BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
ANNUAL EXAMINATION 2024-25
ARTIFICIAL INTELLIGENCE

Class: VIII   **Duration: 2 hrs.**
Date: 21-03-2025   **Max Marks: 50**
Name: ……………………………   **Exam No. :**

General Instructions:
1. *Please read the instructions carefully.*
2. *This Question Paper consists of 18 questions in two sections: Section A & Section B.*
3. *Section A has Objective type questions (MCQ, Fill in the blanks) whereas Section B contains Subjective type questions.*
4. *All questions of a particular section must be attempted in the correct order.*
5. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
    i. *This section has 02 questions.*
    ii. *Marks allotted are mentioned against each question/part.*
    iii. *There is no negative marking.*
    iv. *Do as per the instructions given.*
6. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
    i. *This section has 16 questions.*
    ii. *A candidate has to do 11 questions.*
    iii. *Do as per the instructions given.*
    iv. *Marks allotted are mentioned against each question/part.*

SECTION A: OBJECTIVE TYPE QUESTIONS

I. Multiple Choice Questions: (Answer any sixteen)   **(16 X 1 = 16)**

(1) Full form of "TAY", the artificial intelligent chatbot is :
    (a) Trends About You   (b) Thinking About You
    (c) Talking About You   (d) Time And You

(2) What is your data footprint ?
    (a) the data trail left by you when you surf the internet
    (b) The time you spend on your computer
    (c) the number of electronics you buy in a year
    (d) the number of apps you have on your mobile

(3) What is the primary goal of data privacy ?
    (a) to protect personal data from unauthorized access, use, disclosure, alteration or destruction
    (b) to ensure that personal data is collected, processed and used in a fair and lawful manner
    (c) to empower individuals with control over their personal data
    (d) all of the above

(4) What is the purpose of transforming data into information ?
    (a) to make the data easier to store   (b) to make the data easier to analyze
    (c) to give the data meaning and context   (d) to make the data more valueable

(5) Which of the following is an example of quantitative data ?
    (a) the colour of a product   (b) the size of a customer's business

(c) the number of items sold in a day　　　　(d) the customer's opinion of a product

(**6**) The …………………. vacuum cleaner robot is a little, self-contained cleaning robot that you can control to clean rugs, carpets and floors.

    (a) Roomba　　　　(b) Sophia　　　　(c) Nao　　　　(d) Eagle 2.0

(**7**) The ……………………. has been called an "Ultra compact assistant robot" due to its small size and kind demeanour.

    (a) Roomba　　　　(b) Sophia　　　　(c) Wakamaru　　　　(d) Nao

(**8**) ………………… bots are used to automate repetitive operations like filling out forms to post advertisements on websites.

    (a) Hardware　　　　(b) Internet　　　　(c) Software　　　　(d) Multiuser

(**9**) ……………… is an artificially intelligent robot toy with a strong personality and a range of emotions.

    (a) Sophia　　　　(b) Cozmo　　　　(c) Nao　　　　(d) Eurobot

(**10**) What are the benefits of using humanoid robots ?

    (a) They can perform tasks that are dangerous for humans.

    (b) They can work 24/7 without getting tired.

    (c) They can be programmed to do repetitive tasks.

    (d) All of the above.

(**11**) What is the main difference between a humanoid robot and other types of robots ?

    (a) A humanoid robot is designed to look like a human.

    (b) A humanoid robot is more advanced than other types of robots.

    (c) A humanoid robot is more expensive than other types of robots.

    (d) There is no difference between a humanoid robot and other types of robots.

(**12**) What are some of the challenges associated with designing and building humanoid robots ?

    (a) Finding the right materials to use.

    (b) Making the robot walk and move like a human.

    (c) Making the robot think like a human.

    (d) All of the above.

(**13**) Which of the following is NOT a characteristics of humanoid robots ?

    (a) They have arms and legs.　　　　(b) They are designed to look like humans.

    (c) They are capable of emotions.　　　　(d) They can perform tasks that humans do.

(**14**) Which HTML tag is used to embed an audio file into a web page ?

    (a) <audio>　　　　(b) <video>　　　　(c) <img>　　　　(d) <source>

(**15**) Which HTML attribute specifies whether to display playback controls (eg. Play, pause, volume) for the audio or video ?

    (a) autoplay　　　　(b) controls　　　　(c) loop　　　　(d) muted

(**16**) Which HTML tag is used to create a hyperlink ?

    (a) <link>　　　　(b) <a>　　　　(c) <img>　　　　(d) <href>

(**17**) Which HTML attribute specifies the URL of the linked resource ?

    (a) href　　　　(b) src　　　　(c) alt　　　　(d) title

(**18**) How do you combine two strings in Python ?

    (a) string1 + string2　　　　(b) string1.combine(string2)

    (c) string1.concatenate(string2)　　　　(d) string1*string2

(**19**) A variable that can only have two values, True or False are called

    (a) Boolean　　　　(b) Standard

    (c) Elif　　　　(d) Else

(**20**) Which two statements are used to implement iteration ?

    (a) IF and WHILE　　　　(b) ELSE and WHILE

    (c) FOR and WHILE　　　　(d) IF and ELSE

II. Fill in the blanks. (Answer any eight) (8 X 1 = 8)

(**1**) In June 2005, a ………..…………. at a hospital in Philadelphia malfunctioned during surgery.

(**2**) An Uber self-driving SUV struck and killed a …………………in tempe, Arizona.

(**3**) ………………… consists of the standards of behaviour our society accepts.

(**4**) ……………….. are AI-generated video or audio content with an intent to deceive.

(**5**) A string is a …………………. of characters.

(**6**) ……………….. subscript helps in accessing the string from the beginning.

(**7**) …………………. subscript helps in accessing the string from the end.

(**8**) "+" operator …………………. the strings on both sides of the operator.

(**9**) A statement or statement(s) indented inside the if statement are executed only if the condition evaluates to ………………….

(**10**) In …………….. loop, it is known in advance how many times the loop is going to be executed.

SECTION B: SUBJECTIVE TYPE QUESTIONS

III. Short Answer Type Questions : (Answer any seven) (7 X 2 = 14)

(**1**) Define Ethics. Give two examples where AI is being used for good.

(**2**) Your younger sibling has spent a lot of time in preparing a 3D model of India Gate which is 3 ft tall and kept it on ground for safety concerns. Your mother started the autonomous robot to clean the floor and it tries to clean the area near the model but it falls and breaks.

  (a) Who can be held liable for damages caused by autonomous systems ?

  (b) List two AI Ethics.

(**3**) Explain the difference between data and information.

(**4**) Robots for education are intended for use in classrooms and other learning environments. Justify the statements by giving a few examples.

(**5**) Farmers in India can profit from using agricultural robots in a number of ways. Explain any three ways to do so.

(**6**) What is a humanoid robot ? Give any two characteristics of a humanoid robot.

(**7**) Distinguish between HREF and NAME attributes of <A> tag with the help of example.

(**8**) Write Python code to calculate and display the Area and Perimeter of Rectangle by inputting the length and breadth of it.

(**9**) What is a string ? What is slicing of string in Python ? Explain with example.

(**10**) What is a selection statement in Python ? Which selection statements does Python provide ? Explain.

IV. Long Answer Type Questions : (Answer any four) (4 X 3 = 12)

(**1**) "AI is interdisciplinary in nature and its foundations are in various fields." Justify the statement with three valid points.

(**2**) What are data footprints ? Why should you keep a data recovery plan ? Explain any three data recovery plan.

(**3**) How are robots used in the domestic sector ? Explain with a few examples. (any three)

(**4**) Write and explain any three identification rules of a mobile robot.

(**5**) Explain the **<img>** tag and the attributes **src** and **alt** of HTML. Give suitable example of it.

(**6**) What are iterative statements ? Which are the iterative statements in Python ? Explain with example.

……………………………XXXXXXXXX…………………………………