**Noida Institute of Engineering & Technology Gr Noida**

**B.Tech-II SEM (Assignment sheet 1)**

**Mathematical Foundations-II (Unit-II)**

**Q1**. Obtain the differential equation from each of the following functions by elimination of arbitrary constants:

**(a)** **(b)**

**(c)**

**Q2**. Show that the following pair of functions are linearly independent (with W0) and form the differential from:



**(a)** **(b)** **(c)** *1+x, 1+2x, x2*

**Q3**. Solve (D3−2D2−5D+6) y=2ex+4e3x+7e−2x+8e2x+15.

**Q4**. Solve.

**Q5**. Solve .

**Q6**. Find the general solution of .

**Q7**. Solve.

**Q8**. Solve.

**Q9.**Solve.

**Q10**. Solve .

**Q11.**Find the general solution of the differential equation **.**

**Q12.** Solve .

**Q13.** Solve.

**Q14.**Solve.

**Q15**. Solve.

**Q16**. Solve.

**Answers**

1. (a) (b)

(c)

1. (a)Linearly Independent (b)Linearly Independent (c)Linearly Independent