



**SHEET NO (4)**

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**Q1) What is underwater acoustics?**

**Q2) What is the difference between sound in air and water?**

**Q3) What are the difference between wire and wireless underwater communication?**

**Q4) Discuss in details the applications of acoustics in detecting underwater objects?**

**Q5) Discuss in details the theory of work of the hydrophone in underwater acoustics?**

**Q6) What are the advantages and disadvantages of the hydrophone in underwater acoustics?**

**Q7) Discuss in details the theory of work of the sonar in underwater acoustics?**

**Q8) Discuss in details the differences between the following terms:-**

- a) **Passive sonar.**
- b) **Active sonar.**

**Q9) What are the limitations of the sonar in underwater acoustics?**

**Q10) Discuss in details the differences between the following:-**

- a) **Long-baseline (LBL) systems.**
- b) **Short-baseline (SBL) systems.**
- c) **Ultra-short-baseline (USBL) systems**