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Provincial Department of Education NWP Provincial Department of Education NWP Provincial Department of Education NWP Provincial Department of Education - NWP

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Provincial Department of Education - NWP

20	E	I

First Term Test - Grade 13 - 2020

Index No : ..... Information and Communication Technology I Two - Hours

Instructions :

- **Answer all the Questions**
- **Write down your index number in the space provided in the answer sheet.**
- **Select the correct or most appropriate answer from the given answers of 1,2,3,4 or 5**

1. Which of the following are the correct validation techniques?

A - Type check **B - Direct check** **C - Range check**
D - Local or remote check **E - Presence check**

(1) ABC only. (2) ACE only. (3) BCD only. (4) BDA only. (5) CDE only.

2. Mobile computing is used in ……..…….. and, for that a ……..……..can be used.

(A)	**Processing data in different locations**	**-**	**Desktop computer**
(B)	**Sending an email while a person is going to his office**	**-**	**Laptop computer**
(C)	**Processing data wirelessly without depending on a specific place.**	**-**	**Laptop computer**
(D)	**Creating a social network account**	**-**	**Smart phone**
(E)	**Informing an emergency message**	**-**	**Mobile phone**

Which of the following answer can be used to fill in the above blanks?

(1) ABC (2) BCD (3) CDE (4) DEA (5) EAB

3. What is the answer that contains the computers designed only using the concept of Von Neumann Architecture?

(1) ENIAC and UNIVAC (2) ENIAC and EDSAC (3) EDSAC and EDVAC
(4) CDC 1604 and Mark I (5) CDC 1604 and CDC 3600

4. Mark–I was made using electronic valves and the electronic valves were designed by …… in ……..……..…… era.

(1) Howard Aiken, Electronic (2) John Mauchly, Electronic
(3) Lee De Forest, Electro mechanical (4) J. Presper Eckert, Electro mechanical computer
(5) Von Neumann, Electronic

5. Consider the following statements.

A. Execution of the instructions.
B. Accessing the memory locations of the instruction
C. Decoding the instructions.
D. Fetching the next instruction from the main memory
E. Storing the results

What is the correct order of the Fetch-Decode-Execution cycle according to the Von Neumann computer architecture from the following answers?

(1) ABCE (2) BCDE (3) CBDE (4) DBAE (5) DCAE

6. Consider the following data storage devices.

A - Optical storage B- Cache memory C- Solid state devices.
D- Memory registers E-Main memory

Which of the following are the deseeding order of storage devices considering the read/write speed of data and the cost of storing an average data bit?

(1) BCDEA (2) BDAEC (3) DBECA (4) DEBCA (5) EDBAC

7. What is the correct representation of (-45) in sign magnitude and one's complement method respectively?

(1)11010010 and 00010010 (2) 00101101 and 10101101
(3) 10101101 and 11010010 (4) 11010010 and 11010011
(5)10101101 and 11010011

8. What is the correct bit sequence that was received after the one's complement values of (+45), (-45) and (-53), simplified according to the bitwise XOR operation?

(1) 00101101 (2) 00110101 (3) 11010010 (4) 11001010 (5) 11111111

9. What is the correct answer when the Boolean expression $A\bar{B} + B\bar{C} + \bar{A}C$ is converted into POS form?

(1) $(\bar{A}+\bar{B}).(\bar{B}+C).(\bar{A}+\bar{C})$ (2) $(\bar{A}+B).(B+C).(\bar{A}+C)$
(3) $(\bar{A}+\bar{B}+\bar{C}).(A+B+C)$ (4) $(\bar{A}+\bar{B}+C).(A+\bar{B}+C).(A+\bar{C})$
(5) $(\bar{A}+\bar{B}+\bar{C}).(A+B+C)$

10. The logical memory that was divided equal to the size of the frames is known as,

(1) Pages (2) Frames (3) The page table (4) Segments (5) Holes

11. Storing the data send to the output devices temporarily is known as,

(1) spooling (2) buffering (3) Caching (4) Segmentation (5) Swapping

12. What is/are the correct statement/statements from the following regarding Open Systems and Closed Systems?

A - Outputs of a closed system are taken back as inputs.
B - While a closed system takes inputs from the environment, it doesn't give outputs.
C - Outputs of an open system release its outputs towards inside or outside.
D - An open system always takes inputs from the surrounding environment.

(1) D only. (2) A, C only. (3) A, D only. (4) A, B, C only. (5) B, C, D only,

13. Consider the following statements regarding Pilot and Parallel deployment methods.

A - Pilot deployment is more costly than parallel deployment.

B - You can get more user training from a parallel deployment.

C - In pilot deployment, the same task occurs twice.

Which of the above statements is correct?

(1) A only. (2) B only. (3) A, B only. (4) A, C only. (5) A, B, C only.

14. Which of the following statements about the system development process is correct?
    (1) The data about documents exchanged in the system are stored in the Data Dictionary.
    (2) The Entity Matrix represents the relationship between functional requirements and non-functional requirements of the system.
    (3) Test Cases are filed during the system development phase.
    (4) The White Box Testing only checks if the output is correct related to the input.
    (5) The Black Box Testing fails when using an independent test group.

15. Select the answer that contains the correct order of the OSI layer performing the respective functions of multiplexing, encryption and data transmission methods (simples, half-duplex ...etc.)

(1) Transport, Session and Network (2) Transport, Session and Presentation

(3) Data Link, Transport and Session (4) Presentation, Data Link and Transport

(5) Data Link, Transport and Session

16. What is the TTL value when a data packet is sent from a computer of a certain network to a host computer of another computer network through 04 routers and received back, where the packet is sent in order to check the connectivity?

(1) 4 (2) 8 (3) 251 (4) 247 (5) 255

17. The subnet mask of a certain network is 255.255.252.0 and its broadcast address is 120.100.47.255.

(1) 120.100.44.0 (2) 120.100.40.0 (3) 120.100.46.0

(4)120.100.46.254 (5)120.100.0.0

18. There are 5 subnets in a certain network. One of their Network address is 170.20.64.0. Its broadcast address is,

(1) 170.20.64.127 (2) 170.20.95.255 (3) 170.20.91.255

(4) 170.20.127.255 (5) 170.20.64.255

19. What is the suitable subnet mask for a computer network with 600 hosts?

(1) 255.255.252.0 (2) 255.255.254.0 (3) 255.255.255.128

(4) 255.255.248.0 (5) 255.255.240.0

20. Select the answer that contains the protocols those can only be seen in the Network Layer?

(1) PPP, IMAP, ARP (2) ICMP, ARP, TCP (3) ARP, RARP, IGMP

(4) SNMP, PPP, IGMP (5) IGMP, RIP, ICMP

21. Which of the following is an IP address that can only be assigned to a Wide Area Network (WAN)?
(1) 10.50. 31.0 (2) 10.192.168.0 (3) 172.15.192.0
(4) 172. 20. 192. 0 (5) 192.168.10.0

22. Which of the following answer does not express an intention of using a digital signature?
(1) Confirming whether the message has been changed during the transmission.
(2) Confirming the person who sent the message.
(3) Maintaining the confidentiality of the message.
(4) Prevent the sender of the message from declaring that he or she did not send the message.
(5) Adding a legal validity for the message.

23. Consider the following statements regarding databases:
A - A candidate key is used to identify a field / fields uniquely.
B - Composite primary key cannot be used to identify fields uniquely.
C - Primary key cannot be null.
Which of the following is true regarding the above statements?
(1) A only. (2) B only. (3) C only. (4) A & C only. (5) B & C only.

24. Consider the following relational schema:
Student_Mark (student_id, subject_code, term, mark)
In this relation student_id, subject_code, term and mark are …… while student_id and subject_code are the examples for ……
What are the most suitable terms that can be used to fill in the above blanks respectively?
(1) attributes , alternate keys (2) records, candidate key (3) attribute, foreign key
(4) records, composite primary key (5) relation, primary key

- **Use the following relational schema to answer the questions 25 and 27.**

Programmer (Programmer_id, programmer_name, contact, skill1, skill2, skill3)

A programmer may have more than one skill.

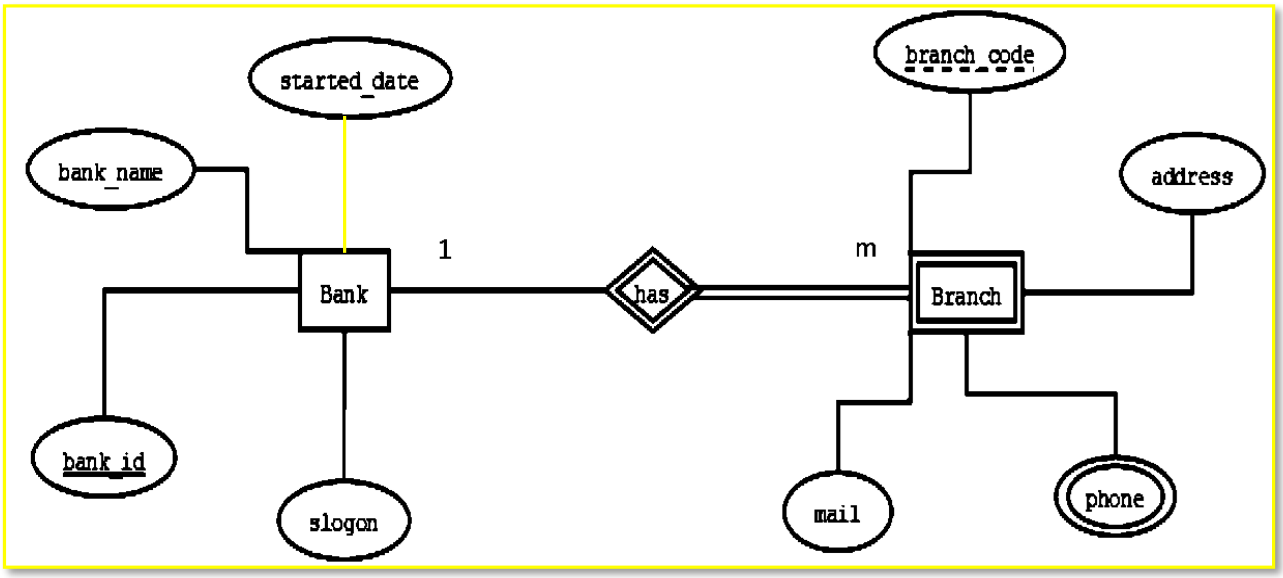
25. Consider the following statements.
A – Programmer table is not normalized.
B – Programmer is a relation that is only in the First Normal Form.
C - According to the normalization definitions, the Programmer relation is in the zero normal form.
Which of the above statement/s is/are correct?
(1) A Only (2) B Only. (3) C Only. (4) A and C only. (5) A, B and C all.

26. Assume that the above relation is converted into database tables. The following SQL query was executed in that database.
DELETE * FROM Programmer;
Which of the following statements is correct regarding the output of the above SQL query?
(1) It can be an empty table.
(2) The Programmer table no longer appears in the database.
(3) This SQL clause is erroneous and shows errors during execution.
(4) All the subsets of the programmer table are deleted from the table but the table still appears in the database.
(5) The data contained in Programmer_id will not be erased as the primary key cannot be zero.

27. The Skill3 attribute should be removed from this link. The SQL clause that can be used for this is,

(1) DELETE FROM Programmer Skill = 3;
(2) DELETE Skill3 from Programmer;
(3) DELETE Skill3;
(4) ALTER TABLE DROP Skill3;
(5) ALTER TABLE Programmer DROP Skill3;

- **To answer questions No. 28 and 29, refer to the Entity Relationship (ER) Diagram given below.**



28. The Phone attribute here is;

(1) A composite primary key
(2) A multivalued attribute
(3) A derived attribute
(4) A composite attribute
(5) A weak attribute

29. Here is the answer that includes the most suitable primary key field for the Branch entity,

(1) branch_code
(2) bank_id
(3) branch_code, phone
(4) branch_code , bank_id
(5) bank_id , phone

30. The correct answer with the table / tables generated by the above Entity Relationship Diagram is,

(1) Bank (bank_id, bank_name, reg_date, slogon, branch_code)
(2) Bank (bank_id, bank_name, reg_date, slogon, branch_code, phone)
(3) Bank (bank_id, bank_name, reg_date, slogon, branch_code) and
Branch(branch_code, address, branch_mail)
(4) Bank (bank_id, bank_name, reg_date, slogon)
Branch(branch_code, address, branch_mail, bank_id) and
Branch_Phone(branch_id, phone_number, bank_id)
(5) Bank (bank_id,bank_name, reg_date,slogon)
Branch(branch_code, address, branch_mail, bank_id) and
Branch_Phone(branch_id, phone_number)

31. Consider the following statements regarding the features of Python programming language.

(A) Having a broad standard library.

(B) Consisting a higher number of Reserved Words.

(C) Portability.

(D) Using Dynamic Data Types.

Which of the above are true for the features of Python Programing Language?

(1) A and B only. (2) A and C only. (3) B, C and D only.
(4) A, C and D only. (5) B , C and D only.

32. What is not a Programming Paradigm?

(1) Procedural programming paradigm (2) Object oriented programming paradigm
(3) Parallel processing paradigms (4) Agile programming paradigms
(5) Functional programming paradigms

33. What is a valid Python identifier?

(1) my 01 (2) my#2 (3) _4mat (4) 3_port (5) _joke 6

34. What is the output when the following Python code is executed?

```
x=" wasana was washing her hands for preventing coronavirus”

print (x.replace("was", "is"))
```

(1) wasana is washing her hands for preventing coronavirus
(2) wasana iss washing her hands for preventing coronavirus
(3) isana is washing her hands for preventing coronavirus
(4) isana is ishing her hands for preventing coronavirus
(5) An error message is generated.

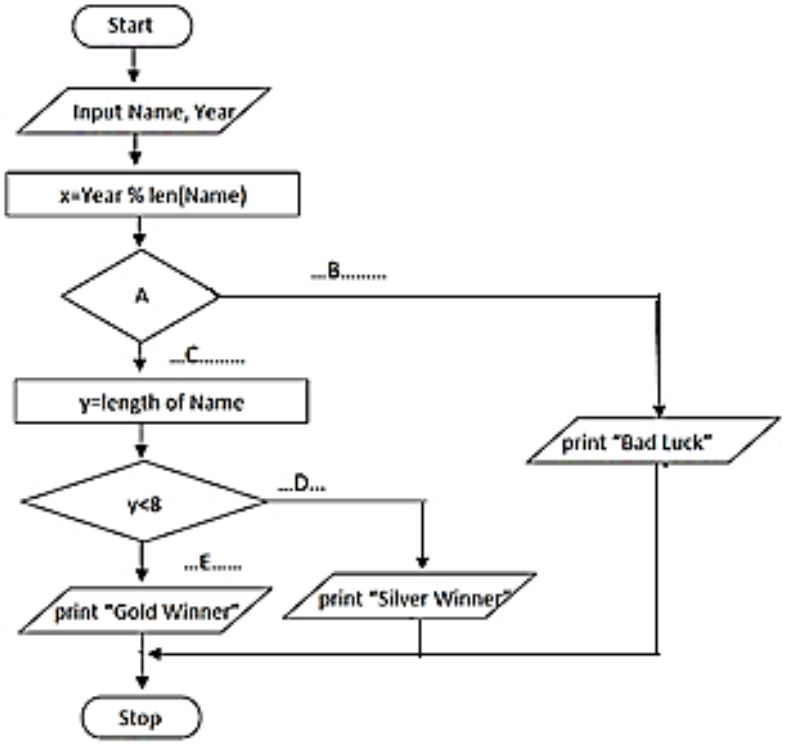
35. What will be the output when the following Python code is executed?

```
x={"ict" , 'Phy' , 45 , 32 , 'ict', 54 ,'phy', 32 , ' " ict " ', 32 , 2.5 }
print(len(x))
```

(1) 6 (2) 7 (3) 8 (4) 9 (5) 11

- **Answer the questions from 36 to 38 using the following flowchart. This is a flowchart of a program that finds the winner when the name and the year of birth of a person are inputted. The selection of the winner is done as given below.**
  - If the birth year of the contestant is **not divisible** without remainders by the number of characters of his/her name, he/she is selected for the second round.
  - At the second round if the number of letters of his/her name is less than 8 she/he is titled as “God Winner” and if not she/he is titled as “Silver Winner”

36. The suitable answers for the blanks A, B, C, D. and E of the above flowchart respectively contains in,



(1) x=0, Yes , No , Yes , No (2) x!=0, Yes , No , Yes , No (3) x=0, Yes , No , No , Yes
(4) x!=0, Yes , No , No, Yes (5) 8=len(x)0, Yes , No , Yes , No

37. What will be the output of the above flowchart if the following inputs are given?

Name = Suraj Year= 2001

(1) Bad Luck (2) Gold Winner (3) Silver Winner
(4) Yes (5) No

38. Which of the following Python code is correct for the flowchart?

(1)
```
Name=input(" your Name : ")
Year=int(input("Year: "))
x=Year%len(Name)
if (x=0):
    y=len(Name)
 if(y<8):
    print("Gold Winner")
else:
    print("Silver Winner")
else:
print("Bad Luck")
```

(2)
```
Name=input(" your Name : ")
Year=int(input("Year: "))
x=Year%len(Name)
if (x!=0):
    y=len(Name)
 if(y<8):
    print("Gold Winner")
else:
    print("Silver Winner")
else:
print("Bad Luck")
```

(3)
```
Name=input(" your Name : ")
Year=int(input("Year: "))
x=Year%len(Name)
while(x=0):
      y=len(Name)
 if(y<8):
      print("Gold Winner")
else:
      print("Silver Winner")

print("Bad Luck")
```

(4)
```
Name=input(" your Name : ")
Year=int(input("Year: "))
x=Year%len(Name)
while (x!=0):
      y=len(Name)
 if(y<8):
      print("Gold Winner")
else:
      print("Silver Winner")
else:
print("Bad Luck")
```

(5)
```
Name=input(" your Name : ")
Year=int(input("Year: "))
x=Year%len(Name)
if (x!=0):
      y=len(Name)
 while(y<8):
      print("Gold Winner")
else:
      print("Silver Winner")
else:
print("Bad Luck")
```

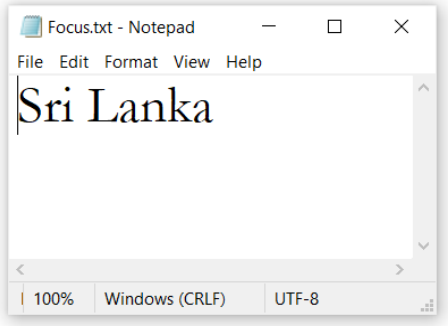
39. What will be the output by executing the following interactive Python program?

>>> 28.75%5+1.25*5-28.75//5

(1) -3.75 (2) -3.0 (3) -0.75 (4) 5.0 (5) 10

40. Consider the following Python code that is connected to the given “”focus.txt” file.

```
myfile=open("e:/focus.txt","r")
x=myfile.read(7)
y=myfile.readline()
z=myfile.readlines()
w=myfile.read()
myfile.close()
print(x)
print(x[1:4])
print(y)
print(z)
```



What is the correct output for the above Python code?

(1)
```
Sri Lan
ri
ka
[]
```

(2)
```
Sri Lan
Sri
Lanka
1
[]
```

(3).
```
Sri Lan
ri
Sri Lanka
[Sri Lanka]
```

(4)
```
Sri Lan
Sri Lanka
7
```

(5)
```
Sri Lan
Sri Lanka
7
[]
```

41. What is the attribute of the <a> (anchor) element that indicates the destination of a hyperlink?

(1) rel (2) src (3) href (4) link (5) alt

42. Consider the following HTML code.

```
<ul>
<li>Hardware</li>
<ul> <li>Secondary Storage Devices</li>
<ul> <li>Hard Disk</li>
<li> Flash Memory</li></ul>
</ul>
</ul>
```

Which of the following is the correct output generated by the above code?

(1)

- Hardware
- Secondary Storage
- Hard Disk
- Flash Memory

(2)

- Hardware
  - Secondary Storage
- Hard Disk
- Flash Memory

(3)

- Hardware
  - Secondary Storage
  - Hard Disk
  - Flash Memory

(4)

- Hardware
  - Secondary Storage
    - Hard Disk
    - Flash Memory

(5)

- Hardware
  - Secondary Storage
    - Hard Disk
    - Flash Memory

43. What is the correct code for connecting a HTML form to the file,"userlogin.php" ?

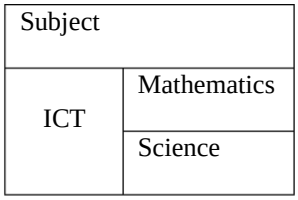
(1) <form action= "GET" method="/userlogin.php" >
(2) <form action= "userlogin.php" method="GET" >
(3) <form submit= "GET" method=" userlogin.php" >
(4) <form submit= "userlogin.php" method="submit" >
(5) <form action= "GET" method=" userlogin.php" >

44. Consider the following HTML code for creating a table to a web page.

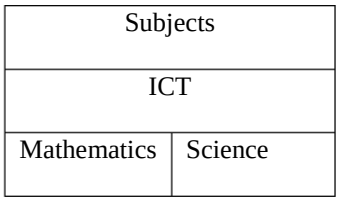
```
<table border="1">
<tr> <td colspan="2">Subject</td></tr>
<tr> <td rowspan="2">ICT</td>
<td>Mathematics</td></tr>
<tr><td>Science</td></tr></table>
```

What is the correct output for the above code?

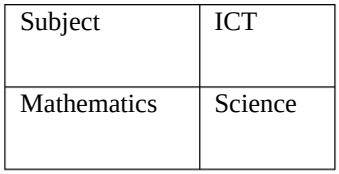
(1)



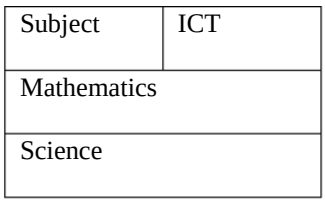
(2)



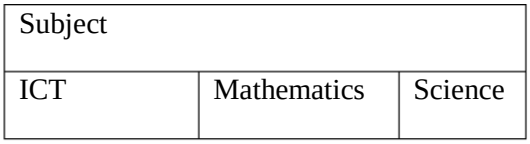
(3)



(4)



(5)



45. Which of the following can be used to style a hyperlink in HTML?
(1) XML (2) JavaScript (3) PHP (4) CSS (5) SQL

46. Consider the codes for a **Reset** button in a HTML form. 

Which of the following code would satisfy the function expected from the above **Reset** button?
(1) <input type=”Reset” name =”Reset”> (2) <input type=”Reset” type =”Reset”>
(3) <button type=”Reset” name =”Reset”> (4) <button type=”Reset” value =”Reset”>
(5) <input type=”Reset” value =”Reset”>

47. What is the institute that makes the web standards?
(1) ANSI (2) W3C (3) ISO (4) Microsoft (5) Oracle

48. Which of the following code is correct for inserting an image to a web page?
(1) <img src=”myimage.gif” alt=”MyImage”> (2) <img alt=”MyImage”>myimage.gif</img>
(3) <img src=”myimage.gif” alt=”MyImage”> (4) <img href=”myimage.gif” alt=”MyImage”>
(5) <img rel=”myimage.gif ”>MyImage</img>

49. Which of the following **cannot** be given as a value for the “target” attribute of a “**Submit button**” of a HTML form?

(1) _child (2) _self (3) _parent (4) _blank (5) _top

50. Consider the following HTML codes.

A – <embed type=”video/webm” src=”movie.mp4” width=”400” height=”300” >
B - <video width=”320” height=”240”>
<source src=”movie.mp4” type=”video/mp4”></video>
C – <source src=”video/webm” href=”movie.mp4” width=”400” height=”300”>

Which of the above HTML code/codes can be used to insert a video file named “movie.mp4” into a HTML web page?

(1) A only. (2) B only. (3) C only. (4) A and B only. (5) A, B and C all.