



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.	<p style="text-align: center;"><u>TIPS TO KEEP HEALTHY</u></p> <ol style="list-style-type: none">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.			
INSTRUCTIONS					

QUESTION 1

1.1 What do you understand by the term transmission in a motor vehicle?

1.2 FIGURES 1.2.1 and 1.2.2 below show two basic types of layouts of automatic-transmission drives. Identify the TWO types of layouts.

1.2.1

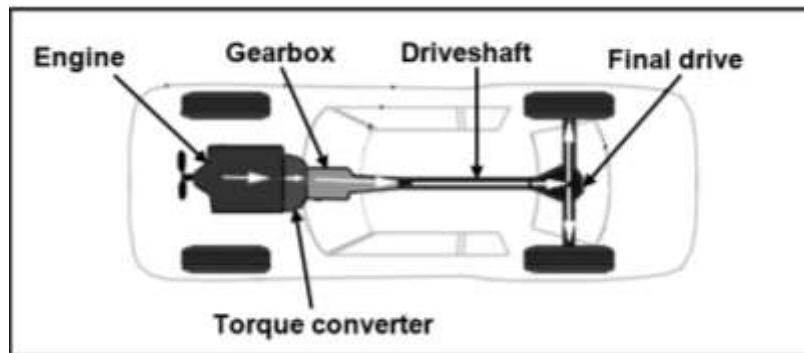


FIGURE 1.2.1

1.2.2

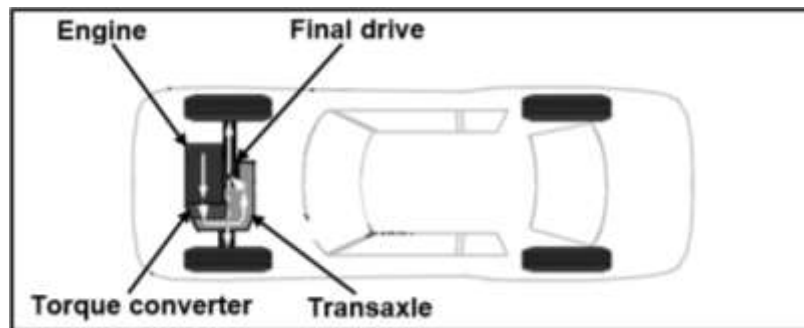


FIGURE 1.2.2

- 1.3 State the main function of a torque converter.
- 1.4 State the main function of a torque converter.
- 1.5 State THREE advantages of fluid coupling in comparison with friction clutches.
- 1.6 Which component of a torque converter allows the stator to rotate in the same direction as the pump?
- 1.7 What is the effect of the gear ratio in relation to the road speed?
- 1.8 Explain how the locking sequence of the epicyclic gear train is achieved.
- 1.9 What is the main purpose of kickdown in an automatic gearbox?
- 1.10 Which mechanical systems in an automatic transmission are able to provide the various forward gear ratios as well as reverse?

QUESTION 2

- 2.1 Name TWO methods used to cool the oil in the automatic transmission of a motor vehicle.
- 2.2 State TWO advantages of an automatic gearbox when compared with a manual gearbox.
- 2.3 What is the main purpose of an automatic transmission gearbox when compared with a manual gearbox?
- 2.4 Explain the influence of the gear ratio on the torque of a motor vehicle.
- 2.5 State TWO advantages of the torque converter in the automatic transmission of a motor vehicle.
- 2.6 FIGURE 2.6 below shows a component of an automatic gearbox. Answer the questions that follow.

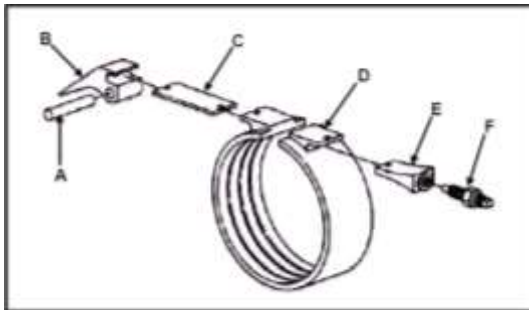


FIGURE 2.6

2.6.1 Identify the component shown in FIGURE 2.6 above.

2.6.2 Label parts A–F.

2.6.3 State the function of the component in FIGURE 2.6 above