Roll Number		

SET **A**

INDIAN SCHOOL MUSCAT
SECOND PRE - BOARD EXAMINATION
COMPUTER SCIENCE(Code-083)

CLASS: XII TERM 2 Max.Marks: 35

MARKING SCHEME			
SET A	QN.NO	VALUE POINTS **Section-A** **Each question carries- 2 marks**	MARKS SPLIT UP
	1	A stack is a basic data-structure where insertion and deletion of data takes place at one end called the top of the stack(LIFO) Basic Operations performed on stack are: push – Insertion of elements in the stack. pop - Deletion of element from the top of the stack. peek- Viewing top most element without removing it. display- To view all the elements of the stack.	1 + 1 = 2
	2	i) VoIP – Voice over Internet Protocol URL - Uniform Resource Locator ii) Telephone line, Twisted Pair Cable, Coaxial Cable, Fiber Optic Cable	1 + 1 = 2
	3	Alternate Key– The candidate key which is not a primary key is known an alternate key. Foreign Key- A non-key attribute, whose values are derived from the primary key of some other table, is known as foreign key in its current table.	1 + 1 = 2
	4	a) 5 Records b) [ ] (empty list)	1 + 1 = 2
	5	a) Designation count(*) --- Manager 2 Clerk 2 b) MAX(Salary) MIN(Salary) --- 80000 32000 c) Firstname Lastname --- Ravi Kumar Ritu Vinod d) Empid Firstname --- E215 Ritu E244 Ankita	½ x 4 = 2

	6	i) USE EXAM ; ii) char(n) – Specifies fixed length string. If length of the string is less than 'n' then blanks are added to the remaining space. varchar(n) – Specifies variable length string. If length of the string is less than 'n' no blank spaces are added	1 + 1 = 2
	7	a) Cardinalty – 5 , Degree – 5 b) Watchid and Watch_name can be primary key. The values appearing in the columns Watchid and Watch_names does not have any duplicate values. **OR** a) Watchid and Watch_name are candidate keys. The values appearing in the columns Watchid and Watch_names does not have any duplicate values. b) Watchid is the foreign key (Watchid is present in the table WATCHES and it is primary key there).	1 + 1 =2
		Section-B **Each question carries- 3 marks**	

	8	**# Question No 8 (first option)**
		M = [90,81,72,75,98,68, 87]
		def PUSH(S,M):
		S.append(M)
		def POP(S):
		if S!=[]:
		return S.pop()
		else:
		return None
		ST=[ ]
		for k in M:
		if k>=80:
		PUSH(ST,k)
		while True:
		if ST!=[]:
		print(POP(ST),end=" ")
		else:
		break
		
		Sample Output of the code should be:
		87 98 81 90
		
		OR
		
		N = [10, 13, 33, 46, 11, 79, 44, 17, 25, 36]
		def PUSH(S,N):
		S.append(N)
		def POP(S):
		if S!=[]:
		return S.pop()
		else:
		return None
			(3)
			
			1 Mark for PUSH () Function.
			
			1 Mark for POP() Function.
			
			1 Mark for correct function calls and displaying the output.

		ST=[ ]
		for k in N:
		  if k%2!=0:
		  PUSH(ST,k)
		while True:
		  if ST!=[]:
		  print(POP(ST),end=" ")
		  else:
		  break
		
		Sample Output of the code should be:
		  25 17 79 11 33 13	

	9	i) ALTER TABLE PRODUCT ADD REMARKS VARCHAR(25) ; ii) Data Definition Language (DDL)-It allows to create database objects like creating a table, view or any other database objects. Eg: CREATE,DROP and ALTER(Any two) Data Manipulation Language(DML) - ➢ It allows to perform following operation on table ✓ Retrieval of information stored in table ✓ Insertion of new data in table ✓ Modification of existing data in table ✓ Deletion of existing data from table Eg: SELECT, INSERT, UPDATE ,DELETE(Any two)	1 1 + 1 = 2

	10	CREATE DATABASE TEXTILE ;
		USE TEXTILE ;
		CREATE TABLE GARMENT(GCODE CHAR(5) Primary Key,
		  GNAME CHAR(25) NOT NULL ,
		  SIZE CHAR(4),
		  COLOUR CHAR(15),
		  PRICE DECIMAL(10,2) NOT NULL,
		  QTY INT) ;
			1 Mark for correctly creating database.
			
			2 Marks for correctly creating the table.

		Section-C **Each question carries- 4 marks**	
	11	a) SELECT * FROM ITEMS ORDER BY INAME ASC ; b) SELECT INAME,PRICE FROM ITEMS WHERE PRICE BETWEEN 10000 AND 22000 ; c) SELECT TCODE,COUNT(*) FROM ITEMS GROUP BY TCODE ; d) SELECT INAME,TNAME,PRICE,QTY FROM TRADERS T, ITEMS I WHERE T.TCODE = I.TCODE AND QTY > 150 ;	1 +1+1+1= 4

	12	i) Bus Topology any one advantage • Easy to implement and extend • Well suited for temporary networks that must be set up in a hurry • Typically the least cheapest topology to implement Bus Topology any one disadvantage • Difficult to administer/troubleshoot • Limited cable length and number of stations • A cable break can disable the entire network; no redundancy • Maintenance costs may be higher in the long run **OR** Switch(Any one point) • Switch is a device that is used to segment network into different Sub-networks (Subnet) to control the network traffic. It provides bridging functionality with greater efficiency. • It is responsible for filtering data in a specific way and for forwarding packets between LAN segments. Router(Any one point) • Router is a networking device which connect multiple Networks irrespective of their Protocols. • Routers works at IP Address where as Bridge works at MAC address. ii) a) Packet switching(Any points can be included from below) In packet switching technique, the entire data is divided into small fragments called packets. Each packet is of a fixed size, usually 128 bytes or 512 bytes. Packet switching is similar to post office operation. Each packet has a source address as well as destination address (IP address) for being transmitted, in the same way as a postman delivers a letter to a specific destination address. b) Message switching(Any points can be included from below) In message switching, the sender sends the data to a switching office first, which is then stored in its buffer. It then checks the available link and, if it is free, the data is relayed to another switching office. This process goes on until the data is sent to the destination (receiver).As the data is first stored in a buffer and then sent to the next switching office, it is also called store and forward switching technique.	1 +1 = 2 1 + 1 = 2
	13	b) The server should be placed in the Admin Unit since it has the most number of computers(150). Housing the server here will make the most of the traffic local, which is required by 80-20 network design rule.	1+1+ 1+1 = 4

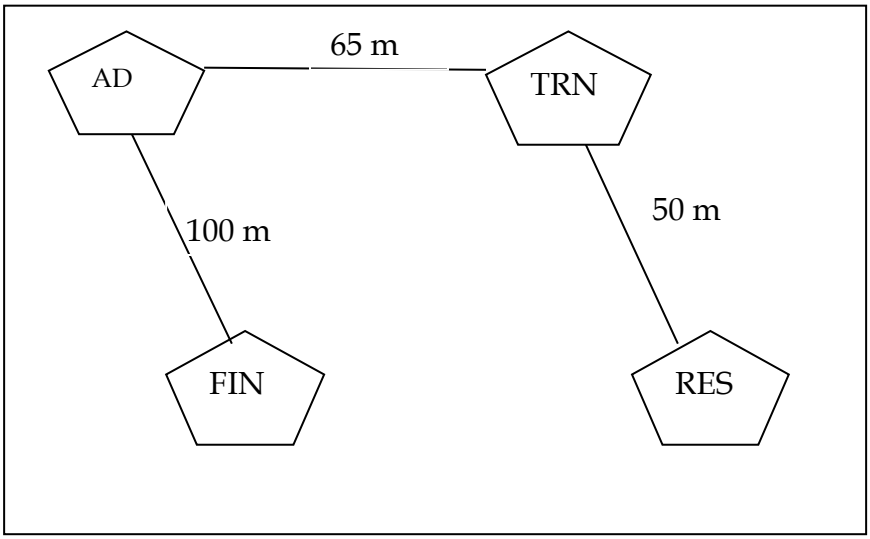
c) Repeater: As per Layout-1, Layout-2 and Layout-4 Between Admin Unit and Finance Unit as the distance between them is 100mts.
As per Layout-3, No repeater needed.

Hub/ Switch : In each block as they help to share data packets within the devices of the network in each block.

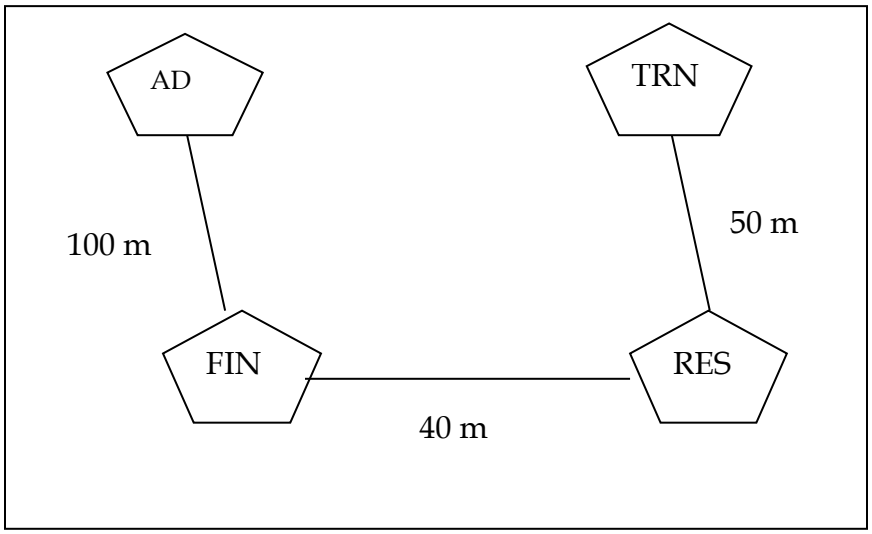
d) iii) Fiber Optic Cable.

a) BUS Layout (Any one of the following Bus Layouts or any other possible layouts)

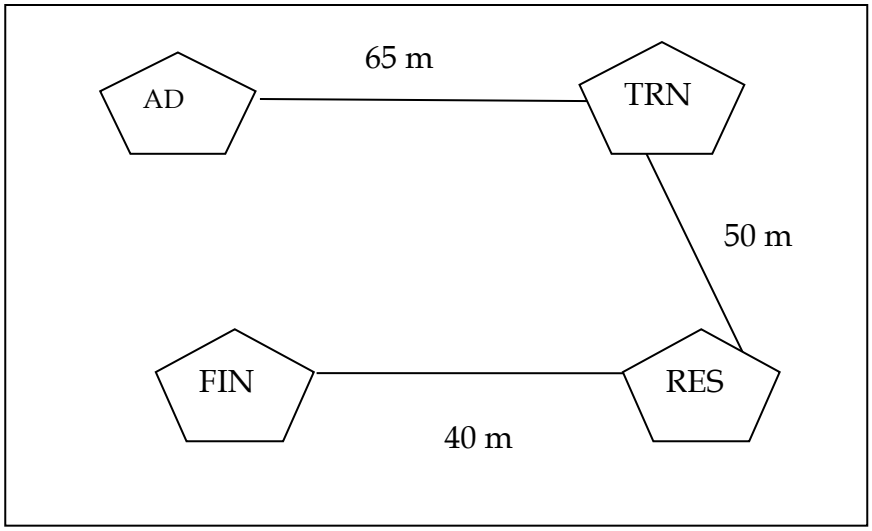
Layout-1



Layout-2



Layout-3



Layout-4