



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

BCA Honours 6th Semester Examination, 2022

DSE-P4-BACHELOR OF COMPUTER APPLICATION (64)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
All symbols are of usual significance.*

**The question paper contains DSE64:E1 and DSE64:E2 and DSE64:E3.
The candidates are required to answer any *one* from *three* courses.
Candidates should mention it clearly on the Answer Book.**

DSE64:E1

MACHINE LEARNING

GROUP-A

1. Answer any *five* questions: 1×5 = 5
- (a) What are the key elements of Machine Learning?
 - (b) What is Regression?
 - (c) What do you mean by feature?
 - (d) What is Neural Network?
 - (e) How we can plot data?
 - (f) What do you mean by classification?
 - (g) What are the applications of Machine Learning?
 - (h) Define Regularization.

GROUP-B

2. Answer any *three* questions: 5×3 = 15
- (a) Discuss supervised and unsupervised learning.
 - (b) How data can be vectorized and operations like addition, multiplication etc. done?
 - (c) How the problem of overfitting can be solved?
 - (d) Discuss gradient and perception training.
 - (e) How classification using logistic regression is done?

GROUP-C

3. Answer any *two* questions: 10×2 = 20
- (a) Discuss Backpropagation in neural network.
 - (b) Discuss different classification methods.
 - (c) Discuss different learning methods.

DSE64:E2

SYSTEM PROGRAMMING

GROUP-A

1. Answer any *five*: 1×5 = 5
- (a) What is system software?
 - (b) What is the purpose of location counter?
 - (c) What is main function of loader?
 - (d) List any two advantages of assembly language.
 - (e) What is intermediate form?
 - (f) What is token?
 - (g) Define macro-definition table.
 - (h) Discuss the role of linker.

GROUP-B

2. Answer any *three*: 5×3 = 15
- (a) Explain database used in Pass 1 and Pass 2 assemblers.
 - (b) Define binder. What are the classes of binders?
 - (c) Explain address modification using instruction as data.
 - (d) Explain open subroutine and closed subroutine with an example.
 - (e) Explain intermediate phase with an example.

GROUP-C

3. Answer any *two*: 10×2 = 20
- (a) Draw the detailed PASS-1 flow chart of an assembler.
 - (b) Explain the function of assembly Languages. Demonstrate with the help of any program.
 - (c) Explain the terms macro definition, macro call, macro expansion with syntax and example.
 - (d) Explain design of an absolute loader with a neat diagram.

DSE64:E3

CLOUD COMPUTING

GROUP-A

1. Answer any *five*: 1×5 = 5
- (a) What is grid computing?
 - (b) What is cluster computing?
 - (c) What do you mean by distributed computing?
 - (d) What is Public Cloud?
 - (e) What is Private Cloud?
 - (f) What is Hybrid Cloud?
 - (g) What is Community Cloud?
 - (h) What is NIST?

GROUP-B

2. Answer any *three*: 5×3 = 15
- (a) What are the services provided by cloud computing?
 - (b) What are the benefits and limitations of cloud computing?
 - (c) Discuss different deployment models.
 - (d) Discuss client/server architecture.
 - (e) What are the differences of PaaS and SaaS?

GROUP-C

3. Answer any *two*: 10×2 = 20
- (a) (i) What is Service Level Agreements (SLAs)? Discuss.
(ii) Discuss scaling hardware of traditional and cloud computing.
 - (b) Discuss Google App Engine.
 - (c) Discuss Eucalyptus.

—x—