

# EXERCISES

## Bearing mounting and surrounding construction

- 1. What do you need to consider before choosing the right fit?**
  - a) The dimensional accuracy of the shaft and housing
  - b) The correct bearing mounting
  - c) The maximum bearing misalignment compared to the permissible misalignment
  - d) The selection of the bearing arrangement
  
- 2. Which components can be used to fasten rolling bearings?**
  - a) Lock nuts
  - b) Fuse shaft
  - c) Adapter sleeves
  - d) Withdrawal sleeves
  
- 3. When using which part must particular attention be paid to potential sources of error (such as limiting radii and bearing connection dimensions)?**
  - a) Circlip
  - b) Bearing cover
  - c) Locking screws
  - d) Snap ring
  
- 4. What are adapter and withdrawal sleeves used for during bearing assembly?**
  - a) For holding the rolling bearing in position
  - b) The radial mounting of the rolling bearing
  - c) The axial mounting of the rolling bearing
  - d) The assembly with tapered shaft
  
- 5. How is the adapter sleeve fixed?**
  - a) Via hydraulic means
  - b) Soldering
  - c) Due to the frictional force of the shaft and the inner diameter of the sleeve
  - d) Due to the frictional force between shaft and outer ring
  
- 6. Mounting bearings with a tapered shaft is an option when mounting with an adapter sleeve.**
  - a) Correct
  - b) Incorrect
  
- 7. What does the choice of the fit depend on?**
  - a) The cage material
  - b) The wall thickness
  - c) The operating conditions of the machine
  - d) The surface finish
  
- 8. If the direction of the radial load acting on the inner ring is circumferential, there is a circumferential load.**
  - a) Correct
  - b) Incorrect

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**9. What should be considered for the bearing abutment dimensions?**

- a) The height of the contact of a bearing ring against the shaft and housing should be greater than the max. permissible corner radius of the bearing
- b) The height of the contact of a bearing ring against the shaft and housing should be smaller than the max. permissible corner radius of the bearing
- c) The fillet radius should have a smaller value than the smallest permissible corner radius of the rolling bearing
- d) The fillet radius should have a higher value than the smallest permissible corner radius of the rolling bearing

**10. What is the surface roughness of shafts for small bearings?**

- a) 0,8  $\mu\text{m}$
- b) 1,6  $\mu\text{m}$
- c) 3,2  $\mu\text{m}$
- d) 4,4  $\mu\text{m}$

**11. What is the permissible bearing misalignment of needle bearings?**

- a) 1/1.000
- b) 1/2.000
- c) 1/500
- d) 1/600