

NEW
Part-III 3-Tier
2015
COMPUTER SCIENCE
(General)

PAPER—IVA

Full Marks : 45

Time : 2 Hours

The figures in the margin indicate full marks

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the questions wherever necessary.

Group—A

Answer any one question : 15×1

1. Define Computer networks? Discuss various types of network topologies in Computer network. Also discuss various advantages and disadvantages of each topology. 3+6+6
2. (a) Differentiate between analog data and digital data with suitable example. 3
(b) How some digital signal can convert to analog signal. 7
(c) Compare and contrast a Circuit-Switched Network and a Packet Switch Network. 5

Group—B

Answer Q. No. 3 and any *two* from the rest : 4+(8×2)

3. Define topology ? What are the function of physical layer ?
 4. What type of transmission mode are used in data communication explain each with suitable example.
 5. With the help of diagram. Explain the components of fibre optic cable.
 6. What are the advantages of cell switching that is used in ATM ? Why does ATM use the cell of small and fixed length ?
- 5+3

Group—C

Answer Q. No. 7 and any *two* from the rest : 2+(4×2)

7. What is an internet ? What is Internet.
 8. Explain the three terms peak amplitude, frequency, and phase.
 9. What is packet switching ? Mention two different approaches of packet switching.
 10. Write a short note on FDDI.
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NEW
Part-III 3-Tier
2015
COMPUTER SCIENCE
PAPER—IVB & C (SET — 1)
(General)
(PRACTICAL)

Full Marks : 25

Time : 1 $\frac{1}{2}$ Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any one from the rest.

1. (a) Identify the following components of a computer system and explain their functions :
- (i) Optical Mouse;
 - (ii) Port;
 - (iii) Ethernet Card;
 - (iv) Mother Board;
 - (v) USB.

(b) Connect the following parts of the computer system :

- (i) Scanner;
- (ii) Webcam;
- (iii) Bluetooth;
- (iv) WiFi;
- (v) Hotspot. 5

2. Write a program in VB or VC++ that connects the MS-Access database and display the student details in the level from the student table is given below : 10

Std (stdname, stdroll, address, marks)

3. Write a program in VB or VC++ to count words in a string. 10

4. Write a program in VB or VC++ for reversing of a string. 10

5. Write a program in VB or VC++ to calculate the sum of even numbers upto 100. 10

6. Write a program in VB or VC++ to calculate sum of individual digits of 3 digit number, consider 312 number whose sum of individual digit number is sum = 3+1+2 = 6.

7. Write a program in VB or VC++ to calculate and print the value of $\sin x$, correct upto four decimal places using the series : 10

$$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} + \dots$$

[PNB + VIVA — 05 marks]

NEW
Part-III 3-Tier
2015
COMPUTER SCIENCE
PAPER—IVB & C (SET — 2)
(General)
(PRACTICAL)
Full Marks : 25

Time : 1½ Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any one from the rest.

1. (a) Identify the following components of a computer system and explain their functions :
- (i) Numeric Keyboard;
 - (ii) LED Monitor;
 - (iii) Micro SD Card;
 - (iv) Bluetooth device;
 - (v) Hard disk.

(b) Connect the following parts of the computer system :

- (i) Scanner;
- (ii) Hotspot;
- (iii) WiFi,
- (iv) RAM;
- (v) Hard Disk. 5

2. Write a program in VB or VC++ to reverse the array of given numbers. 10
3. Write a program in VB or VC++ to count number of words in a sentence. 10
4. Write a program in VB or VC++ to calculate Fibonacci series upto 100. 10
5. Write a program to find whether the year is a leap year or not. 10
6. Write a program in VB or VC++ to calculate the G.C.D. of two numbers. 10
7. Write a VB or VC++ program to check whether a number is magic number or not. 10

[PNB + VIVA — 05 marks]
