QP Code: PT/13/VI
(NEW/OLD)

POST-GRADUATE COURSE

Term End Examination – June, 2019

MASTER OF LIBRARY AND INFORMATION SCIENCE

Paper-VI : Information Technology : Applications

(New : From July 2016 Enrolment Session

Old : Up to July 2015 Enrolment Session.)

Time : 4 Hours **Full Marks : 100**

(Weightage of Marks : 80%)

Special credit will be given for accuracy and relevance in the answer. Marks will be deducted for incorrect spelling, untidy work and illegible handwriting. The weightage for each question has been indicated in the margin.

GROUP – A

Answer any *two* of the following questions : 18 × 2 = 36

1. a) "Unix-like operating systems have many advantages over Window based operating system." Explicate the statement in view of the features of Unices. 6

   b) Write command(s) to perform the following tasks in any Unix-like OS : 2 × 6

   (i) To join two text files to generate a new text file

   (ii) To give read and write permission to all for this new text file

   (iii) To know who are presently logged into the system

   (iv) To know the address of the server

   (v) To see RAM information of the system

   (vi) To create a directory.

2. a) "Serials control is a difficult task even in automated libraries." Elucidate the statement. 6

   b) Discuss the workflow of a computerized serials control subsystem. 12

3. a) Explain the structure of a MARC record with illustration. 6

   b) Explain the Primary Blocks of MARC 21 Authority format. 6

   c) The poetry book is the 40th product of American poets' continuum series (with ISSN 0193-6867) edited by Helly Ross. Library generally trace the series. **Encode appropriate tags** of MARC 21 Bibliographic Format **related to series with indicator positions**. 6

4. a) Explain the Codd's rules for RDBMS. 12

b) Enumerate six major features of any open source SQL known to you in the light of Codd's rules. 6

GROUP – B

Answer any *three* of the following questions :

12 × 3 = 36

5. What is library consortia ? Discuss the objectives and services of ESS (E-Shodh Sindhu) as library consortia in India. 2 + 10

6. What is TCP/IP ? Explain the roles of TCP/IP layers in data communication. 2 + 10

7. Comment on any *two* of the following features of CDS/ISIS as bibliographic DBMS : 6 + 6

(i) Indexing techniques in CDS/ISIS

(ii) Use of conditional and unconditional literals in display/print format

(iii) Retrieval features in CDS/ISIS.

8. Make a comparative study of any *two* of the following concept trios : 6 + 6

(i) 'ASCII, 'ISCII' and 'Unicode' (as text encoding standards)

(ii) 'MARC', 'CCF' and 'UNIMARC' (as content designators)

(iii) 'Hierarchical', 'Network', and 'Relational' (as data models).

9. What are the feature of a High-level Programming Language ? How does it differ from that of a Machine Language and an Assembly Language ?

4 + 8

10. Comment on any *three* of the following standards related with library automation : 4 × 3

(i) EDIFACT

(ii) OAI/PMH

(iii) ISO-2709

(iv) Z 39·50.

GROUP – C

Answer any *four* of the following questions :

$7 \times 4 = 28$

11. Write an algorithm (in 'C' language) and design a flow chart to solve the following problem : 7

    You need to take input of an ASCII character and need to generate ASCII value of that character.

12. Write software requirements for running the following library automation software (any *two*) :

    $3\frac{1}{2} \times 2$

    (i) Virtua ILS

    (ii) SOUL

    (iii) Koha

    (iv) LibSys.

13. Write short notes on any *two* of the following sorting algorithms : $3\frac{1}{2} \times 2$

    (i) Merge sort

    (ii) Quick sort

    (iii) Selection sort

    (iv) Shell sort.

14. Make a comparative study of any *two* of the following concept trios : $3\frac{1}{2} \times 2$

    (i) 'MODEM', 'Multiplexer' and 'Hub' (as communication devices)

    (ii) 'UTP', 'Coaxial cable', 'Fibre Optic' (as communication media)

    (iii) 'Telenet', 'FTP', 'HTTP' (as communication protocol)

    (iv) 'LAN', 'MAN', 'WAN' (as network types).

15. Discuss the application of open standards and open source software in library automation. 7

16. What is a network topology ? What is the best suitable network topology for an academic library ? Give reasons. 2 + 5

17. Write short notes on any *two* of the following concepts : $3\frac{1}{2} \times 2$

    i) OPAC 2·0

    ii) Retrospective conversion

    iii) Boolean Search

    iv) Authority data.

18. Make a comparative study of any *two* of the following concept trios : $3\frac{1}{2} \times 2$

    (i) 'Circuit switching', 'Message switching' and 'Packet switching'

    (ii) 'Close source software', 'Freeware' and 'Open source software'

    (iii) 'Router', 'Bridge' and 'Switch'

    (iv) 'Loader', 'Linker' and 'Locator'.