

S2030

**Final Scheme/ Answer Key for Valuation**

*Scheme of evaluation (marks in brackets) and answers of problems/key*

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
FIRST SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

**Course Code: EC100**

**Course Name: BASICS OF ELECTRONICS ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 5 marks.*

	Marks
1 Types – each 2 marks, Applications – 1 mark	(5)
2 Definition – 1.5 marks each, P-type – 2 marks.	(5)
3 Diagram – 2 marks, Explanation – 3 marks.	(5)
4 Block Diagram – 3 marks, Parameters – 2 marks.	(5)
5 Expression – 1 mark each, Explanation – 3 marks.	(5)
6 Explanation- 5 marks.	(5)
7 Advantages – 2 marks, Sources and Detectors – 1.5 marks each	(5)
8 Definition – 2 marks, Features – 3 points – 3 marks.	(5)

**PART B**

*Answer six questions, one full question from each module and carries 10 marks.*

**Module I**

- 9 a) Color code – 3 marks, tolerance – 1 mark. (4)  
b) Two types – 3 marks each (6)
- 10 a) 2.5 marks each (5)  
b) Diagram – 2 mark, Explanation – 3 marks. (5)

**OR**

**Module II**

- 11 a) 2.5 marks each (5)  
b) Derivation – 2.5 marks, problem 2.5 marks (5)

**OR**

- 12 LED – Diagram – 2 marks, Explanation - 3 marks. (10)  
Photo diode – Diagram – 2 marks, Explanation - 3 marks.

**Module III**

- 13 a) Diagram – 3 marks, Explanation - 3 marks., (6)  
b) Comparison – 2 marks each (4)

**OR**

- 14 a) Two conditions – 2 marks (2)  
b) Diagram – 3 marks, Explanation – 4 marks, Expression – 1 mark (8)

**Module 1V**

- 15 Block diagram – 5 marks, Explanation – 5 marks. (10)

**OR**

- 16 a) Explanation of non-inverting amplifier (7)  
b) Description of the voltage gain or any aspect related with non-inverting amplifier (3)

**Module V**

- 17 a) Advantages – 2.5 marks, Applications – 2.5 marks (5)  
b) Explanation - 3 marks, Definition – 2 marks. (5)

**OR**

- 18 Block diagram – 4 marks, Explanation - 6 marks. (10)

**Module VI**

- 19 a) Principle of transmission through optical fiber. (5)  
b) Block diagram – 3 marks, Explanation - 2 marks. (5)

**OR**

- 20 Basic principles of cellular communication (10)

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