



Province of the
EASTERN CAPE
EDUCATION

DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)

HOME SCHOOLING SELF-STUDY WORKSHEET

SUBJECT	AUTOMOTIVE	GRADE	12	DATE	MAY 2020
TOPIC	SYSTEMS & CONTROL – AUTOMATIC GEARBOX	TERM 1 REVISION	()	TERM 2 CONTENT	(√)
TIME ALLOCATION	2 hrs.	<u>TIPS TO KEEP HEALTHY</u>			
INSTRUCTIONS	SELF – ASSESSING ACTIVITY. ANSWER ALL QUESTIONS.	1. WASH YOUR HANDS thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%. 2. PRACTICE SOCIAL DISTANCING – keep a distance of 1m away from other people. 3. PRACTISE GOOD RESPIRATORY HYGIENE: cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use. 4. TRY NOT TO TOUCH YOUR FACE. The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick. 5. STAY AT HOME.			

QUESTION 1

1.1 State TWO main differences between an automatic gearbox and a manual gearbox.

1.2 State TWO advantages of an automatic gearbox.

1.3 FIGURE 1.3 below shows a torque converter used in an automatic transmission. Answer the questions that follow.

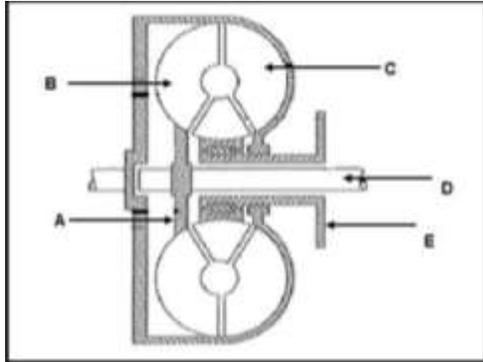


FIGURE 1.3

1.3.1 State TWO functions of a torque converter.

1.3.2 Label parts A–E of the torque converter in the figure above.

1.4 State FIVE different gear drives that can be obtained with the help of a single epicyclic gear train.

1.5 What is the purpose of gear ratios in the gearbox of a motor vehicle?

QUESTION 2

2.1 Briefly explain the principle of operation of a torque converter.

2.2 What is the function of the following components in an automatic transmission system of a vehicle?

2.2.1 Brake bands

2.2.2 Hydraulic pistons

2.2.3 Oil pump

2.3 Briefly explain the following states of a torque converter in operation:

2.3.1 Stall speed

2.3.2 Increasing speed

2.4 What kind of oil is used in automatic transmission?

2.5 Give TWO methods of cooling oil in an automatic transmission.