

Form No. Ex- 8

Particulars about the candidate and the subject are checked thoroughly and corrected where necessary.

Sl. No. 119



EXAM CENTRE CODE :.....

Invigilator

Signature of Officer-in-Charge

KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

BCA 5<sup>th</sup> Semester Examination, 2015

Data Communication and Computer Networking [BCA-15]

Time : 3 Hrs. Full Marks : 80

Enrolment Number

Enrolment Number grid

Medium of Answer :

Medium of Answer box

INSTRUCTIONS TO CANDIDATES

- 1. This booklet contains.....24.... Pages numbering...23..Please verify number of pages in the booklet before answering.
2. An Examinee is allowed to bring only Admission Card and Identity Card to the Examination Hall. Any Examinee found in possession of loose papers, books etc. is liable to be Expelled.
3. Enrolment No. and Medium of answer must be written legibly at the specified places. Examinee's name and any other identifying mark which reveals examinees identity shall not be written anywhere in the script.
4. For Making calculations, only the last page provided for rough work shall be used.
5. No pages of the script be torn out .
6. Calculators will not be allowed for making calculations in the examination hall. MOBILE PHONES are strictly prohibited in the examination Centre.
7. No candidate will be allowed to leave or go out of the hall during the First hour of the Examination.
8. A candidate having completed his/her answer, the script must be handed over, to an invigilator before leaving the hall.
9. Contravention of any of the instructions mentioned above shall render a candidate liable for disciplinary action as per regulations of the University.

525 (DCN)

Mandatory

Examiner's Signature : \_\_\_\_\_

Examiner's Full Name : \_\_\_\_\_

Scrutiniser's Signature : \_\_\_\_\_

Scrutiniser's Full Name : \_\_\_\_\_

Table with 2 columns: Que. No., Marks. Rows include 1, 2, 3.a, 3.b, 3.c, 3.d, 3.e, 3.f, 3.g, 4.a, 4.b, 4.c, 5.a, 5.b, 5.c, and Total.

Head Examiner's Signature : \_\_\_\_\_

1. Answer any eight from the following questions

$1 \times 8 = 8$

- (a) What is the frequency range of microwaves?
- (b) Name the three ways of wireless data propagation.
- (c) What topology is used by FDDI?
- (d) Give three examples of unguided media.
- (e) Which layer of the OSI model does data compression?
- (f) What are the types of switch?
- (g) What layer of the OSI model does 'framing'?
- (h) Which two layers of OSI model are absent in TCP/IP model?
- (i) What type of circuit is used in NIC card?
- (j) What is MAC address?


2. Answer any eight from the following questions

2×8 = 16

- (a) What are the responsibilities of the transport layer in the TCP/IP model?
- (b) How does a router differ from a bridge?
- (c) How is a repeater different from an amplifier?
- (d) What is telnet?
- (e) What is minimum and maximum length of IEEE 802.3 frame?
- (f) What do you mean by bandwidth?
- (g) What is an ISP? Give the name of two ISP.
- (h) What is the role of DNS?
- (i) What is passive hub and active hub?
- (j) What are the main disadvantages of star topology?

3. Answer any five from the following questions

4×5 = 20

- (a) Compare twisted-pair wire and optical fibre cable.
- (b) Distinguish between peer-to-peer LAN and client-server LAN.
- (c) What is looping problem? How can it be avoided?
- (d) What is an URL? Using an example identify the components of an URL?
- (e) What is extranet? What are the advantages of extranet over intranet?
- (f) Define the term 'Unicast', 'multicast' and 'broadcast'.
- (g) What is ADSL connection? Give two advantages of this type of connection. What is the meaning of the ADSL configuration 512 kbps/128 kbps?

4. Answer any two from the following questions

8×2 = 16

- (a) What are the different modes of communication? Discuss each of them with suitable examples.
- (b) Why switching is required? What is the difference between circuit switching and packet switching? What are the disadvantages of message switching?
- (c) What is proxy server? Discuss the working principle of a firewall.

5. Answer any two from the following questions

10×2 = 20

- (a) Describe the functions of various layers of the TCP/IP model.
- (b) What is Ethernet? Discuss the types of Ethernet with their topologies, cabling and frame format.
- (c) Write short notes on -
  - (i) peer-to-peer LAN
  - (ii) www