POST-GRADUATE COURSE

Term End Examination – Dec., 2015 / June, 2016

MASTER OF LIBRARY AND INFORMATION SCIENCE

Paper-VI : Information Technology : Applications

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. Describe the architecture of the UNIX like operating systems. What are the basic elements of UNIX like operating systems ? Briefly describe the file system of UNIX like operating systems.

10 + 4 + 4

2. a) Discuss the problems and prospects of library automation in a developing country like India. 6

b) Explain the use of any *three* of the following standards/technologies in library automation : 4 × 3

(i) ISO-2709 (ii) MARC 21

(iii) Z 39·50 (iv) SIP.

3. a) Enumerate the features of 'high-level' programming language. How does it different from 'low-level' programming language ? 6

b) Discuss the use of any *three* of the following tools/techniques in computer programming : 4 × 3

(i) Algorithm and Flow charting

(ii) Linker and Locator

(iii) Compiler and Interpreter

(iv) Loader and CRef.

4. a) What is DBMS ? Enumerate the features of CDS/ISIS of bibliographic database management system. 2 + 8

b) Explain the application of standards in the following areas of library automation —

(i) Exchange format

(ii) Distributed cataloguing. 8

GROUP – B

Answer any ***three*** of the following questions : 12 × 3 = 36

5. What is 'text-encoding' standard ? Make a comparative study of ASCII, ISCII and Unicode as text encoding standards. 3 + 9

6. What is OSI Reference Model ? Explain in brief the major role of each layer in OSI. 5 + 7

7. Write an algorithm and design a flowchart to solve the problem given below :

   You need to calculate cost of books after deducting discount (10% if book price is ≤ 500 and 15% if book price is > 500). 6 + 6

8. Why is library considered as a system ? Describe the workflow of computerized acquisition sub-system of a library. 3 + 9

9. 'Library automation is a software-centric activity'. —Elucidate the statement. What are the functional requirements of an integrated library system ? 6 + 6

10. What do you mean by 'network topology' ? Explain any three major network topologies in details. 3 + 9

GROUP – C

Answer any ***four*** of the following : 7 × 4 = 28

11. 'MARC 21 is a family of five standards.' —Explain the statement. Enumerate the 'format blocks' of any one standard of MARC 21 family. 4 + 3

12. What is OPAC 2·0 ? How does it differ from OPAC 1·0 ? 3 + 4

13. Write in brief the use of any *two* of the devices/protocols/technologies related to data communication :

    (i) Router (ii) Packet switching

    (iii) ATM (iv) Multiplexer. $3\frac{1}{2} \times 2$

14. What is library network ? Discuss the services of UGC-Infonet. 2 + 5

15. Discuss the general features of any *two* of the following ILSS :

    (i) SOUL

    (ii) Virtua

    (iii) Koha. $3\frac{1}{2} \times 2$

16. Discuss the features of object-oriented database management. 7

17. What is retro-conversion ? Enumerate the steps of retro-conversion. 2 + 5

18. Make a comparison of Linux and Windows operating systems against any *two* of the following parameters :

    (i) User interface

    (ii) Number of users

    (iii) File system

    (iv) Distribution policy. $3\frac{1}{2} \times 2$