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| C:\Users\TEMP.WDC.083\Desktop\VIT logo.png  (Autonomous College Affiliated to University of Mumbai) | *Mid Semester Examination (CBSGS-C scheme) -(2022-23)* | | |
| Date: | | Time: 1 Hr. & 15 Mints | Branch: CMPN |
| Semester: 5 | | Subject: CN | Marks: 30 |
| |  |  |  |  | | --- | --- | --- | --- | | Q. 1) | Attempt any Five (2 Marks Each) | CO | BL | | a) | Find which bit is to be added for making the following data even parity.  Data:1001100 | CO2 | L3 | | b) | Which device takes data sent from network and forwards to all devices on the network regardless of the intended recipient. | CO1 | L1 | | c) | In a fully connected mesh topology with full duplex links consisting of 50 nodes, the number of links required are | CO1 | L3 | | d) | List different Framing methods | CO2 | L1 | | e) | How many 0’s to be appended in generator polynomial for CRC calculation at sender side if degree of polynomial is 5? | CO2 | L3 | | f) | Give two examples of PAN | CO1 | L1 | | g) | Which is the protocol that maps IP address to its MAC address? | CO1 | L3 | | h) | For intra-process communication which is the special IP needed? | CO1 | L3 | |  | | | | | Q. 2) | Attempt any One (10 Marks Each) |  |  | | a) | Consider a message represented by the polynomial M(x) = x5 + x4 + x. Consider a generating polynomial G(x) = x3 + x2 + 1 (1101). Generate a 3 bit CRC and show what will be the transmitted frame. How is error detected by CRC? | CO2 | L3 | | b) | Draw and explain 7 OSI layers in detail | CO1 | L2 | |  | | | | | Q 3) | Attempt any One (10 Marks Each) |  |  | | a) | Explain all ARQ techniques to handle errors | CO1 | L2 | | b) | Show the checksum calculation for 10110011 10110011 | CO2 | L3 |  |  |  | | --- | --- | | CO1 | Demonstrate the concepts of data communication at physical layer and compare ISO - OSI model with TCP/IP model. | | CO2 | Explore different design issues at data link layer. | | | | |