

**CLASS – X (AI)**  
**ICT**

- Q1. What is an operating system? Give two examples.**
- Q2. Explain the function of the Recycle Bin in Windows.**
- Q3. Name any two preventive maintenance practices for a computer.**
- .
- Q4. What are system software and application software? Give one example each.**
- Q5. Why is it important to create backups of data?**
- Q6. What is the shortcut key to save a file? Explain its use.**
- Q7. Explain the function of a firewall in computer security.**
- Q8. Describe two functions of the Start menu in Windows.**
- Q9. What is the difference between 'Cut' and 'Copy' commands?**
- Q10. List any two hardware components used for input and output.**

# **CLASS XI (AI)**

## **CAPSTONE PROJECT**

### **A. OBJECTIVE TYPE QUESTIONS**

1. Which is NOT correct about the Capstone project?
  - a. It is a project where students must research independently
  - b. Students can integrate all their knowledge to develop a solution to the problem
  - c. It is the final project of an academic program.
  - d. Students are made to look at real world situations, exchange their point of view and discuss potential solutions to the problem.
2. Which is the fundamental question which is asked before deciding to embark on an AI development journey?
  - a. Should we do the project?
  - b. Is there a solution?
  - c. Can we leave the problem?
  - d. Is there a pattern?
3. The question, 'which option should be taken?' comes under which category?
  - a. Classification
  - b. Regression
  - c. Anomaly detection
  - d. Recommendation
4. Which stage in Design Thinking is missing (Prototype, Ideate, Test, Define)?
  - a. Evaluation
  - b. Empathise
  - c. Evolution
  - d. Enrichment
5. Real computational tasks are complicated. To accomplish them, you need to \_ before coding.
  - a. Test the problem causing variables
  - b. Ask for finance help from stakeholders
  - c. Break down the problem into smaller units
  - d. Write it in a paper and read it to your partners
6. Which one is not a part of the 5W1H method?
  - a. Who
  - b. While
  - c. Where
  - d. When
7. \_\_\_\_\_ is the process of generating ideas and solutions through sessions such as sketching, brainstorming etc.

- a. Define
  - b. Empathise
  - c. Ideate
  - d. Prototype
8. Which one among the following is known as individual brainstorming?
- a. Brainwriting
  - b. Brain dump
  - c. Brainstorm
  - d. Brain explore
9. \_\_\_\_\_ is a useful process during ideation.
- a. Storyboarding
  - b. Empathy map
  - c. Prototyping
  - d. Data collection
10. The \_\_\_\_\_ stage involves creating a model designed to solve consumer's problems in Design Thinking.
- a. Modeling
  - b. Prototype
  - c. Training
  - d. Deployment
11. \_\_\_\_\_ Analysis helps in identifying the patterns by asking different questions which fall into different approaches.
- a. Predictive
  - b. Prescriptive
  - c. Probability
  - d. Prototype

## **B. Short Answer Questions**

1. What do you mean by a capstone project
2. Name some of the skills which students will acquire by doing capstone project
3. Give some examples of the use case of SDG's
4. Students are promoted to develop critical and creative thinking. Why?
5. Define Design Thinking

# CLASS – XI (CS)

## MULTIPLE CHOICE QUESTIONS

1	What will be the output of the following code? <pre>x=-10 if x&gt;0:     print("positive") else:     print("non-positive")</pre> <p>a) Positive      b) Non-positive      c) Negative      d) Error</p>
2	Which statement checks if a number n is divisible by 3 and 5? a) if n / 3 and n / 5:      b) if n % 3 == 0 or n % 5 == 0: c) if n % 3 == 0 and n % 5 == 0:      d) if n == 3 and 5:
3	Which loop is best when the number of iterations is unknown? a) for      b) while      c) do-while      d) if
4	What is the output of this code?
	<pre>n=4 fact=1 for i in range(1,n+1):     fact*=i print(fact)</pre> <p>a) 10      b) 24      c) 16      d) 5</p>
5	Choose the correct flow for if-elif-else: a) Always executes all blocks      b) Executes only one block c) May skip the if block      d) Executes in reverse order
6	Which of the following will print the numbers from 10 to 1? a) for i in range(10): print(i)      b) for i in range(1, 11): print(i) c) for i in range(10, 0, -1): print(i)      d) for i in range(0, 10, -1): print(i)
7	What will be the output of this code? <pre>i=0 while i&lt;3:     print(i,end=" ")     i+=1</pre> <p>a) 0 1 2      b) 1 2 3      c) 0 1 2 3      d) 1 2</p>
8	Which keyword is used to exit a loop early? a) continue      b) exit      c) break      d) stop
9	Choose the correct statement about loops in Python: a) Only for loops can be nested b) break can only be used in for loops c) while and for loops can both use break and continue d) Python does not support nested loops

10	<p>What will this print?</p> <pre>for i in range(3):     print("Hello",i,end="")</pre> <p>a) Hello 1, Hello 2, Hello 3      b)Hello 0 Hello 1 Hello 2 c) Hello 0 Hello 2 Hello 4      d)Error</p>
11	<p>What is the output of this nested loop?</p> <pre>for i in range(2):     for j in range(3):         print(i,j,end="")</pre> <p>a) (0,0), (1,0), (2,0)      b) 0 0 0 1 0 2 1 0 1 1 1 2      c) 2 times      d)3 times</p>
12	<p>Which of the following is a valid <b>if</b> condition?</p> <p>a) if (x == 10)   b) if x = 10      c) if x &lt;== 10   d) if x ==&gt; 10</p>
13	<p>What does range(5, 1, -1) generate?</p> <p>a) 5 4 3 2      b) 5 4 3 2 1      c) 5 3 1      d) 5 1</p>
14	<p>What is the output of this code?</p> <pre>for i in range(2,6):     if i==4:         break     print(i, end="")</pre> <p>a) 2 3      b) 2 3 4 5      c) 2 3 4      d) 2 3 5</p>

## **CLASS XII - AI**

<b>Q. 1</b>	What does 'P' stand for in the acronym 'RESPECT' used to ensure active listening? Explain.	<b>2</b>
<b>Q. 2</b>	Shikha is an elderly woman. She stays with her family. She has a habit of washing her hands at least 20 times a day. Even after washing her hands, she feels they are not clean, and continues rubbing or washing them. She neither talks to her grandchildren, nor does she participate in any family activity. Suggest her one way in which she can overcome her personality disorder.	<b>2</b>
<b>Q. 3</b>	Differentiate between the terms worksheet and workbook.	<b>2</b>
<b>Q. 4</b>	Name two government schemes that help small-scale entrepreneurs gain capital.	<b>2</b>
<b>Q. 5</b>	The greening of economy presents a major opportunity to start new businesses, develop new markets and lower energy costs. Write any two benefits of green jobs.	<b>2</b>
<b>Q. 6</b>	Define capstone project.	<b>2</b>
<b>Q. 7</b>	Imagine that you want to create your first app. Create a list of questions you would develop to decompose this task.	<b>2</b>
<b>Q. 8</b>	Differentiate between training set and test set.	<b>2</b>
<b>Q. 9</b>	"Once the relevant projects have been selected and properly scoped, the next step of the machine learning lifecycle is the Design or Build phase." Briefly explain this phase.	<b>2</b>
<b>Q. 10</b>	List the considerations which data scientists have to keep in mind during the testing stage.	<b>4</b>

# CLASS – XII

## COMPUTER SCIENCE

### Short Answer Questions/Long Answer Questions

1	<p>a. Given is a Python list declaration :  <code>Listofnames=["Aman","Ankit","Ashish","Rajan","Rajat"]</code>  Write the output of :  <code>print (Listofnames [-1:-4:-1])</code></p> <p>b. Consider the following tuple declaration :  <code>tup1=(10,20,30,(10,20,30),40)</code>  Write the output of :  <code>print(tupl.index(20))</code></p>
2	<p>a. Given is a Python string declaration :  <code>NAME = "Learning Python is Fun"</code>  Write the output of : <code>print(NAME[-5:-10:-1])</code></p> <p>b. Write the output of the code given below :  <code>dict1={1:["Rohit",20], 2:["Siya",90]}</code>  <code>dict2={1:["Rahul",95], 5:["Rajan",80]}</code>  <code>dict1.update(dict2)</code>  <code>print(dict1.values( ))</code></p>
3	<p>Write the output displayed on execution of the following Python code :  <code>LS=["HIMALAYA","NILGIRI","ALASKA","ALPS"]</code></p>
	<pre> D={} for S in LS :     if len(S)%4 == 0:         D[S] = len(S) for K in D :     print(K,D[K], sep = "#") </pre>
4	<p>Write the Python statement for each of the following tasks using built-in functions/methods only :</p> <p>(i) To remove the item whose key is "NISHA" from a dictionary named Students. For example, if the dictionary Students contains {"ANITA":90, "NISHA":76, "ASHA":92}, then after removal the dictionary should contain{"ANITA":90,"ASHA":92}</p> <p>(ii) To display the number of occurrences of the substring "is" in a string named message. For example if the string message contains "This is his book", then the output will be 3.</p>
5	<p>A tuple named subject stores the names of different subjects. Write the Python commands to convert the given tuple to a list and thereafter delete the last element of the list.</p>

6	<p>Predict the output of the following code :</p> <pre> d={"IND":"DEL","SRI":"COL","CHI":"BEI"} str1="" for i in d:     str1=str1+str(d[i])+"@"     str2=str1[:-1] print (str2) </pre>								
7	<p>Write the Python statement for each of the following tasks using BUILT-IN functions/methods only :</p> <p>(i) To delete an element 10 from the list lst.</p> <p>(ii) To replace the string "This" with "That" in the string str1.</p>								
8	<p>A dictionary dict2 is copied into the dictionary dict1 such that the common key's value gets updated. Write the Python commands to do the task and after that empty the dictionary dict1.</p>								
9	<p>Write difference between mutable and immutable data types? Write name of any two mutable data types.</p>								
10	<p>i. Which operator in python has right to left associativity?</p> <p>ii. Evaluate the following expression and write output: &gt;&gt;&gt; 5//4**3%6+2</p>								
11	<p>If str1= "foundation stone" and str2= "strong base", then</p> <p>Write the Python statements for each of the following tasks using Built-in functions/methods only:</p> <ul style="list-style-type: none"> <li>To count the occurrence of the letter 'n' in str1.</li> <li>To convert the string str2 in a list and each word of the string should become the element of the list</li> </ul>								
12	<p>Write a user defined function in Python named showGrades(S) which takes the dictionary S as an argument. The dictionary, S contains Name:(Eng,Math,Science] as key:value pairs. The function displays the corresponding grade obtained by the students according to the following grading rules :</p> <table border="1"> <thead> <tr> <th>Average of Eng,Math,Science</th><th>Grade</th></tr> </thead> <tbody> <tr> <td>&gt;=90</td><td>A</td></tr> <tr> <td>&lt;90 but &gt;=60</td><td>B</td></tr> <tr> <td>&lt;60</td><td>C</td></tr> </tbody> </table>	Average of Eng,Math,Science	Grade	>=90	A	<90 but >=60	B	<60	C
Average of Eng,Math,Science	Grade								
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	<p>For example : Consider the following dictionary</p> <pre> S={"AMIT":[92,86,64],"NAGMA":[65,42,43],"DAVID":[92,90,88]} </pre> <p>The output should be : AMIT</p> <p>– B</p> <p>NAGMA – C DAVID</p> <p>– A</p>								