

Code No.

N – 3573

Entrance Examination for Admission to the P.G. Courses in the Teaching Departments, 2022

CSS

COMPUTATIONAL BIOLOGY (MACHINE LEARNING)

General Instructions

1. The Question Paper is having two Parts — Part 'A' Objective type (60%) & Part 'B' Descriptive type (40%).
2. Objective type questions which carry 1 mark each are to be (✓) 'tick marked' in the response sheets against the appropriate answers provided.
3. 4 questions are to be answered out of 7 questions carrying 10 marks each in Part 'B'.
4. **Negative marking** : 0.25 marks will be deducted for each wrong answer in Part 'A'.

Time : 2 Hours**Max. Marks : 100**

To be filled in by the Candidate									
Register Number	in Figures								
	in words								

PART – A

(Objective Type)

Choose appropriate answer from the options in the questions. **One mark each.**

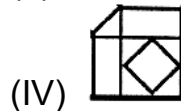
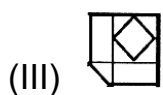
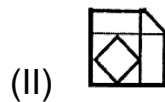
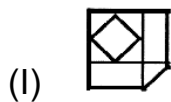
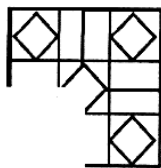
(60 × 1 = 60 marks)

1. SHIFT is coded as as VKLIW then how will you code CHANGE?

a) FKDQJH	b) DJBOHF
c) FKCMJJ	d) FKEQKH

DO NOT WRITE HERE

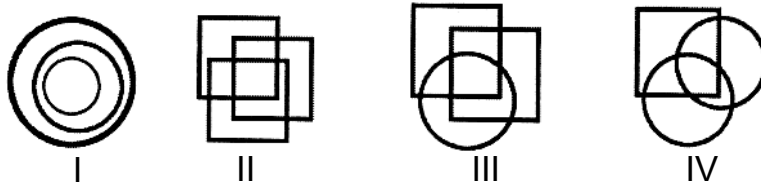
2. Which of the following figure will complete the pattern in



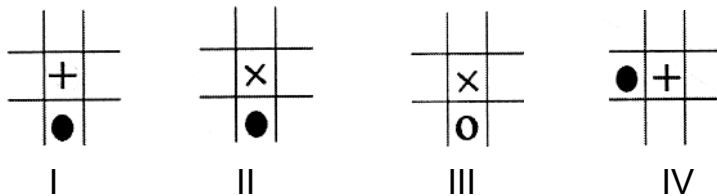
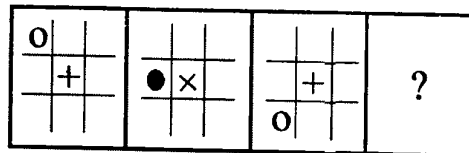
a) I
c) III

b) II
d) IV

3. Identify the diagram which best represents the relationship among classes
Animals: Mammals Human



- a) I
b) II
c) III
d) IV
4. The figure given below is changing in a specific order. Find out one which would occupy the next place.



- a) I
b) II
c) III
d) IV

Directions: In question 5-7. which one of the answer will fill the blank space so that the relation between the first two objects may be the same as that between the third and fourth.

5. Train: Bogies:: Forest: ?

- a) Garden
b) Animal
c) Tree
d) Vegetables

6. Letter: Email :: Train :

- a) Bicycle
b) Bike
c) Car
d) Aero plane

7. Paisa: Rupee:: Kilogram :?

- | | |
|---------|--------------|
| a) Ton | b) Quintal |
| c) Gram | d) Milligram |

Directions (Q.8 to 13): Six lectures A,B,C,D, E and F are to be organized in a span of seven days from Monday to Sunday, only one lecture on each day? accordance with the following:

- (i) C should not be organized on Friday.
- (ii) A should be arranged immediately after D.
- (iii) There should be a gap of two days between F and B.
- (iv) One day there will be no lecture (Saturday is not that day) and just before that day F will be organized.
- (v) E should be organized on Wednesday and should not be followed by F.

8. Which day will the lecture Dare organized?

- | | |
|-----------|-------------|
| a) Friday | b) Saturday |
| c) Sunday | d) Thursday |

9. On which day there is no lecture?

- | | |
|--------------|------------|
| a) Monday | b) Tuesday |
| c) Wednesday | d) Friday |

10. How many lectures are organized between F and D

- | | |
|---------|----------|
| a) Four | b) Three |
| c) Two | d) One |

11. Which of the following is the last lecture in the series?

- | | |
|------|------|
| a) A | b) B |
| c) C | d) D |

12. Which of the following lecture is between B and C

- | | |
|------------|------------------|
| a) D, A | b) E, D |
| c) A, D, E | d) None of these |

13. In a certain code, FUTURE is coded as UFUTER. How NATURE coded in that code?

- | | |
|-----------|-----------|
| a) ANUTER | b) NAUTER |
| c) ERUTAN | d) NARETU |

Direction for Question 14: In each of the following questions two statements are given. Which are followed by four conclusions I, II, III and IV. Choose the conclusions, which logically follow from the given statements.

14. Statements: Some phones are books. Some books are youtube.

Conclusions:

- I. Some Phones are YouTube.
- II. Some YouTube are phones.
- III. All Phones are YouTube.
- IV. All books are phones.

- | | |
|--------------------|-------------------|
| a) Only I | b) Only I and III |
| c) Only III and IV | d) None of these |

15. Based on the statement given below, choose conclusion

Statements :

All the Research scholars are Biologists. Some Biologists are scientists. Then conclusion is?

- a) All Research Scholars are Scientists
- b) All Scientists are Research Scholars
- c) Some Research Scholars are Scientist
- d) None of the above

16. Based on the statement given below, choose conclusion

Statement I : The vegetable prices in the local market have increased manifold during the past few days.

Statement II : Hike of diesel price has affected the transportation and logistics.

- a) Statement I is the cause and statement II is its effect.
- b) Statement II is the cause and statement I is its effect.
- c) Both the statements I and II are independent causes.
- d) Both the statements I and II are effects of independent causes.

17. AD:ZW ::HK:?

- | | |
|-------|-------|
| a) SQ | b) SP |
| c) ST | d) SU |

18. 4,7,13,25,?

- | | |
|-------|-------|
| a) 52 | b) 50 |
| c) 49 | d) 47 |

19. 5,10,17,26,?

- | | |
|-------|-------|
| a) 37 | b) 39 |
| c) 41 | d) 42 |

20. Ray introduces Sam as the Husband of only granddaughter of his mother. Ray has no siblings. How Sam is related to Ray?

- | | |
|------------------|-----------|
| a) Father in Law | b) Father |
| c) Son in law | d) Son |

21. Ramesh walked 20 m towards north. Then he turned right and walks 30 m. Then he turns right and walks 35 m. Then he turns left and walks 15 m. Finally he turns left and walks 15 m. In which direction and how many meters is he from the starting position?

- | | |
|--------------|--------------|
| a) 45 m East | b) 30 m East |
| c) 30 m West | d) 45 m West |

22. One morning after sunrise Mahesh and Suresh were talking to each other face to face. If Suresh's shadow was exactly to the right of Mahesh, Which direction Suresh was facing?

- | | |
|----------|----------|
| a) West | b) North |
| c) South | d) East |

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35. The mass storage device SSD stands for
- a) Smart Storage Drive
 - b) Storage Safe Drive
 - c) Storage State Drive
 - d) Solid State Drive
36. Which protocol assigns IP address to the client connected in the internet?
- a) IP
 - b) FTP
 - c) DHCP
 - d) HTTP
37. _____ is used to connect the users to the host servers on the Internet based on the Domain Name
- a) DNS
 - b) SNP
 - c) MNP
 - d) FTP
38. Small blocks of data created by a web server while a user is browsing a website and placed on the user's computer is
- a) malware
 - b) spyware
 - c) cookies
 - d) antivirus
39. Which of the following is used to read an HTML page and render it?
- a) Web server
 - b) Web network
 - c) Web browser
 - d) Web matrix
40. Which of the following tag is used for inserting the largest heading in HTML?
- a) <h1>
 - b) <div>
 - c) <head>
 - d) <h6>
41. Which element is used for or styling HTML5 layout?
- a) PHP
 - b) CSS
 - c) JavaScript
 - d) .Net

42. Which of the following HTML tag is used to add a row in a table?
- a) <th>
 - b) <td>
 - c) <tr>
 - d) <div>
43. Unix system, the super user refers to
- a) A privileged account with unrestricted access to all files and commands
 - b) A privileged account with unrestricted access to some files and commands
 - c) A privileged account with restricted access to some files and some commands
 - d) None of these
44. Which of the following errors can a compiler check?
- a) Logical
 - b) Runtime
 - c) Syntax
 - d) Semantic
45. Identify the interpreted language.
- a) C
 - b) C++
 - c) Python
 - d) None of these
46. Computer language which can be understood by the users is
- a) Binary language
 - b) Low-level language
 - c) Machine language
 - d) High-level language
47. Function which enables retrieval of any kind of data from database is considered as
- a) Key
 - b) Query
 - c) Script
 - d) None of these
48. Data that provides information about other data, but not the content of the data is
- a) Metadata
 - b) Constrained data
 - c) Filtered data
 - d) Source data

49. Multiple access to database programs simultaneously is considered as
- a) Sharing of Database
 - b) Updating of database
 - c) Cleaning of database
 - d) Porting of database
50. Which of the following is NOT a relational database management system (RDBMS)
- a) Oracle Database
 - b) MySQL
 - c) Microsoft SQL Server
 - d) Visual Basic
51. A key stroke in keyboard is converted to corresponding bits by _____ standard
- a) ISO
 - b) ISI
 - c) ASCII
 - d) ANSYS
52. The permanent programs stored in ROM is known as
- a) Hardware
 - b) Software
 - c) Malware
 - d) Firmware
53. Which of the following is a volatile memory?
- a) RAM
 - b) ROM
 - c) SSD
 - d) HDD
54. VLSI, LSI, and ULSI are used in which generation of computers?
- a) First generation
 - b) Second generation
 - c) Third generation
 - d) Fourth generation
55. Which of the following is open source software
- a) Google Chrome
 - b) Python
 - c) Tally
 - d) Photoshop
56. Which browser comes default with Linux distributions?
- a) MozillaFirefox
 - b) Edge
 - c) Opera
 - d) Internet Explorer

57. Which of the following is true in case of make command in Linux
- a) It determines automatically which piece of a large program need to be recompiled
 - b) Lists all files in a directory
 - c) copies all files to another directory
 - d) None of the above
58. The Machine learning method which does not require the labelled data is called
- a) Supervised learning
 - b) Unsupervised learning
 - c) Multi model Learning
 - d) Recommendation learning
59. The data used in machine learning application to recognize the underlying pattern is called
- a) Training Data
 - b) Testing Data
 - c) Kernel
 - d) Weight
60. What will be output of the program below
- ```
#include<stdio.h>
int main()
{
int n=24, p=0, rem;
while(n!=0)
{
 rem=n%10;
 p=p*10+rem;
 n/=10;
}
printf("output: %d", p) ;
return 0;
}
```
- a) 24
  - b) 42
  - c) 40
  - d) 20

# ANSWER SHEET — PART – A

|    |   |   |   |   |   |
|----|---|---|---|---|---|
| 1  | A | B | C | D | E |
| 2  | A | B | C | D | E |
| 3  | A | B | C | D | E |
| 4  | A | B | C | D | E |
| 5  | A | B | C | D | E |
| 6  | A | B | C | D | E |
| 7  | A | B | C | D | E |
| 8  | A | B | C | D | E |
| 9  | A | B | C | D | E |
| 10 | A | B | C | D | E |
| 11 | A | B | C | D | E |
| 12 | A | B | C | D | E |
| 13 | A | B | C | D | E |
| 14 | A | B | C | D | E |
| 15 | A | B | C | D | E |
| 16 | A | B | C | D | E |
| 17 | A | B | C | D | E |
| 18 | A | B | C | D | E |
| 19 | A | B | C | D | E |
| 20 | A | B | C | D | E |

|    |   |   |   |   |   |
|----|---|---|---|---|---|
| 21 | A | B | C | D | E |
| 22 | A | B | C | D | E |
| 23 | A | B | C | D | E |
| 24 | A | B | C | D | E |
| 25 | A | B | C | D | E |
| 26 | A | B | C | D | E |
| 27 | A | B | C | D | E |
| 28 | A | B | C | D | E |
| 29 | A | B | C | D | E |
| 30 | A | B | C | D | E |
| 31 | A | B | C | D | E |
| 32 | A | B | C | D | E |
| 33 | A | B | C | D | E |
| 34 | A | B | C | D | E |
| 35 | A | B | C | D | E |
| 36 | A | B | C | D | E |
| 37 | A | B | C | D | E |
| 38 | A | B | C | D | E |
| 39 | A | B | C | D | E |
| 40 | A | B | C | D | E |

|    |   |   |   |   |   |
|----|---|---|---|---|---|
| 41 | A | B | C | D | E |
| 42 | A | B | C | D | E |
| 43 | A | B | C | D | E |
| 44 | A | B | C | D | E |
| 45 | A | B | C | D | E |
| 46 | A | B | C | D | E |
| 47 | A | B | C | D | E |
| 48 | A | B | C | D | E |
| 49 | A | B | C | D | E |
| 50 | A | B | C | D | E |
| 51 | A | B | C | D | E |
| 52 | A | B | C | D | E |
| 53 | A | B | C | D | E |
| 54 | A | B | C | D | E |
| 55 | A | B | C | D | E |
| 56 | A | B | C | D | E |
| 57 | A | B | C | D | E |
| 58 | A | B | C | D | E |
| 59 | A | B | C | D | E |
| 60 | A | B | C | D | E |



# COMPUTATIONAL BIOLOGY SPECIALIZATION IN MACHINE LEARNING

## PART – B

(Descriptive Type)

Answer **any four** questions. Each carries **10** marks. **(4 × 10 = 40 Marks)**

1. Write a C Program or pseudo code to
  - (a) Take an input from the user and check whether the number is prime or not.
  - (b) Print factorial of number by taking input from the user
2. Write advantages and disadvantages of Open source and Proprietary Operating Systems with example.
3. Discuss working principle of internet. Also explain flow of data from server to client
4. Differentiate System Software and Application Software and explain its features.
5. Discuss application of Artificial Intelligence in various sectors
6. Compare the Compiler and the Interpreter also discuss advantages of Compiler and Interpreter
7. Create a HTML page with for the following
  - a) Give highest level (main heading) as My Page
  - b) Add a photo - "myphoto.jpg" and its caption as "This is my Photo"
  - c) Give link on text "Click Here" from your page to another page - <https://www.mylink.org>
  - d) Add Bulletin items One, Two, Three, Four
  - e) Add A Submit button





























