

**B.TECH****(SEM -VI) THEORY EXAMINATION 2017-18****WELL COMPLETION TESTING AND SIMULATION TECHNIQUES****Time: 3 Hours****Total Marks: 100**

- Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.  
2. Any special paper specific instruction.

**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. What are the surveying tools and methods of well design?
  - b. Define stress gradients.
  - c. Write down the types of well completion.
  - d. What is tubing design?
  - e. What are the design criteria of completion?
  - f. Explain the term gravel packing.
  - g. What is pre formation?
  - h. What do you understand by well simulation techniques?
  - i. Write down the types of completion.
  - j. Why is fracturing important in well completion and simulation techniques?

**SECTION B**

- 2. Attempt any three of the following: 10 x 3 = 30**
- a. Explain graphical tubing design and simplified tensional strength design.
  - b. Explain the process of well completion for coal bed methane.
  - c. Enumerate inflow performance and multiple tubing performances.
  - d. Explain mud bound stream condition for in-situ.
  - e. Write about acidization fracturing in detail.

**SECTION C**

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Explain the various types of well completion.
  - (b) What do understand about prediction of formation? Explain its various factors.
- 4. Attempt any one part of the following: 10 x 1 = 10**
- (a) Discuss about hydraulic fracturing in detail.
  - (b) Explain the technology of sand control in detail.
- 5. Attempt any one part of the following: 10 x 1 = 10**
- (a) Enumerate about the perforation of oil and gas wells.
  - (b) What do you understand by internal selection and productivity?
- 6. Attempt any one part of the following: 10 x 1 = 10**
- (a) Explain in detail about well completion selection and designing criteria.
  - (b) Explain polymer EOR in detail with screening criteria.
- 7. Attempt any one part of the following: 10 x 1 = 10**
- (a) Discuss about Buckley-Leveret model in detail.
  - (b) Write about tubing packer movement in detail.