

Total No. of Printed Pages: 1

SUBJECT CODE NO: BNP-2724
FACULTY OF SCIENCE AND TECHNOLOGY
B. Sc (NEP) (P-2024) S.Y Sem III
Examination November / December 2025
Physics (Digital Electronics)

[Time: 1:00 Hours]

[Max. Marks: 30]

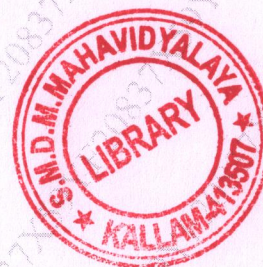
Please check whether you have got the right question paper.

N. B

1. Question No.1 is compulsory from part A. It carries 10 marks
2. Attempt any four questions from part B
3. Figures to the right indicates full marks

Part-A**Q1 Answer all the multiple choice questions.****10**

1. The binary number 1101 is equal to the decimal number
 - a) 13
 - b) 49
 - c) 11
 - d) 3
2. The number 17_8 is equivalent to binary
 - a) 111
 - b) 1110
 - c) 10000
 - d) 1111
3. The Boolean expression for an OR gate is _____
 - a) $A+B$
 - b) $A \cdot B$
 - c) $\bar{A}B + A\bar{B}$
 - d) $\bar{A} \cdot \bar{B}$
4. A _____ gate gives the output as 1 only if all the inputs Signals are 1.
 - a) OR
 - b) AND
 - c) EXOR
 - d) NOR
5. According to associate law of multiplication which equation is correct.
 - a) $B=BB$
 - b) $A(BC)=(AB)C$
 - c) $A+B=B+A$
 - d) $B+B(B+0)$

**Part B****Q2 Convert following decimal number to Binary.****05**

- a) 15 b) 20 c) 25 d) 40 e) 45

Q3 Add the following Binary number**05**

- a) $111+11$ b) $101+111$ c) $1010+1110$ d) $110+101$ e) $1010+1111$

Q4 Explain logic operation of the AND gate and give it's truth table**05****Q5 What is OR gate. Explain logic expression for the OR gate with truth table.****05****Q6 State and explain the laws of Boolean Algebra with logic gate and truth table****05****Q7 State Demorgan's theorem and give it's expression and truth table****05**