

# Scalable Machine Learning and Deep Learning - Review Questions 5

**Deadline: Dec. 11, 2021**

1. **1 point.** Explain how the data-parallelized learning work?

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2. **1 point.** Explain how the model-parallelized learning work?

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3. **1 point.** Explain different synchronization approaches in data-parallelized learning?

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4. **1 point.** Briefly explain gradient quantization and gradient sparsification.

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5. **1 point.** Use the following picture and show step-by-step how the ring-allreduce works to compute the maximum of all elements?

