**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYD.**

Accredited by NAAC with A++ Grade

DEPARTMENT OF MATHEMATICS

**BE III Semester CSE-A (2022-2023)- (II- Quiz) Examinations**

**COURSE: DISCRETE STRUCTURES, CODE: U21PC350CS**

**Maximum Marks: 05 Time:20 MINUTES**

Roll Number:

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| --- | --- |
| 1 | **The coefficient of x10 in (1+x5 + x10 +……….)3  is** [ ]  **a) 2 b) 6 c) 10 d) None** |
| 2 | **The general form of the particular solution of the linear non-homogeneous recurrence relation**  **where is**  **a) an = (a**  **b) an = D n**  **c) an =**  **d) None** |
| 3 | **The Particular Solution of the Recurrence**  **relation an - 7an-1 + 10 an-2 = (4)n is ( )**  **a) 8. 4n  b) (-8)4n  c) (4) 8n  d) (-4) 8n** |
| 4 | **The order and degree of the Recurrence relation an = + is ( )**  **a)1 &2 b) 2 & 0 c) 2& no degree d) 2 &n** |
| 5 | **The general solution of the Linear Homogeneous Recurrence Relation if its characteristic equation has roots -2, -2, 2, 2, 2, 3, 3, 4 is ( )**  **a) an = (A + B n ) (-2)n + (C+D n + E n2)2n +(F + G n)3n + H4n**  **b)an = (A + B n + C n2) (-2)n + (D + E n)2n +(F + G n)3n + H4n**  **c)an = (An + B ) (-2)n + (C n2+ D n + E )2n +(F n + G )3n + H4n**  **d)an = (A n + B ) (-2)n + (C + D n)2n+(E + F n)3n + (G +H n)4n** |
| 6 | **The general solution of an +1 - 3an = 3n  with a0 = 1 is**  **( )**  **a) an = 3n + n 3n-1 b) an = (1/3)n + n 3n-1**  **c) an = 3n - n 3n-1 d) an = 3n + n** |
| 7 | **Write the characteristic equation of** |
| 8 | **The values of so that is a solution of the recurrence relation**  **are**  **a) b) c) d)** |
| 9 | **Write the recurrence relation of Fibonacci numbers**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 10 | **Write the general form of Homogeneous linear recurrence relation**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |