

Dhaka Board-2017

Time : 2 hours 35 Minutes

Information and Communication Technology

Subject Code : 275

Creative Question

Marks : 50

[N.B. Answer any five questions. The figures in the right margin indicate full marks.]

1.► A technology company named vinklu made an artificial maid which is named hikari. This maid can be seen in holographic screen. Hikari will do the work like awaken her householder, say good morning and also send mail on spare time of office work. After completing his study, he join a private bank as an officer. Since he lives alone, so sometimes he woke up late. For this reason he decided to buy a hikari. Since hikari is expensive so that he decided to increase security of his home. So that some known people can enter the house with fingerprint in a specific button. However to enter in the money vault of his office, require speaking in front of a microphone.

- What is cryosurgery?
- Explain the atomic level research.
- Explain the technology used to create hikari mention in the stem.
- Which technology is more effective between rafi's home and office security system? Explain with your opinion.

2.► Nusaiba wanted to create a network with three computer of three room of her flat, so that everyone of her family can use the printer which is attached with her father computer. To create the network, her father advice is use any wire (cable) medium and her mother advice is use any wireless medium. But with help of IEEE 802.15 standard technology Nusaiba can exchange information with her phone and her mother phone.

- a. What is NIC?
- b. Speed 9600 bps – explain.
- c. Explain the technology mentioned in the stem which Nussaiba used to exchange information.
- d. Whose advice should be taken to create the network mentioned in the stem? Explain with reason.

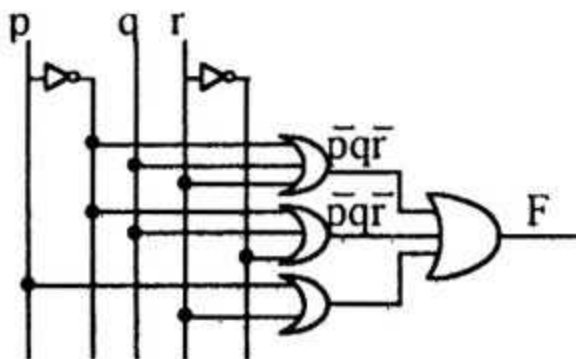
3. ★ Shetu thought of establishing a network of four digital devices in their home with a central connecting device. He wants to use a central device because if a device is lost then the whole does not become inactive. But his brother wants to create the network with backbone cable so that the expense of the network will be less.

- a. What is constant?
- b. Why C is called a mid-level language?
- c. Explain the mentioned network with geographical view.
- d. Implementation of the network mentioned in the stem, whose idea is more appropriate among the siblings? Give your opinion with explanation.

4. ► An ICT teacher was teaching number system in class XI. But because of the inattentiveness of a student, he got annoyed and asked for his roll number. The student answered $(31)_{10}$. Then he asked for the previous roll number and the student replied $(15)_{10}$. Then the teacher said to him, because of your inattentiveness, your result has worsened.

- a. What is base in number system?
- b. Explain the most used alphanumeric code before Unicode.
- c. Show the current class roll number of the student mentioned in the stem into binary number system.
- d. Calculate the difference of two classes roll number of the above mentioned student only through addition and evaluate the result change.

5. ► Look at the following figure and answer the questions.



- What is Boolean function?
- Explain the logic circuit which is capable to convert machine's language to human language.
- Simplified the output equation of the above logic circuit.
- Implement the value of F only by using NAND gate and write the importance of NAND gate.

6. ★ Mr. Shahriar wants to create a small web page in which there will be a image named institute.png and the following tables will be displayed.

Serial No.	Institute Picture
01	

Tables-1

Employee Information

ID No.	Emp. Name	Salary
1001	Nafis	50,000
1005	Sajal	

Tables-2

- What is HTML syntax?
- Hyperlink is very important in web page nowadays- Explain.
- Write the necessary HTML code of the 2nd table to display it in the mozilla firefox web browser.

d. Write the HTML code of the 1st table by taking the image mentioned in the stem to display it in the web page and write the importance of using image in the web page.

7.► On the date 12-8-2016 ICT teacher has discussed in his class about the programme that is enable to understand human language and convert it to computer language. He also said that in the next class he will discuss about C programming language which will able to find out the summation of series number. So that in the very next class when he comes to the class he writes $221+223+225+\dots+N$ in the board and start the discussion of it.

a. What is array?

b. There are some fixed rules at the time of variable creation.- Explain.

c. Write the C language programme of the above series to find out their summation.

d. Which is more suitable among the discussed topics of the ICT teacher in the above mentioned date of the stem? Give your analytical answer.

8. ★ The principal of Collegiate Girls' School and Women College has takes necessary steps to create the database of the girls. He also decides to create the database by using the fields such as student name, roll number, father's mobile number, admission date etc.

a. What is indexing?

b. Explain the role of database administrator in the database.

c. Describe the method to create a database table named 'Student' by taking the above mentioned fields of the stem.

d. Which types of advantage or disadvantage the college administrator may get after creating the database by taking the above fields of the stem? Give your analytical opinion.

Time : 25 minutes

Full marks : 25

[N. B. Answer all the questions. Each question carries one mark. Block fully, with a ball point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Objective Type Examination.]

1. Which technology do the difficult task of people?

- (a) Robotics (b) Virtual reality
- (c) Nanotechnology
- (d) Artificial intelligence

2. Which one is equivalent of (1110.11)₂ in headecimal?

- (a) E.3 (b) E.8
- (c) E.C (d) C.E

3. How many bits of code with parity bit?

- (a) 3 (b) 4
- (c) 7 (d) 8

4. Which one have same types of data?

- (a) In field (b) Record
- (c) Data table
- (d) Relationship filed

Read the stem and answer the questions number 5 & 6:

'A' is a student of a college. For study purpose he create his term paper with help of computer and internet with reference the source of information. But student 'B' takes a copy of that file from a computer of library without any permission. Even without showing any gratitude to the received information, he published it in his own name.

5. Which one is the activity of student 'B'?

- (a) Spamming (b) Hacking
- (c) Sinking (d) Spoofing

6. Activity of student 'A' according to the stem —

- i. Obey the copyright law
- ii. Telent
- iii. Computer ethics

Which one of the following is correct?

- (a) i & ii (b) i & iii
- (c) ii & iii (d) i, ii & iii

7. Which one is IP data network?

- (a) 1G (b) 2G
- (c) 3G (d) 4G

8. Which one is the sign of html tag?

- (a) <> (b) { }
- (c) () (d) []

Read the stem and answer the question number 9 and 10:

```
# include <stdio.h >
main ( )
{
int a = 3, b;
b = 2* a;
print f("%d", b);
}
```

9. What will be vlue of after running the program?

- (a) 3 (b) 4
- (c) 5 (d) 6

10. After running the program out value will be 3, when —

- i. b = a ++;
- ii. b = a --;
- iii. b + = a;

Which of the following is correct?

- (a) i & ii (b) i & iii
- (c) ii & iii (d) i, ii & iii

11. Which field can be a primary key?

- (a) Name (b) Mobile
- (c) Examination fees
- (d) Address

Read the stem and answer the question number 12 and 13:

A plan is taken to bring all the laptops in the room under a same network.

12. Which will be the network mention in the stem?

- (a) WPAN (b) WLAN
- (c) WMAN (d) WWAN

13. Network of the stem —

- i. With cable
- ii. Client server
- iii. By Wi-Fi

Which of the following is correct/

- (a) i & ii
- (b) i & iii
- (c) ii & iii
- (d) i, ii & iii

14. What is meant by nano?

- (a) 10^{-6}
- (b) 10^{-9}
- (c) 10^{-12}
- (d) 10^{-15}

15. Result will be A when —

- i. $A + A + A$
- ii. $A.A$
- iii. $A \text{ XOR } A$

Which of the following is correct?

- (a) i & ii
- (b) i & iii
- (c) ii & iii
- (d) i, ii & iii

16. What is result of $\langle p \rangle \text{H} \langle \text{sup} \rangle 2 \langle / \text{sup} \rangle 0 \langle / p \rangle$ html code?

- (a) H₂O
- (b) H₂O
- (c) H²O
- (d) HO²

17. Which logic has the same input and output line?

- (a) AND
- (b) OR
- (c) NOT
- (d) NAND

18. Which one is the advantages of maching language?

- (a) Program can be written easily
- (b) Can use all type of machine
- (c) Program is effective directly and fast
- (d) Error of the program can detect easily

Read the stem and answer the question number 19 and 20.

Mr. Ismail writes his account in a notebook. So he faced many problem. Business gets loss due to not getting necessary information at right time.

19. Which software is needed to make easier the work mention in the stem?

- (a) Word processing
- (b) Webpage
- (c) Programing
- (d) Database

20. Benefit of using database —

- i. To make report
- ii. To make biodate
- iii. To search record

Which of the following is correct?

- (a) i & ii
- (b) i & iii
- (c) ii & iii
- (d) i, ii & iii

21. Which one is the structure sequence of C program?

- (a) `main () → # include`
- (b) `# include → main ()`
- (c) `main () → # include <>`
- (d) `# include <> → main ()`

22. Device can be created with nano technology—

- i. Computer
- ii. Cryoprobe
- iii. Robot

Which of the following is correct?

- (a) i & ii
- (b) i & iii
- (c) ii & iii
- (d) i, ii & iii

23. What is called the function of converting analog signal into digital signal in modern?

- (a) Modulation
- (b) Demodulation
- (c) Broadcast
- (d) Half duplex

24. Which one is an empty tag?

- (a) `< th >`
- (b) `< td >`
- (c) `< br >`
- (d) `< em >`

25. Which is the simple form of $F = \overline{AB} . \overline{BC}$?

- (a) $\overline{AB} . \overline{BC}$
- (b) \overline{ABC}
- (c) $\overline{AB + AC}$
- (d) \overline{ABC}

Ans.

1	(a)	2	(c)	3	(d)	4	(a)	5	(b)	6	(b)	7	(d)	8	(a)	9	(d)	10	(a)	11	(b)	12	(a)	13	(d)
14	(b)	15	(a)	16	(c)	17	(c)	18	(c)	19	(d)	20	(b)	21	(d)	22	(b)	23	(b)	24	(c)	25	(b)		