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Question Paper

Duration: 120 Mins

Total Marks: 53

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Student Name: _____	Roll No: _____
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1. What is the advantage of mechanical actuated type clutches?

- | | |
|--------------------------------|----------------------|
| A) Less maintenance and repair | B) Less pedal effort |
| C) Smooth functioning | D) Easy to operate |

2. What is the main feature of hydraulic actuated clutches?

- | | |
|---|--|
| A) Pedal effort transmitted through fluid | B) Pedal effort transmitted through spring |
| C) Pedal effort transmitted through linkage | D) Pedal effort transmitted through coupling |

3. Which type of joint permit small diffraction angle and linear variations?

- | | |
|-------------------|-----------------|
| A) Tripod joint | B) Double joint |
| C) Flexible discs | D) Pot joint |

4. What causes noisy gear box in neutral position?

- | | |
|-----------------------------|----------------------------|
| A) Synchronizer worn-out | B) Synchronizer defective |
| C) Synchronizing unit stuck | D) Bearing worn out or dry |

5. What is the advantage of using single plate hydraulic clutch?

- | | |
|--|---|
| A) Effective frictional force obtained | B) Reduce the wear on the clutch plate |
| C) Easy repair and maintance | D) Minimize the force to operate the clutch |

6. Which type of drive line used in high gears and high speed applications?

- | | |
|----------------------------|---------------------------|
| A) Rear wheel drive line | B) Front wheel drive line |
| C) Center wheel drive line | D) All wheel drive line |

7. Which type of gear box can be operated even by unskilled driver?

- | | |
|---------------------------|---------------------------------|
| A) Constant mesh gear box | B) Sliding mesh gear box |
| C) Synchromesh gear box | D) Compound wheel mesh gear box |

8. Which type of gear will have more than one tooth in contact at the same time

- | | |
|-----------------|--------------------|
| A) Spur gear | B) Rack and Pinion |
| C) Helical gear | D) Spur bevel gear |

9. What is the possible reason for gear slip?

- | | |
|--------------------------------|-------------------------------------|
| A) Excessive end float of gear | B) Wrong selection gear shift lever |
| C) Wrong clutch engagement | D) Wornout clutch plate |

10. What is the working principle of clutch?

- | | |
|-------------|------------------|
| A) Friction | B) Screw and Nut |
| C) Sliding | D) Centripetal |

11. Which is noise free clutch?

- | | |
|---------------------------------|------------------------|
| A) Diaphragm spring type clutch | B) Single plate clutch |
| C) Multi plate clutch | D) Dog clutch |

12. Which system provides DC power source for the various units of the vehicles?

- | | |
|--------------------|--------------------|
| A) Lighting system | B) Charging system |
| C) Steering system | D) Storage system |

13. What will be the result of defective clutch?

- | | |
|---------------------------|-------------------------------|
| A) Noise in gear shifting | B) Gear clash during shifting |
| C) Gear slip | D) Gear locked in one gear |

14. What is the permitted range of pedal play observed in the heavy vehicle?

- | | |
|--------------|--------------|
| A) 15 -18 mm | B) 16 -20 mm |
| C) 6 -10 mm | D) 2 -4 mm |

15. What is the role of ABS brakes?

- | | |
|----------------------------------|------------------------------|
| A) Provide positive braking | B) Reduce the brake failures |
| C) Prevents skidding of vehicles | D) Increase frictional power |

16. Which type of gear box eliminates the defect of gear wheels move on the shaft to mesh with each other?

- | | |
|---------------------------------|--------------------------|
| A) Compound wheel mesh gear box | B) Sliding mesh gear box |
|---------------------------------|--------------------------|

C) Constant mesh gear box D) Synchromesh gear box

17. What is the necessity of square cut seals?

- A) Withstand radial movement B) Prevent fluid leakage
C) Provide cushioning effect D) Prevent the seal rolling in groove

18. What is the cause of hard gear shifting?

- A) Synchronizing unit damaged B) Bearing worn out
C) Fly wheel ring wornout D) Synchronizing unit stuck

19. Which gear will produce clicking noise during teeth contact?

- A) Spur gear B) Helical gear
C) Worm gear D) Bevel gear

20. Which instrument is used to check the face out of the fly wheel?

- A) Inside micrometer B) Bore dial gauge
C) Dial indicator D) Outside micrometer

21. Which part of heavy vehicle deals with static and dynamic loads without deflection or distortion?

- A) Control system B) Chassis and frames
C) Engine D) Power trains

22. Which type of seal allows a controlled amount of fluid leakage to lubricant moving parts?

- A) Non - positive seal B) Positive seal
C) Dynamic seal D) Static seal

23. What is the permitted diffraction angle of double joint?

- A) 58 Degree B) 62 Degree
C) 72 Degree D) 50 Degree

24. What is the function of steering system?

- A) To increase the engine RPM B) To control the braking system
C) To control the fuel system D) To guide the vehicle

25. Which system not connected with electrical system?

- A) Suspension system B) Steering system
C) Charging system D) Transmission system

26. Which part connects propeller shaft?

- A) Cam shaft and clutch shaft B) Crankshaft and final drive shaft
C) Clutch shaft and fly wheel D) Gear box and final drive

27. What is the reason of gear locked in one gear position?

- A) In adequate lubrication B) Gear teeth wornout
C) Synchronizer wornout D) Synchronizing unit stuck

28. Which type of gear box provided with helical gears?

- A) Constant mesh gear box B) Auto synchromesh gear box
C) Synchromesh gear box D) Sliding mesh gear box

29. Which system deals with alternator?

- A) HVAC system B) Starting system
C) Steering system D) Charging system

30. Which system making the drive cabin comfortable for driving?

- A) Charging system B) Steering system
C) Starting system D) HVAC system

31. What is the name of seal used between two parts that do not move in relation to each other?

- A) Dynamic seal B) Static seal
C) Teflow seal D) Square cut seal

32. Which part provides flexible connection and permits smooth transfer of torque from gear box to the rear axle?

- A) Half shaft B) Universal joint
C) Clutch shaft D) Fly wheel

33. Which way the steering system increase the tire life?

- A) By maintaining proper angle between tyres B) Providing proper brake adjustment
C) Providing adequate lubrication D) By applying grease on the steering controls

34. What is the advantage of dual mass fly wheel?

- A) Reduce the possibility of clutch slip B) Transmit the torque with less effort
C) Prevent wrong clutch engagements D) Reduction of gear box and body noises

35. Which type of synchromesh gear box will produce torque more than three times of other types?

- A) Multi and Double cone B) Baulk ring type
C) Porche type D) Baulk type

36. What is the function of clutch?

- A) Prevent malfunctioning of fly wheel B) Reduce the noise during engine running
C) Connect and disconnect power flow engine to gear box D) Increase and decrease the RPM of engine

37. Which type of clutch provides more frictional area and simple in construction?

- A) Multi plate clutch
- B) Dog clutch
- C) Diaphragm spring clutch
- D) Cone clutch

38. Which part of dual mass fly wheel isolate the fly wheel mass system of the engine?

- A) Vibration damper
- B) Crank shaft
- C) Cam shaft
- D) Gear box

39. What is the permitted diffraction angle of tripod joint?

- A) 18 Degree
- B) 13 Degree
- C) 32 Degree
- D) 26 Degree

40. What is the battery system used for heavy vehicles?

- A) 6 volts
- B) Provide caution to the driver
- C) 24 volts
- D) 12 volts

41. What is the advantage of using constant mesh gear box?

- A) Efficient lubrication possible
- B) Wrong adjustment of gear will not affect the function
- C) Smooth power transmission
- D) Quick change of gear obtained

42. Which type of gear will not produce axial thrust while transmitting torque

- A) Spur gear
- B) Spiral bevel gear
- C) Helical gears
- D) Worm gears

43. Which type of synchromesh gear box used for heavy commercial vehicles?

- A) Baulk type
- B) Multi and double cone type
- C) Porche type
- D) Baulk ring type

44. Which type of gear converts rotary motion in to linear motion and vice versa?

- A) Spur gear
- B) Helical gears
- C) Rack and Pinion
- D) Bevel gear

45. What is the advantage of using power steering system?

- A) To enhance the fuel efficiency
- B) To increase the engine power

C) To turn and control vehicle with less effort

D) To reduce the fuel consumption

46. Which type of gear will not produce axial thrust but it neutralizes the axial thrust?

- A) Worm gear
- B) Spur gear
- C) Bevel gear
- D) Herring bone gears

47. Which type of system is to isolate the vehicle body from road shock and vibration?

- A) Suspension system
- B) Steering system
- C) Control system
- D) Hydraulic system

48. What is the advantage of dog clutch?

- A) Easy maintenance and repair
- B) No possibility of slip
- C) More frictional area
- D) Less pedal force to operate

49. What is the permitted diffraction angle of pot joint?

- A) 20 Degree
- B) 18 Degree
- C) 22 Degree
- D) 26 Degree

50. Which type of gear teeth are straight and parallel to the gear axis

- A) Worm gear
- B) Spur gear
- C) Bevel gear
- D) Helical gear

51. Which factor does not affect the torque transmission by clutch?

- A) Axial load on the clutch
- B) Size of clutch plat
- C) Number of clutch plates used
- D) Co-efficient of friction

52. How to rectify the hard gear shifting?

- A) Adjust clutch pedal free play
- B) Check and realign
- C) Lubricate the unit
- D) Re - install springs correctly

53. Why synchromesh action is needed in a gear box?

- A) Provide noise in gear shifting
- B) Damage the gear teeth during gear change
- C) Prevent cushioning effect during gear shifting
- D) Easy gear shifting when vehicle in motion