

## Unit Standard **21679**

### **Demonstrate knowledge of interchanging and balancing wheels in the motor industry**

Level 2 Credit 2 v2

**Student Name:**

**School:**

**Date:**

**Marked By:** \_\_\_\_\_ **Mark** \_\_\_\_\_ **%**

**Feedback:**      **Excellent work**       **Please attempt all questions**   
                         **Good work**       **Please resubmit**

## **USEFUL WEBLINKS**

### **Tyre Construction**

<http://youtu.be/If5t783NZFY>

### **Tread Patterns**

<http://youtu.be/uRGF2SXGB1A>

### **Types of Wheels**

[http://youtu.be/hx3M\\_AEnLTk](http://youtu.be/hx3M_AEnLTk)

### **Balancing and adhesive weights**

<http://youtu.be/eYrVSokg4to>

### **Tyre Machine**

<http://youtu.be/bC5p08jTTvo>

### **Raising Car on Stands and Removing Wheels**

<http://youtu.be/t6TRIRaAZwY>

### **Checking wheel bearings**

<http://youtu.be/IpdghLj6AhE>

### **Checking tyres**

<http://youtu.be/ck9rmeG3lgE>

### **Wheel Alignment**

<http://youtu.be/MFxH-kjbs7Q>

[http://youtu.be/F6ZZ\\_U\\_F11Y](http://youtu.be/F6ZZ_U_F11Y)

## REVIEW QUESTIONS ONE

Q1 List the five main functions of a tyre.

Q2 Name the main components that make up the construction of a tyre.

Q3 Complete the following sentence.

Many tread designs are used by the \_\_\_\_\_ to provide \_\_\_\_\_, the main \_\_\_\_\_ of the \_\_\_\_\_, under varying conditions. Requirements of the tread are the ability to \_\_\_\_\_ and \_\_\_\_\_ safely and have good \_\_\_\_\_ while \_\_\_\_\_.

Q4 Identify the tyre parts labelled A-E below.

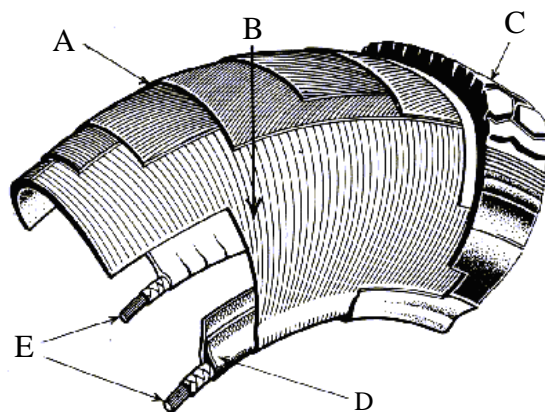
A

B

C

D

E



Q5 Describe the function of an all-purpose tread tyre.

Q6 Outline the main differences between clip on and adhesive type wheel weights.

Q7 Provide two main differences between alloy rims and pressed steel rims.

## REVIEW QUESTIONS TWO

Q8 Explain two safety procedures to be followed when working with compressed air.

Q9 List five main points to remember when lifting a heavy object such as a wheel.

Q10 Why does a tyre have a speed rating?

Q11 What is a Load Index?

Q12 Complete the following charts.

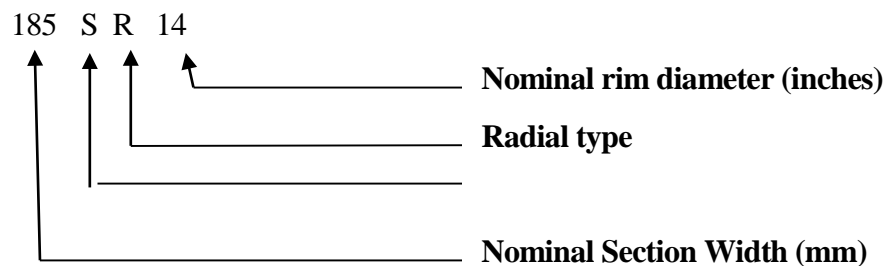
Load Index	Weight in kilograms
23	
	272
62	
	545
39	
	710

Speed symbol	Speed Category
A3	
	120
K	
	40
H	
	70

Q13 What are the two measurements that may be read when inflating a tyre?

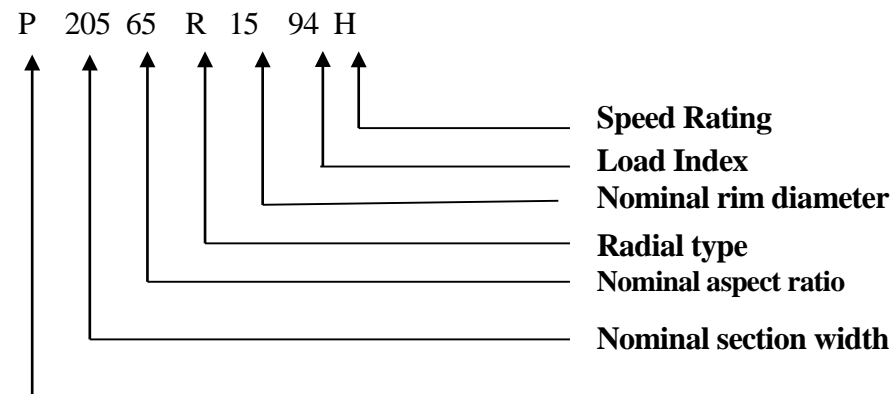
Q14 List the four most common tyre rating systems.

Q15 Complete the following rating systems.



Name the rating system Used

What is the speed rating of the tyre in Kp/h?



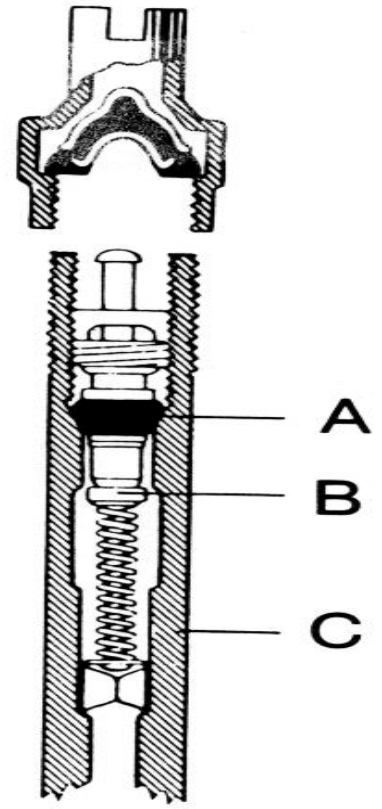
Name the rating system used

What is the speed rating of this tyre in Kph?

What is the Load Index in Kg for this tyre?

Q16 Name the three main tyre valve elements A-C as shown in the diagram below.

A  
B  
C



### **REVIEW QUESTIONS THREE**

Q17 List five pieces of equipment that may be used to raise a vehicle.

Q18 Explain the purpose of vehicle lifting points.

Q19 What is the legal requirement for tyre tread?

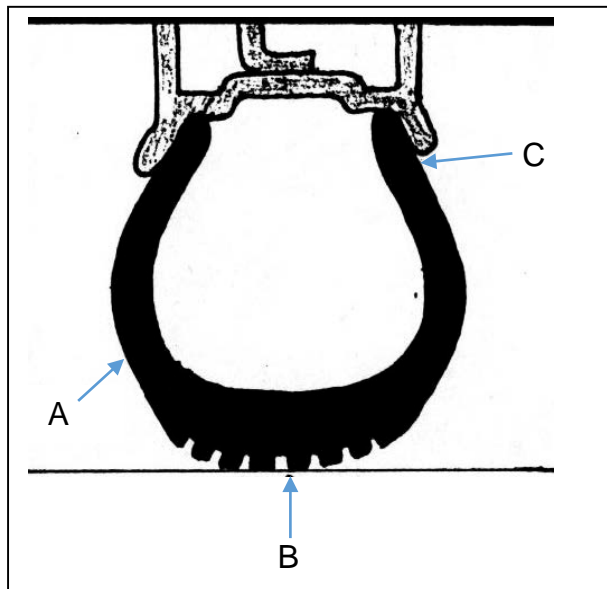
Q20 Explain the function of a tyre machine.

Q21 How should you prepare a wheel rim for tyre attachment?



Q22 Explain the safety procedures to be followed when inflating a tyre on a tyre machine.

Q23 The diagram below shows an over inflated tyre. Which of A, B or C correctly shows the wear spots.

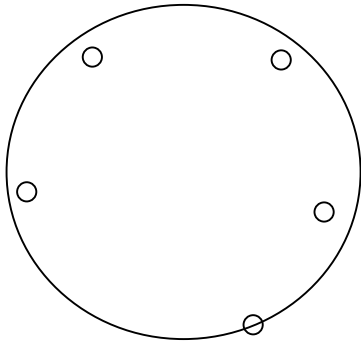


Correct wear spot

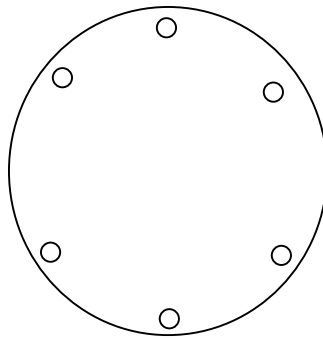
## **REVIEW QUESTIONS FOUR**

- Q24 What effect will an out-of-balance wheel have on vehicle handling?
- Q25 Describe in your own words static unbalance and dynamic unbalance.
- Q26 What two items are calibrated on a wheel balancing machine before balancing can take place?
- Q27 Explain why it is important to rotate tyres on a regular basis.

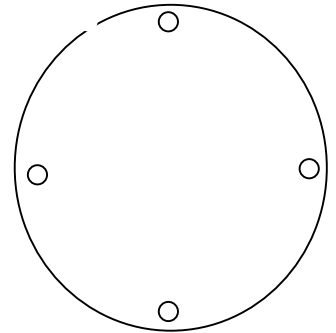
Q28 Complete the following wheel nut securing sequence.



5 Stud



6 Stud



4 Stud