	10 pcs
4	Plate for Putty Mixing	5 pcs
5	Dust Extraction Sanding Machine: 3M , Mirka	2
6	Hand Blocks (Small & medium) 3M, Mirka	5 each set
7	Sanding paper Disc – P80, P120, P180, P320, P400, P500, P600	30 pcs each
8	Sanding paper Sheet P80, P120, P180, P320	20 pcs each
9	Scotch Brite Grey	1 Pcs per Competitor
10	Scotch Brite Purple	1 Pcs per Competitor
11	HVLP Spray Gun for Primer Surfacer	4
12	HVLP Spray guns for Base coat	4
13	HVLP Spray Guns for Clear Coat	4
14	Spray Gun cleaning unit	1
15	Stands for Paintings	5
16	Table for work stations	5
17	Pressure Gauge for Spray Guns	4
18	SATA RPS Cups 0.6 L - 200 Mic/3M PPS	50
19	Spray Gun Coupler	4
20	DFT Meter	1
21	Mixing Scale for Colour mixing	5
22	Weigh Balance	2
23	Cleaning / Degreasing Cloth	50
24	Tack Cloth	15
25	Masking paper – Brown	1 Roll
26	Making tape – 1 inch	20 Pcs
27	Fine Line Masking Tape -9 mm	10 Pcs
28	Dry Guide coat	5
29	Panel – Door ED coated panel	1/competitor
30	Panel – Fender Pre-painted panel	1/competitor
31	Panel – Plastic part	1/competitor

Consumables:

S.No	Items	Quantity
1	Degreasers (Silicone Remover)	5 ltr
2	Polyester putty with Hardener for Plastic	4 Kg
3	Polyester putty with Hardener for Metal surface	2 kg
4	2K Primer Surfacer fast drying (Grey)	4 ltr
5	2K Hardener for Primer surface	2 ltr
6	2K Thinner	10 ltr
7	Solvent Borne Tints and Binder for making colour	5 ltr
8	Fast drying Clear	5 ltr
9	Hardener for Clear	2 ltr
10	Gun cleaning NC thinner	10 ltr

Safety Items:

S.No	Items	Quantity
1	Solvent Vapour mask /	1 / competitor
2	Air fed mask	1 / competitor
3	Dust mask	1 / competitor
4	Cotton Hand Gloves	1 / competitor
5	Rubber hand Gloves	1 / competitor
6	Ear plugs	1 / competitor
7	Pair of Safety Shoes	1 / competitor
8	Pair of Safety Glasses	1 / competitor
9	Anti-Static Cloth for Paint Spraying	1 / competitor
10	Uniform	1 / competitor

Section – E

E. Instructions for candidates

1. Candidate must wear the prescribed Personnel Clothing while performing the task and ensure safety of equipment and personnel's working around his workstation.
2. The Competitor must use the following Personal Protective Equipment:
 - Dust Protection mask;
 - Solvent resistant Gloves;
 - Safety glasses;
 - Ear protection;
 - Safety shoes
 - Dust free overall with hood
 - Solvent Vapor Resistant mask
 - Safety measures have to be taken at the workstation (extractors for dry sanding and spraying);
 - Safety procedures must relate to the paint sponsors data sheets
3. Candidate should remain present at the Competition venue 30 min before start of work
4. Each candidate would be allotted a specific time to complete the task, no further extension would be given to anyone unless specified by Jury.
5. Candidates must follow the instructions given by Jury.
6. Candidate must dispose-off the environmentally harmful products carefully.
7. Candidate must adhere to the MSDS (Material Safety Data Sheets) provided by the paint manufacturer.
8. In case of any difficulty the candidate must seek support of Jury members.

Section – F

F. Health, Safety, and Environment

1. All accredited participants, and supporting volunteers will abide by rules and regulations with regards to Health, Safety, and Environment of the Competition venue.
2. All participants, technicians and supporting staff will wear the required protective personnel clothing.
3. All participants will assume liability for all risks of injury and damage to property, loss of property, which might be associated with or result from participation in the event. The organizers will not be liable for any damage, however in case of Injury the competitor will immediately inform the immediate organizer for medical attention.

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