

Code No.

L – 4031

Entrance Examination for Admission to the P.G. Courses in the Teaching Departments, 2021

CSS

COMPUTATIONAL BIOLOGY SPECIALIZATION IN 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. Symposium : Chairman: : Newspaper : ?
 - a) Reporter
 - b) Distributor
 - c) Printer
 - d) Editor

DO NOT WRITE HERE

2. Mouth : Mask :: Hand :

a) Gloves

b) Finger

c) Nail

d) Palm

3. Kind-hearted : benevolent :: humorous :

a) Chucklesome

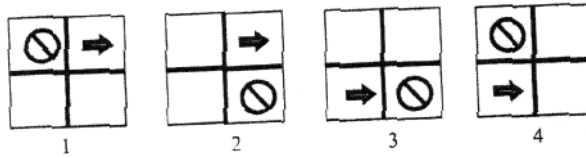
b) Serious

c) Outstanding

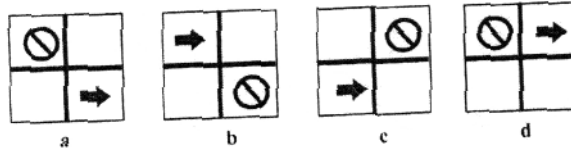
d) Notable

4. IF GIVE is coded as 9643 and TAKE is coded as 7103, how is GATE coded?
- a) 9173 b) 9731
c) 9713 d) 9317

5. See the Figure



Next will be



- a) d b) c
c) b d) a
6. Walking at $\frac{5}{6}$ of his usual speed, Mohan is 15 minutes late for an appointment. Find the usual time he takes to cover the journey.
- a) 90 min b) 115 min
c) 60 min d) 75 min
7. A person sells impure milk by mixing with water and thereby gains 25%. The percentage of water in the mixture is
- a) 5% b) 10%
c) 20% d) 25%
8. Chinchu is twice as old as Kukku. Three years ago, she was three times as old as Kukku. How old is Chinchu now?
- a) 6 years b) 12 years
c) 14 years d) 16 years

9. Raman can type 400 words in four minutes. How much time will she take to type 4200 words?
- a) 42 Minute b) 21 Minute
c) 20 Minute d) 25 Minute
10. If AMBITION is BNCJUJPO then SUCCESS
- a) TVDDFTT b) RTBBFTT
c) VTBBFTT d) TVDDETT
11. Look at this series: 15, 5, 15, 7, 15, 10, 15 ... What number should come next?
- a) 12 b) 13
c) 14 d) 15
12. For the series of alphabets ABD, DFC, GJB, _____ the missing term is
- a) JNA b) JMA
c) IMA d) HMA
13. Here are some words translated from an artificial language.
 suneraliba means GOOD HEALTH
 ishajpmada means NICE DAY
Which word could mean GOOD DAY
- a) Suneraishajp
b) Suneramada
c) Libamada
d) Ishajliba
14. If yesterday's tomorrow was Saturday, then today's day-after-tomorrow will be
- a) Thursday b) Monday
c) Friday d) Sunday

15. Statements: All young doctors are open-minded All open-minded persons are sensible.
 Conclusions: I. All doctors are sensible. II, All young people are sensible.
- Only conclusion I follows
 - Only conclusion II follows
 - Either I or II follows
 - Neither I nor II follows
16. If A exceeds B by 60%, B is less than C by 20%, then A: C is:
- 32:25
 - 6:2
 - 3:1
 - 16:8
17. If + stands for division, - stands for equal to, x stands for addition, ÷ stands for greater than, = stands for less than, > stands for multiplication and < stands for subtraction, which of the following statement is correct?
- $5 + 2 \times 1 = 3 + 4 > 1$
 - $5 > 2 \times 1 - 3 > 4 < 1$
 - $5 \times 2 < 1 - 3 < 4 \times 1$
 - $5 < 2 \times 1 + 3 > 4 \times 1$
18. $32^2 - 15^2$ is how many times of 47
- 15
 - 16
 - 17
 - 18
19. There are 5 people — A, B, C, D and E. They have to sit around a circular table with 5 chairs such that A can sit neither next to B nor next to C. How many such distinct arrangement are possible?
- 10
 - 8
 - 6
 - 4
20. A river flows West to East and on the way turns Right, goes in a semi-circle round a hillock, and then turns left at right angles. In which direction is the river finally flowing?
- West to East
 - East to West
 - South to North
 - North to South

21. Chathan walked 10m towards north, took a right turn; and walked 6 m. He again took a right turn and walked 10 m. How far and which direction is he from his starting point?
- a) 6 Meter East
 - b) 10 meter East
 - c) 26 Meter west
 - d) 10 Meter West
22. Find number of words that can be formed by using all letters of the word 'LEARNING with vowels are together.
- a) 1440
 - b) 720
 - c) 360
 - d) 240
23. There are six women and four men in a group. A committee of 4 is to be chosen. In how many ways can a committee be formed that contain three women and one man?
- a) 80
 - b) 60
 - c) 40
 - d) 20
24. Raju takes twice as much as Radha or thrice as such time as Rani to finish a piece of work, Working together, they can finish the work in 2 days. In how many days can Radha alone finish the work?
- a) 12 days
 - b) 10 days
 - c) 6 days
 - d) 4 days
25. The radius of a circle is so increased that its circumference increased by 5%. Find the percentage increase in its area?
- a) 5%
 - b) 10.25%
 - c) 25%
 - d) 50%

26. A room is 20 m long and 5 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the room is:
- (a) 400 m^3 (b) 500 m^3
(c) 550 m^3 (d) 600 m^3

Directions (Questions 27 to 30): Study the given information carefully and answer the questions that follow:

- (I) There are seven books one each on Mathematics, Hindi, English, Chemistry, Biology, Physics and Sociology, lying on a table one above the other.
- (II) Mathematics is on the top of all the books.
- (III) Sociology is immediately below Chemistry, which is immediately below Physics.
- (IV) Physics is immediately below Mathematics but not in the middle of all books.
- (V) Hindi is immediately above English and below Biology
- (VI) Biology is in-between Sociology and Hindi
27. Which book is at the bottom most?
- a) Hindi (b) English
c) Sociology (d) Chemistry
28. Which book is in-between Physics and Sociology?
- a) Chemistry (b) Biology
c) Hindi (d) None of the above
29. Which book can be middle most?
- a) Hindi (b) English
c) Sociology (d) Chemistry

30. Which book is immediately above biology?
a) Chemistry
b) Biology
c) Hindi
d) Sociology
31. Arrange in ascending order the units of memory TB, KB, GB, MB
a) TB>MB>GB>KB
b) MB>GB>TB>KB
c) TB>GB>MB>KB
d) GB>MB>KB>TB
32. A computer program that converts assembly language to machine language is
a) Compiler
b) Interpreter
c) Assembler
d) Comparator
33. Method of representing numbers such as '0s' and '1s' is called
a) Binary notation
b) Primary notation
c) Secondary notation
d) Numeric notation
34. Keyboard shortcut to paste a text, which is copied to clipboard is
a) CTRL+C
b) CTRL+V
c) CTRL+L
d) CTRL+D
35. USB is a device used to store data, stands for
a) Unlimited Service Band
b) Unlimited Serial Bus
c) Universal Serial Bus
d) Universal Service Bus

36. What is OMR?
- a) Optional Mark Reader
 - b) Original Mark Reader
 - c) Optimal Mark Reader
 - d) Optical Mark Recognition
37. The component which supplies adequate power for the Motherboard of a computer is
- a) Switched Mode Power Supply (SMPS)
 - b) CMOS
 - c) Direct supply
 - d) AC supply
38. Which of the following is temporary memory to store data
- a) ROM
 - b) RAM
 - c) Hard Disk
 - d) None of these
39. One Gigabyte is equal to
- a) 1024 MB
 - b) 1000 MB
 - c) 1024 KB
 - d) 1024 TB
40. Which of the following Ethernet cable has max transmission speed?
- a) Cat 3
 - b) Cat 5
 - c) Cat 5e
 - d) Cat 6
41. Which of the following is not an Android version?
- a) Marshmallow
 - b) Kitkat
 - c) Lollipop
 - d) Orange

42. Which of the following is NOT a database package
- a) Oracle
 - b) MySQL
 - c) MsSQL Server
 - d) All of these
43. Which of the following protocol is used to transfer large files
- a) FTP
 - b) SMTP
 - c) IP
 - d) HTML
44. Unix/Linux the command to get current working directory is
- a) pwd
 - b) ls
 - c) wd
 - d) dir
45. Which Unix command is used to display the top few lines of the file
- a) cat
 - b) more
 - c) grep
 - d) head
46. Bluetooth is an example of
- a) Personal area network
 - b) Local area network
 - c) Virtual private network
 - d) Wide area network
47. The length of an IPv6 address is
- a) 256 bits
 - b) 128 bits
 - c) 64 bits
 - d) 32 bits
48. Which of the following translates internet domain and host names to IP address.
- a) Routing Information Protocol
 - b) Network Time Protocol
 - c) Internet Relay Chat
 - d) Domain Name System

49. WPA2 is used for security in

- a) Ethernet
- b) Bluetooth
- c) WiFi
- d) Infrared

50. The result of the following C program is

```
#include<stdio.h>
int main()
{
int i = 2;
while(++i<=6)
printf("%d ",i++);
}
```

- a) 2 3 4 5 6
- b) 2 4 6
- c) 2 4
- d) 3 5

51. The result of the following C program is

```
#include <stdio.h>
void main ( )
int a;
a=5;
a*=5;
printf ("%d", a);
}
```

- a) 25
- b) 15
- c) 10
- d) 5

52. Which escape character can be used to beep from speaker in C?

- a) \b
- b) \m
- c) \n
- d) \a

53. Which of the following character is used to terminate an instruction in a C program?

- a) 0
- b) \n
- c) \0
- d) None of these

54. What is the purpose of getch () function?
- a) Pauses the Output Console untill a key is pressed
 - b) Read a character from a file
 - c) Read all file
 - d) Read file random
55. How can you make a numbered list in HTML?
- a) <line>
 - b) <list>
 - c) <dl>
 - d)
56. Choose the correct HTML element for the largest heading:
- a) <h1>
 - b) <h6>
 - c) <heading>
 - d) <head>
57. The Binary code corresponding to 147 is
- a) 10010000
 - b) 10010011
 - c) 10010111
 - d) 10110011
58. The sample data on which a machine learning algorithm build a model is known as
- a) Trail data
 - b) Training Data
 - c) Transfer data
 - d) Transform data
59. The most widely used metrics and tools to assess a classification model are:
- a) Decision Matrix
 - b) Random Matrix
 - c) Confusion matrix
 - d) None of the above
60. Clustering is a
- a) Supervised learning algorithm
 - b) Unsupervised learning algorithm
 - c) Mixed Algorithm
 - d) None of these

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 carry **10** marks

(4 × 10 = 40 Marks)

1. Discuss classification of Programming language- Machine language, Assembly language, Assembler, High level Language.
2. Discuss the positives and negatives of Windows and Linux Operating Systems.
3. Discuss how does the Internet work?
4. What is software and what are the types of software?
5. Explain how Artificial Intelligence is transforming the world?
6. Discuss Machine learning with its advantages in reducing cost, effort and time.
7. Explain how AI and machine learning can help to tackle pandemic that we are facing.

