

Total No. of printed pages = 7

IT-301/IT/3rd Sem/2017/N

INFORMATION TECHNOLOGY

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks
for the questions.

PART – A

I. Multiple choice questions : 1×15=15

(a) UNIVAC is

- (i) Universal Automatic Computer
- (ii) Universal Array Computer
- (iii) Unique Automatic Computer
- (iv) Unvalued Automatic Computer

(b) Arrange in ascending order the units of
memory TB, KB, GB, MB

- (i) TB > MB > GB > KB
- (ii) MB > GB > TB > KB
- (iii) TB > GB > MB > KB
- (iv) GB > MB > KB > TB

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(c) Which one of these also known as read / write memory ?

- (i) ROM
- (ii) RAM
- (iii) DVD
- (iv) Hard Disk

(d) Memory stores

- (i) the operating system
- (ii) application programs
- (iii) the data being processed by the application programs
- (iv) all of the above

(e) A _____ is a blank ROM that can be programmed once only.

- (i) EPROM
- (ii) EEPROM
- (iii) Flash ROM
- (iv) PROM

(f) A modem does the following :

- (i) Convert digital data to analogue before sending data
- (ii) Convert digital data to analogue when receiving data

- (iii) Convert analogue data to digital before sending data
- (iv) All of the above
- (g) Which media makes use of light for data transmission ?
- (i) Twisted pair (ii) Coaxial
- (iii) Fibre optics (iv) All of the above
- (h) The columns in a database are called
- (i) Cells (ii) Fields
- (iii) Records (iv) Queries
- (i) The jargon for navigating on the Internet is called
- (i) Clicking (ii) Selecting
- (iii) Surfing (iv) Analysing
- (j) _____ is a mechanism which will look for information on different web sites and databases distributed all over the Internet.
- (i) Web server (ii) Browser
- (iii) Trojan (iv) Search engine

(k) Protocols :

- (i) Define techniques for encoding and decoding data.
- (ii) Can define mechanism for detecting and recovering from transmission errors ?
- (iii) Are set of rules defining format of data for communication ?
- (iv) All of the above.

(l) In order to view pages on a web site, the user needs to enter the site address called

- (i) Uniform resource locator
- (ii) E-mail address
- (iii) Postal address
- (iv) MAC address

(m) Electrical interferences that can distort data during transmission are called

- (i) Virus
- (ii) Trojan
- (iii) Noise
- (iv) Modulation

(n) An HTML file has which type of extension ?

(i) xml (ii) html

(iii) txt (iv) htl

(o) A node can be

(i) A server (ii) A workstation

(iii) A printer (iv) All of the above.

2. Answer the following questions in short :
(any five) 2×5=10

(a) What is analog computer ?

(b) What is ROM ?

(c) What are the different types of number system representation in computer ?

(d) What is computer network ?

(e) What is the difference between volatile and non-volatile memory ?

(f) Define the term E-commerce ?

(g) What are search engines ?

(h) What is computer virus ?

PART - B

3. Answer any *three* of the following questions :

(a) Discuss the important features of various generations of computers. Give some examples of each generation. 10

(b) Write the algorithm and draw the flowchart for the following : 5+5=10

(i) Print 1 to 20

(ii) Determine and output whether number N is even or odd.

(c) What is network topology ? Explain the various topologies of computer network with proper diagram. 2+8=10

(d) What is an operating system ? Enlist its function in brief. 2+8=10

(e) What is an e-mail ? State the advantage of using e-mail ? State three precautions to be taken for security of a computer. 2+4+4=10

4. Answer any *one* of the following questions :

(a) (i) Explain about the Shannon Fano coding method in brief. 5

- (ii) Find out the binary code, code length and total length from the following :

$$6+2+2=10$$

Symbol	Frequency
A	24
B	14
C	10
D	3
E	2

- (b) Convert the following :

- (i) 11001011.01110 binary number to its decimal equivalent 3
- (ii) 37.29 decimal number to its octal equivalent 3
- (iii) 725.25 octal number to its decimal, binary and hexadecimal equivalent.

$$3 \times 3 = 9$$