

Jalpaiguri Govt. Engg. College
Department of Computer Sc. & Engg.
2nd Internal Examination, Even Sem, 2024

Sub: Computer Network

Sub. Code: PCC- CS602C

Time: 45 Minutes

Full Marks: 15

Answer all the questions:

1. "Good news propagates rapidly, but bad news propagates very slowly in Distance vector routing".
(CO4) 5
2. What is the minimum size of Ethernet frame to detect collision? "Length" field of UDP datagram is 16-bit long. What can be the maximum size of UDP datagram and why? (CO5) 5
3. An ISP is granted a block of addresses starting with 120.60.4.0/22. The ISP wants to distribute these blocks to 100 organizations with each organization receiving just eight addresses. Design the subblocks and give the slash notation for each subblock. Find out how many addresses are still available after these allocations. (CO6) 5

JALPAIGURI GOVERNMENT ENGG. COLLEGE

Dept : Computer Sc. & Engg

Subject :- PCC-CS601(Compiler Design)

Second Internal Test

F.M 15/Time – 45 minutes

Q1. Generate the three address code for the following program fragment

5

while (A<C and B>D) do

if A=1 then C=C+1

else while A<=D do

A=A+3

Q2. Construct LALR parsing table for the following grammar:

10

$S \rightarrow Aa$ $S \rightarrow bAc$ $S \rightarrow dc$ $S \rightarrow bda$ $A \rightarrow d$

2nd Internal/ Soft Skill and Interpersonal Communication/ OEC-CS601/ FM-15/Time: 45 min

1. What is Soft skill development?
2. Define the key aspects of GOAL SETTING.
3. Briefly discuss Maslow's motivation theory.

4

5

6

1. Construct all conditional FP-Trees from the FP-Tree given in Fig. 1. → Min-Supp. Count = 3

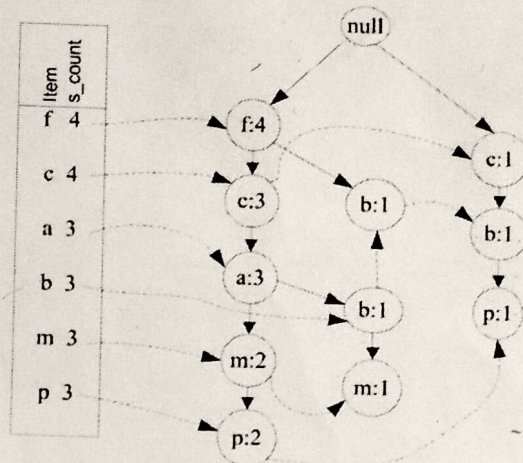


Figure 1 FP-Tree

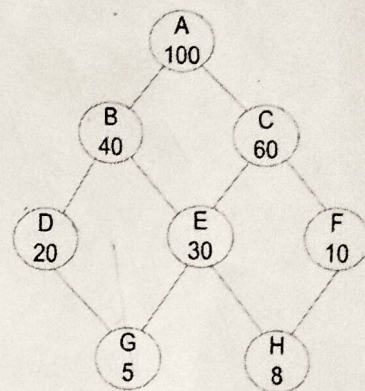


Figure 2 Lattice of views

2. Choose three (3) views to materialize apart from the base cuboid (i.e., A) for the lattice of views given in Fig. 2.

3. Give examples of the following
 - a) Concept Hierarchy
 - b) Bitmap index
 - c) Join index

JALPAIGURI GOVERNMENT ENGINEERING COLLEGE

JGEC/B.TECH/ CSC/HU601A/ 2023-24/ ClassTest-2/2024

Principle of Management

Full Marks: 15

Times: 45 Minutes

Answer any one question:

- 1) What is management? Write function and role of management. Why planning is extremely important in modern organization? 3+6+6
- 2) Name and describe various external sources of recruitment available to organization. Discuss the various steps involved in the process of selection of candidate in job. 7+8

Image Processing (PEC-CS602)

Date of Examination: 07.05.2024 (Internal Exam-2) CSE Dept.

Full Marks: 15

Time: 45 Minutes

Attempt any three. (Each question carries 5 marks)

1. Explain Euler's Theorem as a circular motion in a complex plain and write the expression for $\sin\theta$ and $\cos\theta$ in terms of complex exponentials.
2. Prove that $\mathcal{F}[f(x,y)(-1)^{x+y}] = F(u-M/2, v-N/2)$, where $\mathcal{F}[p]$ denotes the Discrete Fourier transform of the argument p.
3. Show with a suitable example how Discrete Fourier Transform works. (With the help of Sine and Cosine basis functions of different frequencies, correlation, complex exponentials, bins of integer frequency value etc. You may use any non-zero correlation value when required for demonstration purpose).
4. Show graphically the following functions
 - i) $y = -(1/2) \cdot \cos(2x + \pi)$
 - ii) $y = 2 + \sin(x - \pi/3)$