

1. Which elements belong to the field of tribology?

- a) Friction
- b) Lubrication
- c) Seal
- d) Wear

2. What is not a function of lubrication?

- a) Prevention of rust
- b) Extending the service life
- c) Increasing the limiting speed
- d) Reduction of friction and wear

3. Which statements are true with regard to grease and oil lubrication?

- a) Handling is better with grease lubrication
- b) The cooling effect is higher with grease lubrication
- c) Oil lubrication is suitable for higher speeds
- d) The environmental impact is lower with grease lubrication
- e) Grease is the most widely used lubricant
- f) Grease lubrication is rather expensive and complicated

4. What are the rules of thumb for filling with grease lubricant?

- a) 30 to 40 % of the bearing free space
- b) 20 to 50 % of the bearing free space
- c) 50 to 60 % of the housing
- d) 30 to 60 % of the housing

5. When bearings fail, it usually has something to do with lubrication.

- a) Correct
- b) Incorrect

6. Which statements apply to oil lubrication?

- a) It is usually more expensive than grease lubrication
- b) It is preferred especially for rolling bearings with point contact
- c) It is mainly used when the heat generated by the bearing needs to be dissipated more effectively
- d) Oils are often blended to take advantage of the benefits of each variety

7. Which greases are best suited for low temperatures and high speeds?

- a) Greases with high viscosity base oil
- b) Greases with low viscosity base oil
- c) All greases are suitable for this
- d) No grease is suitable for this combination

8. All bearings must always be regreased.

- a) Correct
- b) Incorrect

9. In which temperature range are mineral oils used?

- a) -50 °C – 50 °C
- b) -30 °C – 100 °C
- c) -30 °C – 150 °C
- d) -30 °C – 200 °C

10. In order to obtain elastohydrodynamic lubrication, one must only be careful not to use too little oil.

- a) Correct
- b) Incorrect

11. Bearings with solid lubricant are used in applications where dirt can enter the bearing and in the food industry.

- a) Correct
- b) Incorrect

12. What is the biggest limitation in the use of solid lubricant?

- a) It is significantly more expensive
- b) The applications are more complicated
- c) It is washed out more easily
- d) You have to pay very close attention to the running speeds

13. Which statements are true about the kappa value?

- a) It represents the viscosity ratio of actual kinematic viscosity ν and nominal viscosity ν_1
- b) It is needed for the determination of the factor of the operating conditions of the modified life of rolling bearings
- c) The rolling bearing size and the rolling bearing type do not play a role here
- d) The kappa value can be divided into five lubrication conditions
- e) With a value of $\kappa \leq 0.1$, boundary lubrication is present
- f) A value of $\kappa > 6$ indicates full lubrication.