

Rajshahi 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.  Read the stem and answer the following questions:

While Mr. Y went his father laboratory he looked at a special sensor and the door is open. After entering inside, he saw first room is prepare for information system research with bioinformatics and second room is prepare research for create recombinant DNA.

- a. What is nanotechnology? 1
- b. Information technology and communication technology is complimentary to each other — explain. 2
- c. Describe the technology used in laboratory door. 3
- d. Analyze the comparisons of technology that is being studied in the laboratory. 4

2.  Mr. X open a browser software in his computer and press enter after writing an address in address bar. Then a mail service is open. Then he download attachment file from the mail service.

- a. What is topology? 1
- b. Why fiber optics cable is free from EMI? 2
- c. Describe the service used by Mr. X in the light of your text book. 3
- d. Analyze what kind of data transmission mode and method is used in Mr. X works. 4

3. ► Read the stem and answer the following questions:

Input		Output
P	Q	R
0	0	1
0	1	1
1	0	1
1	1	0

Truth Table-1

Input		Output
P	Q	R
0	0	1
0	1	0
1	0	0
1	1	1

Truth Table-2

- What is Unicode? 1
- Explain at which logic $1+q=1$ and $1+1=10$. 2
- Truth table-1 represent NAND Gate – prove. 3
- Is possible to convert truth table-1 represent gate by truth table-2 gate – analyze. 4

4. ★ Mr. Z sir was showing html programing in class. He attached a picture from C drive of picture folder which name is logo.jpg and size is 500*300 pixel in a website. Then he said to his student, write a html code that if we click on the picture it will show www.xeducationbard.edu.bd website. Then he write the following html code for create a table:

Student Name	Compulsory			Optional
Harry Porter	Bangla	English	ICT	Physics
				Math
				Biology

- What is website? 1

- b. Describe the attributes of tag. 2
- c. Show the student code look like and describe all attribute which is used in the code. 3
- d. Write HTML code to create a table that will be created if we convert the rows in columns and columns into row of the stem. 4
5. ► Read the series and answer the following question:
10, 20, 30,, 100
- a. What is program? 1
- b. Explain the print f("%d %x", &a &b); statement. 2
- c. Draw the flowchart of the series of the stem and describe it. 3
- d. Write a C program to get output like as like the stem using go to statement. 4

6. ► Read the stem and answer the following question:

ID	Name	Address
1001	Anika Azad	Kushtia
1002	Shafin Hasan	Dhaka
1003	Adnan Jaami	Rangpur

Table-1

Sl	Designation	Salary
1	Manager	40,000
2	Officer	25,000
3	Accountant	50,000

Table-2

Asked to show their name and designation whose salary is 40000 or more? A person named B did the job with the command, according to the condition, but it took a long time to process. A person named C said that if you create an important file, then the process will be very fast, but the data entry will take a long time.

- a. What is RDBMS? 1
- b. Why SQL is called weapon of database? 2
- c. Create database relation by adding two of those tables. 3
- d. Do you agree with person C? Analyze. 4
7. ★ Adnan Jaami wants to know the summation of two numbers $(E)_{16}, (7)_8$ to his uncle. Adnan jaami's uncle show him the summation and also said that all arithmetic operation such as- addition, subtraction, multiplication, division are done only a single operation in the computer, moreover a type circuit is available for addition operation.
- a. What is telemedicine? 1
- b. Why synchronous transmission is expensive? 2
- c. Subtract the two numbers of the stem with the help of the operation that's uncle indicatē. 3
- d. Show the addition process of these two numbers with circuit. 4
8. ► Mother's age is three times the age of the son. Father's age is more than 5 years of age of mother. Son's age is x year.
- a. What is data encryption? 1
- b. Why database is used in dynamic webpage? 2
- c. Write an algorithm to calculate mother's and father's age. 3
- d. Write a program to calculate of three of them in C programing language. 4

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 is the unique technology to identify a person?

- (a) Bioinformatics
- (b) Biometrics
- (c) Nanotechnology
- (d) Robotics

2. Robot is used —

- i. In household work
- ii. Plan formulation
- iii. Inside of a mine

Which of the following is correct?

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

Read the stem and answer the questions number 3 & 4:

Bangladesh has now become known as rice exporters country due to the invention of high yielding rice invented by BRRI.

3. Which technology is used by BRRI in the above stem?

- (a) Biometrix
- (b) Bioinformatics
- (c) Nanotechnology
- (d) Genetics

4. Activities of the stem —

- i. Financially develops
- ii. Adverse effect in medical sector
- iii. Biodiversity will emerge

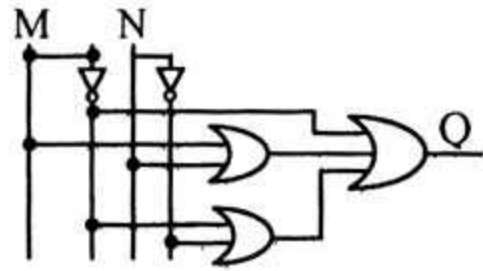
Which one of the following is correct?

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

5. What is the 2's complement of decimal number 12?

- (a) 00001100
- (b) 11111100
- (c) 11110011
- (d) 11110100

Answer the question number 6 & 7 from the following stem:



6. What is the value Q in the circuit mentioned in the stem?

- (a) 0
- (b) 1
- (c) M
- (d) M + N

7. Using which gate instead of OR gate in the stem, will it always be Q = 1?

- (a) AND
- (b) NOR
- (c) XOR
- (d) XNOR

8. Which one is link tag?

- (a) ``
- (b) ``
- (c) `<a>`
- (d) `<q>`

9. Parts of URL are —

- i. Protocol name
- ii. Host name
- iii. Directory name

Which one of the following is correct?

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

10. What kind of operator && is called in C?

- (a) Arithmetic
- (b) Relation
- (c) Logical
- (d) Assignment

11. Which is the format specifier of double data type?

- (a) %d
- (b) %f
- (c) %lf
- (d) %s

12. Which is the example of two dimensional array?

- (a) mark [5, 6]
- (b) mark (5, 6)
- (c) mark [5] [6]
- (d) mark (5) (6)

Answer the question number 13 & 14 from the following stem:

A plan is taken to bring all the computer under a same network of the 8th floor office.

13. What kind of network will be their network?

- (a) LAN (b) MAN
(c) WAN (d) PAN

14. Which frequency range will be used to build the office's network a wireless network technology?

- (a) 1-9 Mbps (b) 10-50 Mbps
(c) 51-100 Mbps (d) 101-150 Mbps

15. Same C expression of

$$Y = P^2x + \frac{2}{3}$$

i. $Y = (\text{pow}(p,2)) * x + \frac{2}{3}$

ii. $Y = (\text{pow}(2, p)) * x + \frac{2}{3}$

iii. $Y = p * p * x + \frac{2}{3}$

Which one of the following is correct?

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

16. How many bit is need for float type constant?

- (a) 1 (b) 2
(c) 4 (d) 8

17. Which is the data conduction mode between computer and multimedia projector?

- (a) Simplex (b) Half-duplex
(c) Full-duplex (d) Multicast

18. Which logic circuit convert alpha numeric character in to binary code, what does it called?

- (a) Register (b) Encoder
(c) Decoder (d) Counter

19.

A	B
C	D

What is the output of this html code in the stem?

- (a)

A	B
C	D

 (b)

A	C
B	D

- (c)

A	B
C	D

 (d)

A	B
C	D

20. Which of the following is Wi-Fi standard?

- (a) 802.10 (b) 802.11
(c) 802.01 (d) 802.16

21. Which one is database management software?

- (a) MS-Power point
(b) MS-Word
(c) MS-Excell (d) MS-Access

22. Student

Roll	Name	GPA
01	A	5.00
02	C	4.50
03	M	5.00

To get the name of those student whose GPA = 5.00 from the stem table, what is next part of the SQL command of "SELECT NAME FROM student"?

- (a) WHERE "GPA" = "5.00";
(b) WHERE "GPA", = "5.00";
(c) WHERE GPA= "5.00";
(d) WHERE "GPA"= "5.00"

23. A + BC = (A+B) (A+C) theorem is —

- (a) interchange (b) correspondence
(c) basic (d) division

24. "UPDATE" include in which query?

- (a) Select (b) Parameter
(c) Crosstab (d) Action

25. C statement to print the "Hello World" % times —

- i. for(n = 1; n < 6; n++) print f("Hello World")
ii. n = 3; do {printf ("Hello World!"); n++;} while (n <=8);
iii. n = 5; while (n < 10) {printf ("Hello World!"); n++;}

Which one of the following is correct?

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

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