

**GAUTENG DEPARTMENT OF EDUCATION  
SENIOR CERTIFICATE EXAMINATION**

**MOTOR BODY REPAIRING SG**

**TIME: 3 hours**

**MARKS: 200**

**REQUIREMENTS:**

- Calculator
- Drawing instruments

**INSTRUCTIONS:**

- Answer Question 1 and any SIX other questions

**QUESTION 1  
COMPULSORY**

- |      |  |     |
|------|--|-----|
| 1.1  | Name FIVE safety rules in the workplace.   | (5) |
| 1.2  | Where must flammable gases be stored?  | (1) |
| 1.3  | Name FIVE safety rules to be followed when spray-painting.                         | (5) |
| 1.4  | Name FIVE safety rules when using the oxyacetylene gas plant.                      | (5) |
| 1.5  | Name FIVE qualities a spray-booth should have.                                     | (5) |
| 1.6  | What can be used to remove tar spots from a vehicle?                               | (1) |
| 1.7  | Explain what rust is.  | (4) |
| 1.8  | Why are rivets and <b>not</b> nuts and bolts used to mount a conventional chassis? | (2) |
| 1.9  | Name THREE properties of a good pigment.   | (3) |
| 1.10 | Define the following:  |     |
|      | 1.10.1 Strain  | (3) |
|      | 1.10.2 Elasticity of steel   | (3) |
|      | 1.10.3 Stress  | (3) |

- 1.11 Name EIGHT types of tools used for body repair work. (8)
- 1.12 Name TWO advantages of body putty in comparison with body lead. (2)
- [50]**

### **QUESTION 2**

- 2.1 A sports car with a fibreglass body was involved in a minor accident. The only damage was a tear in the fender. Describe, step by step, how you would repair the damage. (12)
- 2.2 The boot lid of a car has been repaired; part of the paint has been removed. Describe how you would prepare and respray the boot lid. (13)
- [25]**

### **QUESTION 3**

- 3.1 Make a simple sketch of a conventional chassis. Show the method and points to be tested (measured) to determine a bent chassis. (5)
- 3.2 Describe the method for repairing a bent chassis. The car was hit from behind and the chassis is bent slightly downwards. (5)
- 3.3 The door of a car has been replaced. Describe in detail how the door must be prepared and resprayed. (15)
- [25]**

### **QUESTION 4**

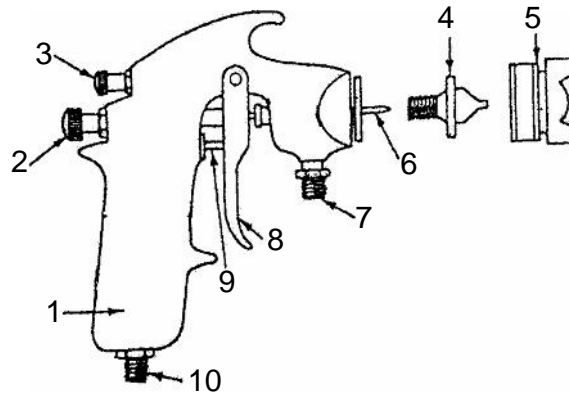
- 4.1 Name FIVE checks to be done before wheel alignment can be adjusted. (5)
- 4.2 What could cause a car's front wheels to wobble? State any THREE reasons. (3)
- 4.3 Make line sketches to illustrate the following steering angles:
- 4.3.1 Positive camber (5)
- 4.3.2 Toe-in (4)
- 4.3.3 Ackerman principle (8)
- [25]**

**QUESTION 5**

- 5.1 Describe the ignition and setting of the oxyacetylene gas welding plant to weld thin, mild steel. (7)
- 5.2 Draw a sketch to illustrate the leftwards welding method when using oxyacetylene gas welding. Show the degrees clearly. (10)
- 5.3 Explain how hot shrinking is done. (8)
- [25]**

**QUESTION 6**

- 6.1 In Figure 6.1 a spray gun is shown. Write only the number in your answer book and the name of each part next to the number. (10)



**Figure 6.1**

- 6.2 In the sketches below different spray-patterns are shown. Identify the possible causes for each pattern during spray painting. (10)



- 6.3 What causes the orange peel effect on painted panels? (1)
- 6.4 Should existing paint be stripped from the surface before repainting? (1)

- 6.5 What causes the paint on certain surfaces not to dry? (1)
- 6.6 What causes a finished (painted) surface to be rough and sandy? (1)
- 6.7 At what distance must the spray gun be held from the surface? (1)
- [25]**

### QUESTION 7

- 7.1 Describe how a paint stripper should be applied to clean a surface and to remove old paint. (5)
- 7.2 Describe the method used to apply body-putty on to a surface and to finish off the surface. The grit of the sanding paper should be mentioned. (8)
- 7.3 Explain each of the following:
- 7.3.1 Primer (2)
  - 7.3.2 Body-putty (2)
  - 7.3.3 Surface coating (2)
- 7.4 Describe in detail how a spray gun should be cleaned after use. (4)
- 7.5 Name TWO safety precautions to be considered when working with paint stripper. (2)
- [25]**

### QUESTION 8

- 8.1 Describe step by step how a rusted panel should be repaired. (10)
- 8.2 What causes rust? (3)
- 8.3 Where does rust normally occur on a car? (3)
- 8.4 How can manufacturers prevent rust on a car? (2)
- 8.5 Name THREE general rules that should be followed when mixing colours. (3)
- 8.6 What is the purpose of underbody sealant and what does it consist of? (3)
- 8.7 Why is it important to clean the underbody before a sealant is put on? (1)
- [25]**

**TOTAL: 200**

**END**