

**BACHELOR OF COMPUTER APPLICATIONS
(BCA) (Revised)**

Term-End Examination

June, 2021

**BCS-011 : COMPUTER BASICS AND PC
SOFTWARE**

Time : 3 hours

Maximum Marks : 100

(Weightage : 75%)

Note : *Question number 1 is compulsory and carries 40 marks. Attempt any three questions from the rest.*

1. (a) Convert the following numbers as asked : 6
- (i) $(12.5)_{10}$ to binary
 - (ii) $(1110\ 1000)_2$ to decimal
 - (iii) $(01111111000)_2$ to hexadecimal
 - (iv) $(BE5)_{16}$ to binary
- (b) Why does a computer need main memory ?
What is cache memory ? How is main memory different from a cache memory ? 5
- (c) What are the advantages and disadvantages of using Inkjet printers ? 3

- (d) Draw a flow chart to find the sum of the first n natural numbers. 5
- (e) A University wants to maintain, manipulate and organise large student data. Which software will be needed by the University ? Give justification in detail. 5
- (f) Explain the Internet-based architecture of software with the help of a diagram. 4
- (g) What are the different domains used in Web addresses ? How is an IP address different from a Web address ? 4
- (h) What is a Browser ? What is a Cookie ? Is cookie a threat to information security or privacy ? Justify your answer. 4
- (i) List and explain any two processes that are part of e-learning systems. 4
2. (a) Identify the Net ID and Device ID for the following IP address and Subnet mask pairs : 4
- 192.168.5.97 and 255.255.255.0
10.10.13.10 and 255.255.0.0
- (b) How does the search on keyword “Intelligent” OR “System” differ from the search “Intelligent” AND “System” ? Explain. 3
- (c) What is a MODEM ? Why is it used in networking ? Explain. 4
- (d) Explain the characteristics and advantages of Wide Area Network (WAN). 4
- (e) What are the characteristics of Twisted Pair Cable ? Compare its features with optical fibre cables. 5

3. (a) Explain how object-oriented software design paradigm is different from structured and modular design paradigm. 4
- (b) What is the need of an Operating System ? Give names of two popular operating systems. Suppose you want to transfer a file from your hard disk to a CD, which of the following services of the operating system will be used and for what purpose ? (User Interface, File management, Input/Output services, Process control management and Memory management) 8
- (c) Explain which software will be required to perform the following tasks. Also list four features of these software. 8
- (i) Scheduling of tasks
 - (ii) Creating mailmerge
 - (iii) Entering formulas and functions
 - (iv) Creating presentation
4. (a) Explain the working of a basic computer with the help of a diagram showing its basic components. 6
- (b) What are the differences between primary and secondary memory of a computer. Which of them is larger in size ? Which of them is faster ? 6
- (c) Explain the role of the following utility software : 4
- (i) Disk checkers
 - (ii) System restore
- (d) What is the use of digitizing (graphic) tablet and joystick ? 4

5. Explain any *five* of the following with the help of an example/a diagram :

5×4=20

- (a) Supercomputer
- (b) Fourth Generation Computers
- (c) Disk Layout of a CD-ROM
- (d) Perverse Software
- (e) Open-source Software
- (f) Wiki
- (g) TCP/IP

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