



மாகாணக் கல்வித் திணைக்களம், வடக்கு மாகாணம்
Provincial Department of Education, Northern Province



Provincial Department of Education Northern Province மாகாணக் கல்வித் திணைக்களம் வடக்கு மாகாணம்
Provincial Department of Education Northern Province மாகாணக் கல்வித் திணைக்களம் வடக்கு மாகாணம் Provincial

கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை - 2016 - மார்ச்
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தகவல் தொடர்பாடல் தொழினுட்பவியல்
Information Communication Technology

80

E

I,II

மூன்று மணித்தியாலம்
Three Hours

Part I

Answer the all questions

(1) Consider the following conversion,

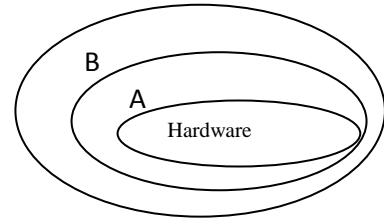
Data → Processing → X

Which is most suitable for representing X?

- 1) Testing 2) Visualization 3) Producing 4) Information

(2) Which of the following is most suitable for Labels A and B shown in the nearest figure?;

- 1) A = Operating system > B = Application Software
2) A = Application Software > B = Utility Software
3) A = Utility Software > B = Application Software
4) A = System Software > B = Application Software



(3) Which of the following is the correct order in increasing speed of modern storage Medias?

- 1). Memory Registers, Cache memory, Random Access memory, Read only memory
2) Read only memory, Cache memory, Random Access memory, Memory Registers
3). Read only memory, Random Access memory, Cache memory, Memory Registers
4). Read only memory, Random Access memory, Memory Registers, Cache memory

4). The capacity of Random Access memory of a computer is 8GB. Which is equivalent to that capacity of memory?

- 1).8192 Bytes (3) 8192 MB
2) 8192 KB 4) 8192 TB

5) Which is the most suitable field for primary key to store data of students in a school in a Database?

- 1) Student Name 3) Student Date of Birth
2) Student Identity Number 4) Student Full Name

6). Which are included into central processing unit of a computer?

- 1) Arithmetic and logic unit, control unit, Input/output devices
2) Arithmetic and logic unit > Arithmetic and logic unit > Secondary storage
3) Arithmetic and logic unit, control unit, Memory register
4) Arithmetic and logic unit > control unit > Random Access memory

7). Find out the incorrect statement about the computer ports?

- 1) All the ports are directly connected to control unit of computer.
2) VGA Port is called the Graphic Port

- 28) Considering the Operator precedence of computer languages , calculate the value of $5 - 4 \times 3 + 7$?
 1) 10 2) 11 3) 0 4) (-35)

- 29) Consider the following logical functions P, Q, R

P : (A=B) OR (C>=D)
 Q : (A<=B) AND (C>= D)
 R : NOT (A=<C)

If the value of A, B, C, D is 50, 45, 50, 43 respectively then which of the following represent the correct output of P, Q, R respectively

- 1) True, False, False 3) True, True, False
 2) True, True, True 4) True, False, True
- 30). Consider the logic gate which has three inputs A, B, C and the output F. The following observations were made regarding that logic gate.
 if one of the input is 0, then output will be 0.
 if all the inputs are 1 then the output will be 1.
 What is the output regarding this scenario.?

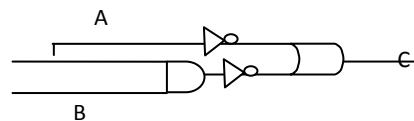


- 31). If a student wants to be qualified in an examination he should sit the examination for S_1, S_2, S_3 and S_4 . He must pass the two compulsory subjects S_1 and S_2 and he should pass in one of the optional subjects S_3 or S_4 . Which of the following represents the above scenario.

- 1) S_1 AND S_2 AND (S_3 AND S_4) 3) S_1 OR S_2 AND (S_3 OR S_4)
 2) S_1 AND S_2 AND (S_3 OR S_4) 4) S_1 AND S_2 AND (S_3 OR S_4)

- 32). Consider the following logic gate with the input A and B and the output C
 if the output $C = 0$ then which of the following is correct regarding the inputs?

- 1) Always A should be 1
 2) Always A should be 0
 3) Always B should be 1
 4) Always B should be 0



- 33). A situation where steps are executed depending on whether a condition of an algorithm is satisfied or not is called

- 1) Coding 2) Iteration. 3) Sequence 4) Selection

- 34). Which of the following is correct regarding computer networks.

A – computer resources shared by multiple users
 B – able to control central software
 C – Always two/above two computers connected with cables when create a network.

- 1) only A, B 3) only B, C
 2) only A, C 4) All of A, B, C

- 35). Which of the following statement/s is/are correct regarding data transmission.

A – An example of full duplex mode is telephone.
 B – data transmit to one direction at a time in Half- duplex Mode
 C – Data transmit only one direction in Simplex Mode

- 1) only A
- 2) only B

- 3) only A, B
- 4) all of A, B, C only

36). which is correct about the output of the given pseudo code

```

Begin
  Read n1, n2
  if n1 > n2 then
    output = n1
  else
    out put = n2
  end if
  Display output
End.

```

- 1) Find the largest number of two unequal numbers.
- 2) Adding two numbers.
- 3) Find the average of two numbers.
- 4) Multiplying two numbers.

37). What is the output of the given pseudo code .

```

if (marks >= 75)
  R = A
else
  if (marks >= 63)
    R = B
  else
    if (marks >= 55)
      R = C
    else
      if (marks >= 40)
        R = S
      else
        R = Fail
      endif
    endif
  endif
endif
endif

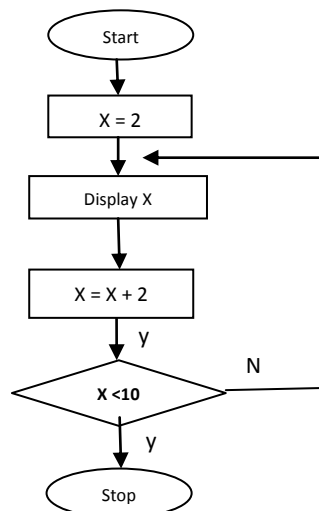
```

if value of marks is 55 then what value will be reserved for R.

- 1) A
- 2) B
- 3) C
- 4) S

38). What is the output of the given flowchart.

- 1) 2, 4, 6, 8, 10
- 2) 4, 6, 8, 10
- 3) 2, 4, 6, 8
- 4) 0, 2, 4, 6, 8



39). Which is using as an assignment operator in Pascal?

1) :=

2) =

3) :

4) ;

(40) Find out the correct order of process in a system development life cycle?

A – Identification of requirements

B – Maintenance of the system.

C – Designing the solution

D – Deployment of the system

E – Coding the solution.

F – Testing and debugging

1) A, C, E, B, D, F

2) A, C, E, F, B, D

3) A, C, E, D, F, B

4) A, C, E, F, D, B

Part II

Answer only five questions including first question.

(1) A logic gate should be prepared for a water pump which will water the plants automatically. If the humidity of soil is less and temperature of soil is less, the water pump will automatically water the plants.

The truth table for the function of water pump is shown below.

Situation when the:

A- humidity of soil is less (1)

humidity of soil is high (0)

B- temperature of soil is less (1)

temperature of soil is high (0)

C- water pump pumps the water automatically (1)

water pump doesn't pump the water automatically (0)

A	B	C
0	0	
0	1	
1	0	
1	1	

Copy down the truth table in your answer sheet and complete the last column. Draw the logic gate for that.

- I. Classify the computers according to the technology.
- II. Convert Hexadecimal number D7 to binary number? Show your calculations.
- III. Write the difference between primary key and foreign key.
- IV. Based on the functionality of the Operating System it can be classified into four types. Write down that four types.
- V. Find out the suitable pairs from tables A and B. Write their labels(in pairs) in your answer sheet.

Table A	Table B
A – Full duplex	P - Television
B – half duplex	Q – Telephone
C – simplex	R – Willkie talkie

- VI. What is the main purpose of Unicode?
- VII. The user can create documents using internet as well if the computer does not have a Word Processing software. Give two suitable software for this? .
- VIII. Compare structured and object oriented paradigms?

IX. Fill in the blanks using with the correct words.

[Line out, wifi signal, VGA, Network switch, USB, PS/2]

-is used to connect computer to the internet.
 -port is used to connect monitor to system unit.
 - Speakers are connected through
 -is used to connect computers to a network in a school computer room
- (10x2=20marks)

(2)

(i) An operating system has many application software.

- What do you meant by partitioning?
- Give 2 reasons that why do we partition hard disk?
- fill in the blanks using the following phrases within the bracket(defragmentation, task manager, Antivirus software, data integrity)
 - it uses to protect computer from outer interference -----
 - it uses to give information about functioning programme and processor -----
 - it uses to join small spaces as big in the disk -----
 - it uses to maintain feasibility from primary storage to target storage-----

(ii)

- Give 2 examples to the electronic presentation software?
- What are the advantages got by the presenter and user when we do a presentation using Electronic presentation software?
- Write the short cut keys to the following using Electronic presentation software.
 - Slide Show
 - Next Slide
 - Show/Hide White Screen

(2,2,2,1,1 ½,1 ½ =10 marks)

(3) Price details of items in four shops are shown in the following spreadsheet.

	A	B	C	D	E	F	G
1	Item	Shop A	Shop B	Shop C	Shop D	Lowest Price	High Price
2	17" LCD	17000.00	16500.00	19000.00	18500.00		
3	Mother Board	7000.00	8000.00	7500.00	6750.00		
4	Hard disk	4000.00	5000.00	6785.00	6000.00		
5	Mouse	475.00	527.00	568.00	698.00		
6	UPS	5050.00	4786.00	5896.00	3698.00		
7	Keyboard	569.00	579.00	468.00	705.00		
8	Total cost						

- Write down the formulae in cell F2 to find out the lowest price of 17" LCD..
- Consider the following steps for copy the formulae in cell F2 to cells F3 to F7 and find the suitable answer for (A), (B) and (C)

move the cell pointer (curser)to cell(A).....Then move the mouse pointer to the corner of the cell.....(B).....until pointer changes to '+'. Press the left button of the mouse and drag it to the cell.....(C)

- III. Write the formulae in cell B8 to find the total cost of item?
 IV. Write the formulae in cell G2 to find the Maximum price of goods.
 V. Write the cell address that automatically updated when the price of C5 cell changed?
 (2,3,1,2,2=10 marks)

(4) We can get Communication and data transmission very fast due to the rapid change of information communication technology in the modern world.

- (I) Write the basic components of data communication.
 (II) Wi-Fi adapter has become the most popular media in computer networking. What is the technology/wave used in Wi-Fi?
 (III) What do you mean by computer network? Mention the types of computer network?
 (IV) Network Topology is used that we connect computer in a computer network. Draw 5 network topology Diagrams and name it?

(2 1/2, 2,3, 2 1/2 =10

Marks)

(5) The following database table is shown the details of teachers in a school.

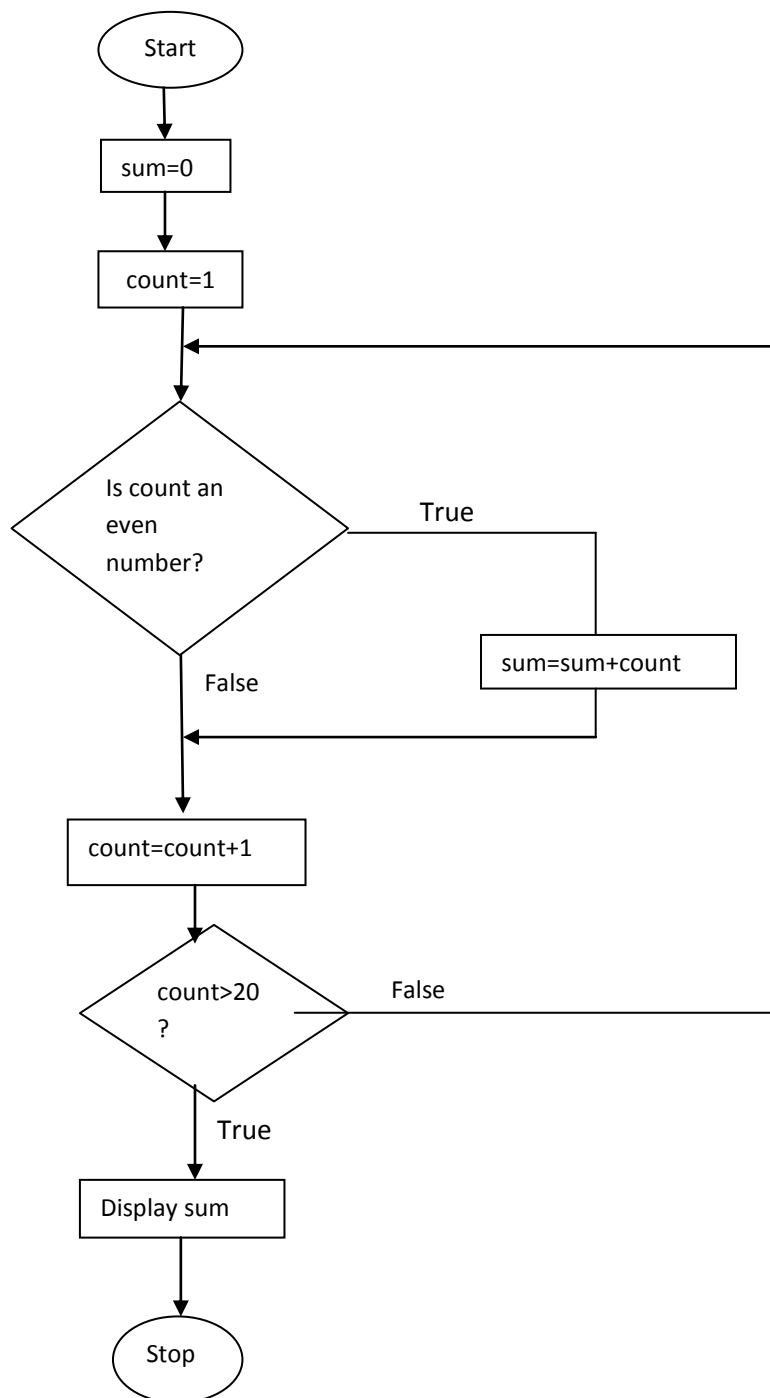
Teacher Code No	Full name	DOB	Address	Subject code	Subject name
G1	Raj Kumar	12.09.1977	Meesalai East, Meesalai.	ICT	Information Communication Technology
G2	Raam Ravi	24.12.1980	Chavakachcheri	SCI	Science
G2	Raam Ravi	24.12.1980	Chavakachcheri	MAT	Maths

A particular teacher allocated for a particular subject. A teacher can teach more than one subject.

- (i) Explain briefly about “data duplication” using above table?
 (ii) Explain briefly that why do we omit data duplication?
 (iii) Write the most suitable data type in every field of the above table?
 (iv) In the above table, when we omit data duplication, Teacher code no, Full name, DOB and address fields only will be displayed. So, what is the field that can be used as a primary key in the new table?

(2,2,4,2=10 Marks)

(6) Consider the following flowchart.



- (i) Write the pseudo code to the above Flowchart?
- (ii) The above pseudo code converted into pascal coding. Find out the output of the program.

(6,4=10 Marks)

(7) Explain briefly **four** of the following topics.

- 1) Switch and hub
- 2) Online shopping
- 3) Free and Open Operating system
- 4) e-banking
- 5) Artificial Intelligence

((2 ½ x 4 =10 Marks)