

Model Question of HSC Examination-2020(All Board)

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. ► An ICT expert has come to visit the computer lab of a college. He notices that the LAN of the lab was configured with Hub. He suggests to the lab authority to replace the hub with some another device for better network.

- a. What is CDMA? 1
- b. Explain the data transmission mode of mobile phone. 2
- c. Which network device is suggested by ICT expert and why? 3
- d. Explain the current network topology of the lab. 4

2. ★ Mr. Reja is a lecturer of a college. Sometimes he needs to calculate average mark of his students. To make this task easy he wants to develop a program that can calculate average of obtained marks in 5 exams.

- a. What is compiler? 1
- b. Write differences between algorithm and flowchart. 2
- c. Write the algorithm of the program described in the stem. 3
- d. Draw the flowchart of the program described in the stem. 4

3. ► There are total 5 students in a class of a college. The college authority wants to publish something like below

Cadet No	Name	House	CGPA
2501	Feroz	QH	4.99
2503	Ahmed	TH	5.00
2409	Maruf	TH	4.78
6378	Billal	KH	3.00
3578	Fahad	QH	4.70

- What is the web page? 1
- Why do we need hyperlink? 2
- Pick the list of names from the table and write a HTML code to show it as unordered list. 3
- Write the HTML Code of the table above. 4

4. ★ Rahat wrote a program that can calculate area of circle. He has to provide radius of the circle and get area of the circle as output.

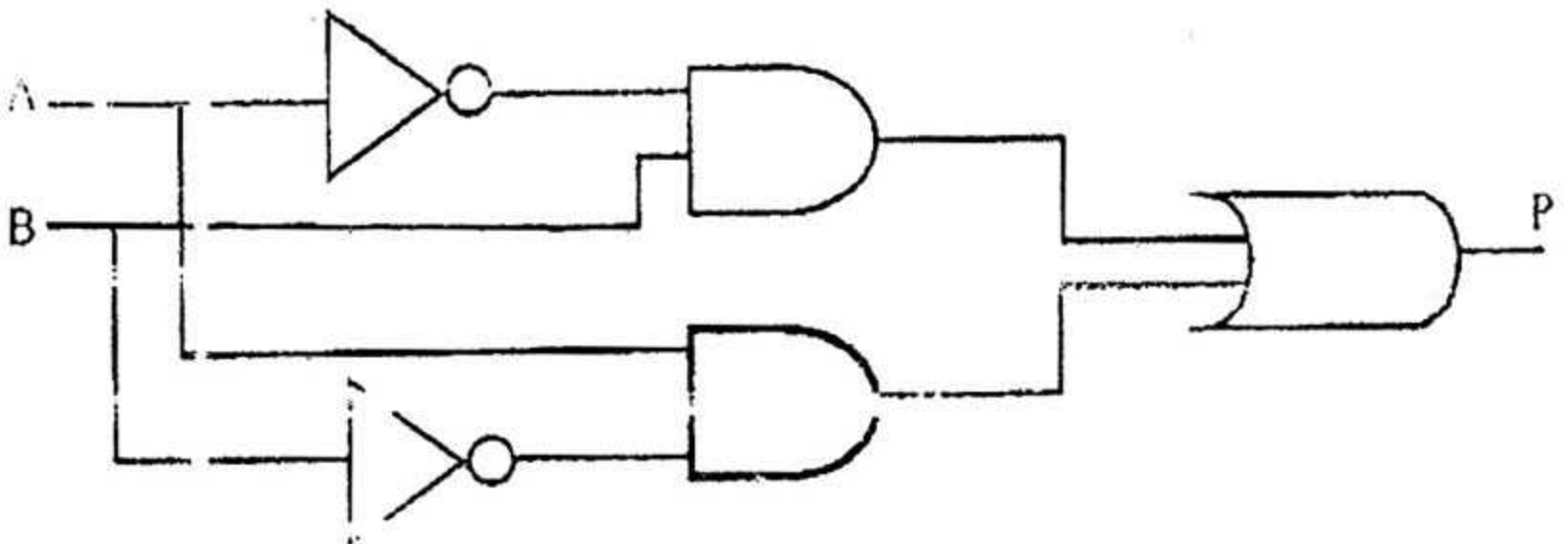
- What is constant? 1
- Write the difference between local and global variable. 2
- Write a program of calculating radius of circle. 3
- Identify all the sections of the program. 4

5. ► Consider the following truth table


X	Y	CI	S	Co
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

- What is encoder? 1
- Draw the logic circuit of Half Adder. 2
- For which the truth table in the stem is correct? Write its equation. 3
- Draw the logic circuit considering the truth table using X-OR gate. 4

6. ★




- a. What is BCD? 1
- b. "1 + 1 = 10" explain it. 2
- c. Explain the gate used by the above stem. 3
- d. Find out the value of P then implement it using NAND gate. 4

7.  Mr. Fahad is an ICT lecturer. He was teaching his student about number system. He wrote an octal and a decimal number on the board.

i. $(525.25)_{10}$

ii. $(525.50)_8$

- a. What is ASCII? 1
- b. Write the differences between bit and byte. 2
- c. Convert the 1st number of octal. 3
- d. Convert 2nd number of decimal, add the result to 1st number then show the output in binary. 4

8.  Sadman wrote a program for finding even or odd number which takes an integer number as input and shows output like "Number is even" or, "Number is odd".

- a. What is operator? 1
- b. What do you mean by buffer gate? 2
- c. Write the program in c language. 3
- d. Write the algorithm and flowchart of that program. 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. Empty tag is—

- i.

- ii. <hr>
- iii. <p>

Which one is correct?

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

2. Top level domain into

http://www.rajshahiboard.gov is—

- (a) www
- (b) gov
- (c) board
- (d) http

3. CERN is located in—

- (a) Switzerland
- (b) London
- (c) USA
- (d) Italy

4. Which one of the following is General Purpose programming language?

- (a) Oracle
- (b) Basic
- (c) C
- (d) HTML

5. Which one of the following is written at the end of each statement?

- (a) :
- (b) ;
- (c) {}
- (d) ()

6. Identifier is—

- i. Constant
- ii. Variable

iii. Function

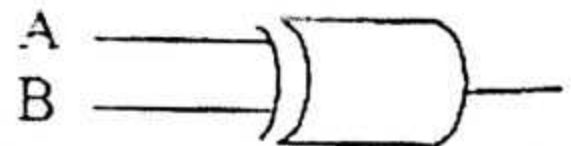
Which one of the following is correct?

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

7. What is the equivalent binary number of $(A1D)_{10}$?

- (a) $(101010011101)_2$
- (b) $(101000111101)_2$
- (c) $(101000011100)_2$
- (d) $(101000011101)_2$

8.



From the above mentioned circuit output is —

- i. $A+B$
- ii. $\bar{A}B+A\bar{B}$
- iii. $A\oplus B$

Which one is correct?

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

9. What is the number of bits used in EBCDIC?

- (a) 4
- (b) 7
- (c) 8
- (d) 16

10. Output of which gate is opposite to the output of NOR gate?

- (a) X-NOR
- (b) OR
- (c) X-OR
- (d) AND

11. Where did the use of 0 begin?

- (a) Egypt
- (b) Indian subcontinent
- (c) Greece
- (d) China

12. What is the full form of SEO?

- (a) See Enlarged Option
- (b) Search Engine Optimization
- (c) Search Earliest Order
- (d) South East Organization

13. Which of the following isn't the unit of bandwidth?

- (a) Hz
- (b) bps
- (c) ACK
- (d) mbps

14. How many transmission modes support bidirectional data transmission?

- (a) 2
- (b) 3
- (c) 4
- (d) 5

15. How many wired are there in Cat-5 cable?

- (a) 2 pair
- (b) 3 pair
- (c) 4 pair
- (d) 5 pair

16. Standard of Bluetooth is—

- (a) IEEE 802.15.1
- (b) IEEE 801.15.1
- (c) IEEE 802.14.1
- (d) IEEE 802.16.1

17. Who used wireless communication source code for the first time?

- (a) De-Morgan
- (b) Gorge Boole
- (c) Bill Gates
- (d) Guglielmo Marconi

18. What is the elaborated form of Tbps?

- (a) Terabig per Secondary
- (b) Terabytes per second
- (c) Terabits per second
- (d) Terabet per second

19. Which of the following technology is used to transfer information from one place to another?

- (a) Communication Technology
- (b) Information Technology
- (c) Wireless Technology

(d) Mobile Technology

20. Which one is the medium for sending file quickly from one computer to another computer?

- (a) E-mail
- (b) Courier
- (c) Telephone
- (d) Telegraph

21. Which one is the following is e-commerce?

- (a) www.odesk.com
- (b) www.bikroy.com
- (c) www.guru.com
- (d) www.elance.com

22. Biometric passport is—

- i. Digital passport
- ii. Electronic passport
- iii. machine readable passport

Which one is correct?

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

23. What is the number of genes in human body?

- (a) 300000
- (b) 400000
- (c) 500000
- (d) 600000

24. Which type of image is used in virtual reality?

- (a) One-dimensional
- (b) Two-dimensional
- (c) Three-dimensional
- (d) Multi-dimensional

25. The way of converting digital signal to analog signal is called—

- i. Modulation
- ii. Synchronizatoin
- iii. Demodulation

Which one is correct?

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

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