

लोक सेवा आयोग  
नेपाल विविध सेवा, कम्प्युटर अधिकृत राजपत्राङ्कित तृतीय श्रेणीका पदहरूको खुला र आन्तरिक प्रतियोगितात्मक  
लिखित परीक्षाको पाठ्यक्रम  
वस्तुगत बहुउत्तर नमूना प्रश्नहरू (Sample questions)

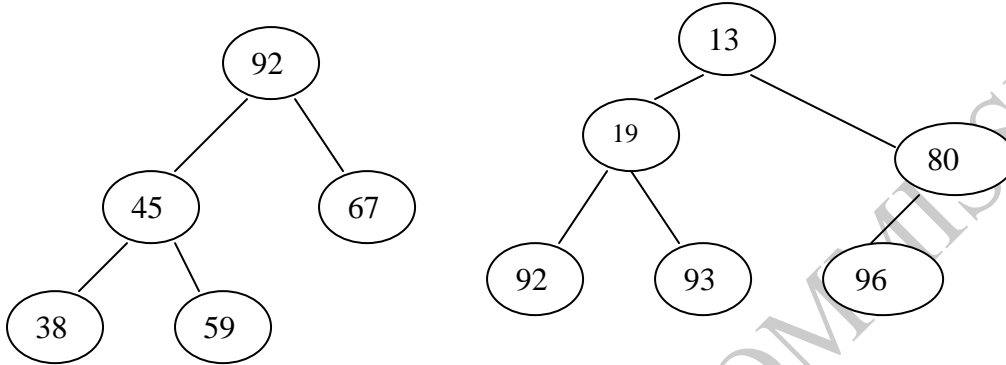
- 1) SCANDISK analyze and repairs damage to which of the following  
A. Physical clusters      B. FAT      C. Lost Clusters      D. All of the above  
**Correct Ans. (D)**
- 2) DOS makes which of the special batch file named  
A. AUTOEXCE.BAT      B. AUTOEXE.BAT  
C. AUTOEXEC.BAT      D. AUTOEXC.BAT  
**Correct Ans. (C)**
- 3) The two parts of the CPU are  
A. Control unit and memory      B. Addresses and ALU  
C. Addresses and Registers      D. Control Unit and ALU  
**Correct Ans. (D)**
- 4) Operating is a .....  
A. System Software      B. Application Software  
C. Presentation Software      D. Database Software  
**Correct Ans. (A)**
- 5) Which key is used to work with non-adjacent cells in excel?  
A. Shift key      B. Ctrl key      C. Alt key      D. Tab key  
**Correct Ans. (B)**
- 6) The database element that represents a correspondence between the various data element is  
A. Data      B. Information      C. Constraints      D. Schema  
**Correct Ans. (D)**
- 7) Currently the most popular database model is  
A. Hierarchical      B. Object-Oriented      C. Relational      D. Deductive  
**Correct Ans. (B)**
- 8) When we download anything from the internet which protocol works:  
A. TCP/IP      B. FTP      C. HTTP      D. ARP  
**Correct Ans. (C)**
- 9) What e-commerce category is the largest in terms of revenue?  
A. Business to Business (B2B)      B. Intra-Business (B2E)  
C. Business to Consumer (B2C)      D. Consumer to Consumer (C2C)  
**Correct Ans. (A)**
- 10) How is data transferred in serial communications?  
A. 10 bits at a time.      B. 1 bit at a time.  
C. 1 byte at a time.      D. 6 bits at a time  
**Correct Ans. (B)**
- 11) With respect to the interface network card, what does the term 10/100 refer to?  
A. Protocol speed.      B. A fiber network  
C. Megabits per second.      D. Minimum and maximum server speed  
**Correct Ans. (A)**
- 12) A workstation has just been installed on the Ethernet LAN but cannot communicate with the network. What should you do first?  
A. Reinstall the network protocols.  
B. Reinstall the network interface card driver.  
C. Verify the IP configuration on the workstation.  
D. Verify the link status on the computer's network card.  
**Correct Ans. (C)**
- 13) To represent an entity in a model which of the following conventions are used  
A. Soft box with any dimension  
B. Singular, unique entity name  
C. Entity Name in uppercase  
D. All of the Above.  
**Correct Ans. (D)**

- 14) SQL statement used to
- Data Retrieve
  - Data manipulate
  - Data control
  - All of the above.

**Correct Ans. (D)**

**विषयगत नमूना प्रश्नहरू (Sample questions)**

- 1) Merge operation between two heap trees



H1: A max Heap

H2: A min Heap

- 2) Preorder and postorder traversals of a binary tree given as below:  
 Preorder: u1 u2 u3 u4 u10 u8 u5 u9 u6 u11 u7  
 Postorder: u4 u10 u3 u8 u2 u9 u11 u7 u6 u5 u1  
 Obtained a binary tree, which resembles with traversals ?
- 3) Use the do-while loops in nested form and produces the following output in Java.
- ```

Multiple Tables
1    2    3
2    4    6
3    6    9
    
```
- 4) Using C program Draw Result
- ```

1    2
2    3
3    4
4    5
    
```

- 5) Consider the following schema:

*Suppliers* (sid:integer, sname:string, address: string)

*Parts*(pid: integer, pname: string, color: string)

*Catalog* (sid: integer, pid:integer, cost: real)

The key fields are underline, and the domain of each field is listed after the field name. Thus sid is the key for suppliers, pid is the key for parts, and sid and pid together form the key Catalog. The catalog relation list the prices charged for parts by suppliers. Write the following queries in relational algebra, SQL

- Find the Name of the suppliers who supply red part.

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*Solution:*

**a. Relational algebra**

$\Pi_{sname}(\Pi_{sid}(\Pi_{pid} \sigma_{color='red'} Parts) \bowtie Catalog) \bowtie Suppliers)$

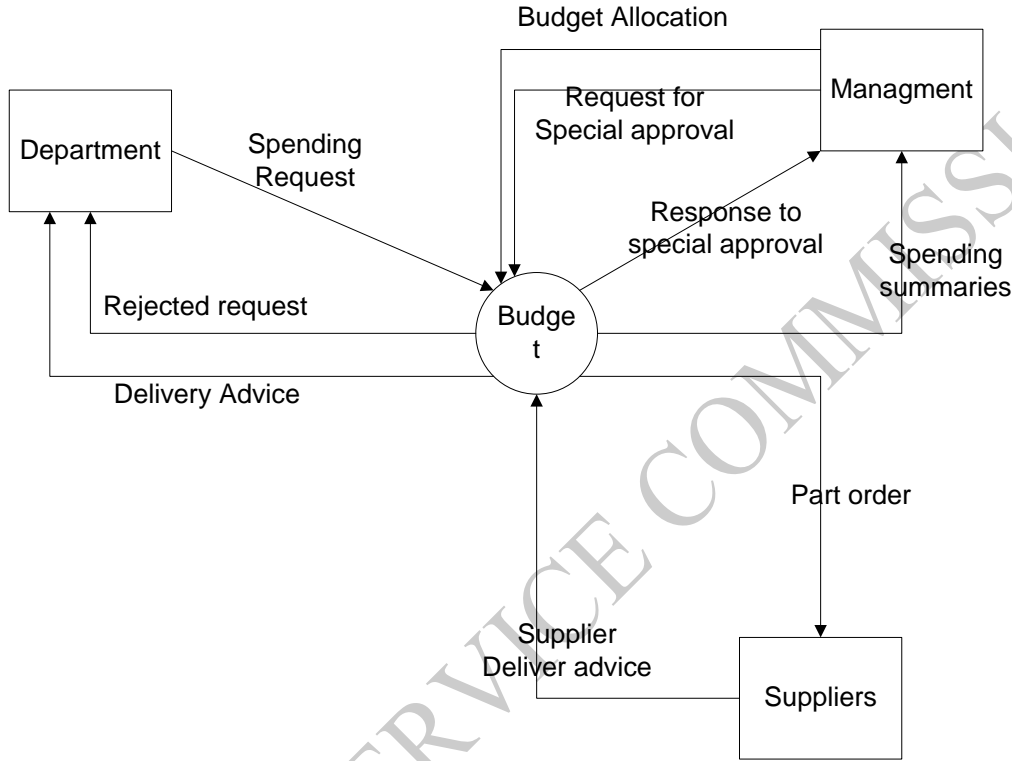
**b. SQL**

*SELECT S.sname*

*FROM Suppliers S, Parts P, Catalog C*

*WHERE P.color='red' AND C.pid=P.pid AND C.sid=S.sid*

6) Develop Top level DFD from Context Diagram



७. विद्युतिय अभिलेख तथा डिजिटल हस्ताक्षर प्रभाणीकरण गर्ने निकायको इजाजत पत्र कुन कुन अवस्थामा नेपाल सरकारले रद्द गर्न सक्तछ । बुदागत व्याख्या गर्नुहोस् ।
८. राष्ट्रिय सूचना प्रविधि केन्द्र (National Information Technology Center वा NITC) को काम, कर्तव्य र अधिकार के के हुन् ? छोटकरीमा वयान गर्नुहोस् ।
९. e-Governance तथा e-Banking बारे परिचय तथा प्रयोगबारे छोटो व्याख्या गर्नुहोस् ।
१०. सूचना प्रविधि नीति २०५७ ले किटान गरेको रणनीति अन्तरगतका कुनै १० वटा बुदाहरु लेख्नुहोस् ।
११. सूचना प्रविधि नीति २०५७ ले विद्युतीय व्यापार आदिको प्रवर्धन गर्न बनाएका ४ वटा बुदाहरु प्रस्तुत गरी व्याख्या समेत गर्नुहोस् ।
१२. नेपालमा कम्प्युटर प्रविधिको शुरुआत, विकास तथा प्रयोग बारे वयान गर्नुहोस् ।

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लिखित परीक्षाको पाठ्यक्रम  
प्रयोगात्मक परीक्षाका नमूना प्रश्नहरू

1. Get IP address from given computers which are Network.
  - a. Give privileged share only database administration.
  - b. Determine if the following address are on local or remote network.  
Node 1: 192.255.16.8  
Node2: 192.225.14.8  
Mask: 255.255.255.0
2. Create tables Student, Teacher, Course is SQL .  
Student (Sid, Sname, subject, level)  
Teacher (Tid, Tname, subject,)  
Course (Cid, Cnumber, Tname, level)
  - a. Insert 10 values
  - b. Delete first two values.
3. Given a string  
String S("123456789")  
Write a program in C++ that displays the following:

1  
232  
34543  
4567654  
567898765