

Unit 7 - Week 6

Course outline

How does an NPTEL online course work?

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Week 2

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Week 5

Week 6

Automotive Clutch - Part 01

Automotive Clutch - Part 02

Transmission - Part 01

Transmission - Part 02

Powertrain Analysis - Part 01

Powertrain Analysis - Part 02

Quiz : Assignment 6

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Solution - Assignment 6

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Assignment 6

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-11, 23:59 IST.

1) Which one of the following is not true about a clutch?

1 point

- It provides a link between engine and transmission.
- It allows for smooth take up of drive when the vehicle moves from rest.
- It magnifies the engine torque.
- It disengages the transmission from the engine when a gear change is made.

No, the answer is incorrect.
Score: 0

Accepted Answers:
It magnifies the engine torque.

2) Which one of the following is not a component of a clutch assembly?

1 point

- Pressure plate
- Release Bearing
- Flywheel
- Lay shaft

No, the answer is incorrect.
Score: 0

Accepted Answers:
Lay shaft

3) Which one of the following statements is true?

1 point

- The pressure plate presses the clutch plate against the flywheel when the clutch is engaged.
- The pressure plate presses the clutch plate against the flywheel when the clutch is disengaged.
- The pressure plate directly contacts the flywheel.
- The pressure plate is mounted on splines on the input shaft to the gearbox.

No, the answer is incorrect.
Score: 0

Accepted Answers:
The pressure plate presses the clutch plate against the flywheel when the clutch is engaged.

4) The potential axial vibration due to the sudden engagement of the clutch plate with the flywheel is reduced by

1 point

- torsional spring.
- cushion spring.
- diaphragm spring.
- return spring.

No, the answer is incorrect.
Score: 0

Accepted Answers:
cushion spring.

5) Which one of the following actuation mechanisms is typically not used in automotive clutches?

1 point

- Pneumatic
- Mechanical
- Hydraulic

No, the answer is incorrect.
Score: 0

Accepted Answers:
Pneumatic

6) The gear ratio in a transmission is defined as the ratio of

1 point

- input power to output power.
- input torque to output torque.
- input speed to output speed.
- input force to output force.

No, the answer is incorrect.
Score: 0

Accepted Answers:
input speed to output speed.

7) In an underdrive gear

1 point

- the driver gear is smaller than the driven gear and the gear ratio is less than 1.
- the driver gear is larger than the driven gear and the gear ratio is greater than 1.
- the driver gear is larger than the driven gear and the gear ratio is smaller than 1.
- the driver gear is smaller than the driven gear and the gear ratio is greater than 1.

No, the answer is incorrect.
Score: 0

Accepted Answers:
the driver gear is smaller than the driven gear and the gear ratio is greater than 1.

8) Which one of the following statements is not true about a helical gear transmission?

1 point

- The gear has teeth cut at an angle to the axis of rotation.
- It does not produce significant axial thrust.
- The engagement of teeth is more gradual.
- It is quieter in operation compared with a spur gear transmission.

No, the answer is incorrect.
Score: 0

Accepted Answers:
It does not produce significant axial thrust.

9) Which is not a component of a typical synchronizer?

1 point

- Hub
- Outer sleeve
- Collar
- Blocking ring

No, the answer is incorrect.
Score: 0

Accepted Answers:
Collar

10) The selector fork rests in the synchronizer

1 point

- groove.
- hub.
- spline.
- blocking ring.

No, the answer is incorrect.
Score: 0

Accepted Answers:
groove.

11) The net gear ratio of an automotive driveline is

1 point

- the sum of the transmission ratio and the final drive gear ratio.
- the difference of the transmission ratio and the final drive gear ratio.
- the product of the transmission ratio and the final drive gear ratio.
- the ratio of the transmission ratio and the final drive gear ratio.

No, the answer is incorrect.
Score: 0

Accepted Answers:
the product of the transmission ratio and the final drive gear ratio.

12) The force that acts on the vehicle due to the hysteresis of the tyre is

1 point

- grade resistance.
- aerodynamic drag.
- inertia.
- rolling resistance.

No, the answer is incorrect.
Score: 0

Accepted Answers:
rolling resistance.

13) The magnitude of the longitudinal dynamic load transfer increases with

1 point

- increase in CG height and increase in wheelbase.
- increase in CG height and decrease in wheelbase.
- decrease in CG height and increase in wheelbase.
- decrease in CG height and decrease in wheelbase.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Increase in CG height and decrease in wheelbase.

14) Which one of the following parameters does not influence the static load on a wheel?

1 point

- Total vehicle weight.
- Wheelbase.
- Longitudinal location of CG.
- Height of CG.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Height of CG.