

CBSE | DEPARTMENT OF SKILL EDUCATION

INFORMATION TECHNOLOGY (SUBJECT CODE 802)

CLASS XII (SESSION 2021-2022)

MARKING SCHEME OF SAMPLE QUESTION PAPER FOR TERM - II

Max. Time Allowed: 1 ½ Hours (90 min)

Max. Marks: 30

General Instructions:

1. Please read the instructions carefully
2. This Question Paper is divided into 03 sections, viz., Section A, Section B and Section C.
3. Section A is of 05 marks and has 06 questions on Employability Skills.
 - a) Questions numbers 1 to 4 are one mark questions. Attempt any three questions.
 - b) Questions numbers 05 and 06 are two marks questions. Attempt any one question.
4. Section B is of 17 marks and has 16 questions on Subject specific Skills.
 - a) Questions numbers 7 to 13 are one mark questions. Attempt any five questions.
 - b) Questions numbers 14 to 18 are two marks questions. Attempt any three questions.
 - c) Questions numbers 19 to 22 are three marks questions. Attempt any two questions
5. Section C is of 08 marks and has 03 competency-based questions.
 - a) Questions numbers 23 to 25 are four marks questions. Attempt any two questions.
6. Do as per the instructions given in the respective sections.
7. Marks allotted are mentioned against each section/question.

SECTION A

(3 + 2 = 5 marks)

| Answer any 03 questions out of the given 04 questions | | 1 x 3 = 3 |
|---|--|-----------|
| Q.1 | Who are social entrepreneurs? Individuals, who focus on developing solutions that benefit the society, are called social entrepreneurs. They develop, fund and implement solutions that are directed towards society, culture and environment. | 1 |
| Q.2 | An entrepreneur may face many personal barriers . Give any two personal barriers to entrepreneurship. i- Self-doubt comes when we do not have confidence in ourselves and our abilities ii. Forming a team /team work -Finding suitable people and training them to put in their best. | ½+½ |
| Q.3 | What are the possible green jobs in building and construction? Areas for green jobs in building and construction include landscape, gardening, maintenance of green components, water management developing new green building, rating programmes, certification services | 1 |

| | | |
|---|---|-------------------|
| Q.4 | <p>What is the mission of National Action Plan on Climate Change?</p> <p>The National Action Plan on Climate Change deals with adverse impacts of climate change on environment, forests, habitat, water resources and agriculture.</p> | 1 |
| Answer any 01 question out of the given 02 questions | | 1 x 2 = 2 |
| Q.5 | <p>What are the attitudes that make a successful entrepreneur?</p> <p>The attitudes that make a successful entrepreneur are</p> <ol style="list-style-type: none"> 1. Decisiveness 2. Initiative 3. Interpersonal Skills 4. Perseverance 5. Organisational Skills <p>(any 4 points to be mentioned)</p> | $\frac{1}{2} * 4$ |
| Q.6 | <p>List some ways to minimise waste and pollution.</p> <p>Ways to minimise waste and pollution</p> <ol style="list-style-type: none"> 1. Reusing scrap material. 2. Ensuring quality control 3. Waste exchange 4. Managing e-waste 5. Use of eco-friendly material <p>(any 4 points to be mentioned)</p> | $\frac{1}{2} * 4$ |

SECTION B

(5 + 6 + 6 = 17 marks)

| | | |
|--|---|------------------|
| Answer any 05 questions out of the given 07 questions | | 1 x 5 = 5 |
| Q.7 | <p>Why Java program is platform independent?</p> <p>A Java compiler instead of translating Java code to machine language code, translates it into Java Bytecode. A Java interpreter, called the Java Virtual Machine (JVM), translates the bytecode into machine code and then executes it. The bytecode can be run on any platform as long as it has a JVM running on it. This makes Java programs platform independent and highly portable. (keywords bytecodes and JVM to be included)</p> | 1 |
| Q.8 | <p>Think and write any two work areas which uses Database Management Systems</p> <p>Education, banking, railways, telecommunication, hotels, air lines, ecommerce, companies, government sector (any 2 domains should be written. 0.5 mark for each)</p> | 1 |
| Q.9 | <p>How can you write multiline comments in java program?</p> <p>Beginning a comment line with two consecutive forward slashes (//) Writing the comment between the symbols /* and */ (both ways of commenting should be mentioned)</p> | 1 |

| | | |
|---|--|-------------------------|
| <p>Q.10</p> | <p>What should we do to make a data member or a method member of a class visible only within the class?</p> <p>To make a data member or method of a class visible only within the class. add the keyword private before its declaration.</p> | <p>1</p> |
| <p>Q.11</p> | <p>Why main is special method in java program?</p> <p>Main is a special method that every Java application must have. When you run a program, the statements in the main method are the first to be executed.</p> | <p>1</p> |
| <p>Q.12</p> | <p>How many times the loop will execute ?</p> <pre>for (int number = 5; number >= 1; number = number-1) { System.out.print("Square of " + number); System.out.println(" = " + number*number); }</pre> <p>Answer 5</p> | <p>1</p> |
| <p>Q.13</p> | <p>Write the statement to create an array that stores percentage of 5 students.</p> <pre>double [] percentage = {78.3, 89.6, 90, 78 ,67};</pre> <p>(any numeric data type with any array name and values can be taken)</p> | <p>1</p> |
| <p>Answer any 03 questions out of the given 05 questions</p> | | <p>2 x 3 = 6</p> |
| <p>Q.14</p> | <p>Explain the difference between a Class and an Object with an example.</p> <p>A class is a physical or logical entity that has certain attributes. A class is a template from which objects are created. Object is an instance of a class . Class book can have title, author, publisher, price as the data members. To display the details of class book you would call the method member display() Method members of a class are invoked through the object like book1 to perform the action associated with that method. (Any suitable example can be taken to explain class and object 1 mark for definition and 1 mark for example)</p> | <p>1+1</p> |
| <p>Q.15</p> | <p>Find the error and give correct code</p> <pre>int number = 1; while (number <= 5) {System.out.print("Square of " + number); System.out.println(" = " + number*number);}</pre> <p>This loop will run forever since number never changes – it remains at 1.</p> <p>Correct code</p> <pre>int number = 1; while (number <= 5) {System.out.print("Square of " + number); System.out.println(" = " + number*number); number++; }</pre> <p>(1 mark for finding the error and 1 mark for correct code)</p> | <p>2</p> |

| | | |
|---|--|-------------------------|
| <p>Q.16</p> | <p>Give two differences between while loop and do while loop</p> <p>while loop</p> <ol style="list-style-type: none"> 1.A while loop is an entry controlled loop 2.Body of loop may never be executed 3. The variables in the test condition must be initialized prior to entering the loop structure. <p>do while loop</p> <ol style="list-style-type: none"> 1.A do-while loop is an exit control loop - 2. Body of loop is executed at least once 3. It is not necessary to initialize the variables in the test condition prior to entering the loop structure. <p>(any 2 points of difference. 1 mark for each difference)</p> | <p>1+1</p> |
| <p>Q.17</p> | <p>What is the need of a constructor in OOP? Also write one feature of a constructor.</p> <p>A special method member called the constructor method is used to initialize the data members of the class.</p> <p>Feature</p> <p>The constructor has the same name as the class, has no return type, and may or may not have a parameter list.</p> <p style="text-align: center;">Or</p> <p>Whenever a new object of a class is created, the constructor of the class is invoked automatically.</p> <p>(1 mark for definition. 1 mark for writing any 1 feature)</p> | <p>1+1</p> |
| <p>Q.18</p> | <p>What will be the value of n after the execution of the following selection statement :</p> <pre>int n=0; if (6>7 5>4) {n=5;} else n=7;</pre> <p>answer n=5</p> | <p>2</p> |
| <p>Answer any 02 questions out of the given 04 questions</p> | | <p>3 x 2 = 6</p> |
| <p>Q.19</p> | <p>Read the code carefully and give its output :</p> <pre>package javaprograms; public class StringDemo{ public static void main(String[]args) { String myString = "INFORMATION TECHNOLOGY"; System.out.println(myString.indexOf('E')); System.out.println(myString.contains("NO")); System.out.println(myString.length()); }};</pre> <p>answer 13 True 22</p> <p>(1 mark for each correct answer)</p> | <p>1+1+1</p> |

| | | |
|--------------------|--|---------------------|
| <p>Q.20</p> | <p>What will be the value of rem after the execution of the following code snippet ? Give reason.</p> <pre>code =2; switch(code) { case 1: rem= 8; case 2: rem= 9; case 3: rem= 10; break; case 4: rem= 11; break;}</pre> <p>answer rem=10 case 2 will be executed and rem will become 9 but because of absence of break statement the control will move down(fall through) and case 3 will be executed which will make rem as 10 now break will terminate the switch case statement . (2 marks for correct answer and 1 mark for explanation)</p> | <p>3</p> |
| <p>Q.21</p> | <p>Write a for loop that displays all odd numbers between 1 to 10</p> <pre>for(int count = 1; count <= 10; count = count +2) {System.out.println(count);}</pre> | <p>3</p> |
| <p>Q.22</p> | <p>i. How can we enable assertions to debug our code in java? ii. What are the two ways to create threads in java? iii. Which member function of the Integer wrapper class allows access to the int value held in it.</p> <p>i.To enable assertions at runtime, you can enable them from the command line by using the <code>-ea</code> option</p> <p>ii. In Java, threads can be created in two ways</p> <ol style="list-style-type: none"> 1. By extending the Thread class 2. By implementing the Runnable interface <p>iii. intValue()</p> | <p>1+1+1</p> |

**SECTION C
(COMPETENCY BASED QUESTIONS)**

(2 x 4 = 8 marks)

| | | |
|---|--|-------------------|
| <p>Answer any 02 questions out of the given 03 questions</p> | | |
| <p>Q.23</p> | <p>What are methods in Java ? Write a user defined method that return product of two numbers</p> <p>A method in Java is a block of statements grouped together to perform a specific task. A method has a <i>name</i>, a <i>return type</i>, an optional <i>list of parameters</i>, and a <i>body</i>.</p> <pre>static double product (double number1, double number2) {return (number1 * number2);}</pre> <p>(1 mark for definition . 2 marks for correct syntax of the user define method product)</p> | <p>1+3</p> |

| <p>Q.24</p> | <p>What is an exception? Explain with example.</p> <p>An error situation that is unexpected in the program execution and causes it to terminate unexpectedly is called an exception.</p> <p>For example Division by zero exception:</p> <pre>try { int quotient = divide(10,0); System.out.println(quotient); } catch (Exception e) { System.out.println(e.getMessage()); } </pre> <p>(1 mark for correct definition of exceptions and 3 mark for example code using try and catch)</p> | <p>1+3</p> | | | | | | | | | | | | | | | |
|--------------------|---|----------------------------------|------|---------|-----|------------|-----------------------|-------|-------------|--------------|-------|---------|------------------|---------|-------------|----------------------------------|---------------------|
| <p>Q.25</p> | <p>i. How database management concepts are helpful in Government sector ?</p> <p>ii. A Hospital is making database of patients and its staff. Doctor table includes Docid, Dname, Department. Give details of Patient Table along with its schema.</p> <p>i.Database management concepts are helpful in Government sector for storing details of electoral roll, all types of taxes, criminal records, PAN cards, AADHAR cards, vehicle registration, birth/death certificate registration.</p> <p>ii.</p> <p style="text-align: center;">Patient table</p> <table border="1" data-bbox="240 1196 1452 1391"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>pid</td> <td>Varchar(5)</td> <td>Patient unique number</td> </tr> <tr> <td>pname</td> <td>Varchar(20)</td> <td>Patient name</td> </tr> <tr> <td>phone</td> <td>Int(10)</td> <td>Patient phone no</td> </tr> <tr> <td>disease</td> <td>Varchar(20)</td> <td>Disease he/she is suffering from</td> </tr> </tbody> </table> <p>Schema:- Patient (pid, pname,phone,disease)</p> <p>(1 mark for applications in govt sector , 2marks for creating the table with appropriate columns and data type,1mark for creating the schema)</p> | Name | Type | Remarks | pid | Varchar(5) | Patient unique number | pname | Varchar(20) | Patient name | phone | Int(10) | Patient phone no | disease | Varchar(20) | Disease he/she is suffering from | <p>1+2+1</p> |
| Name | Type | Remarks | | | | | | | | | | | | | | | |
| pid | Varchar(5) | Patient unique number | | | | | | | | | | | | | | | |
| pname | Varchar(20) | Patient name | | | | | | | | | | | | | | | |
| phone | Int(10) | Patient phone no | | | | | | | | | | | | | | | |
| disease | Varchar(20) | Disease he/she is suffering from | | | | | | | | | | | | | | | |