

INFORMATION TECHNOLOGY (SUBJECT CODE 802)

CLASS XII (SESSION 2021-2022)

MARKING SCHEME OF SAMPLE QUESTION PAPER FOR TERM – II

MAX. TIME ALLOWED: 1&1/2 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) Question number 14 to 18 are two marks questions. Attempt any three questions.
 - c) Question number 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		1x3=3
Q.1	Define external motivation? External or extrinsic motivation involves completing a task or exhibiting a behavior because of outside causes such as avoiding punishment or receiving a reward.	1
Q.2	What is the role of water Quality technician? Water pollution is in its alarming state. This has given rise to the need of water quality technician to help monitor the water quality and treat it.	1

Q.3	<p>Write two benefits of entrepreneurial competencies.</p> <ol style="list-style-type: none"> 1. Taking actions to implement the ideas. 2. Strategizing and planning the steps that need to be taken. 3. Networking with stakeholders. 4. Preparing an action plan and timelines. <p>(Any 2 points to be mentioned)</p>	1
Q.4	<p>Define the term Biofuel.</p> <p>Biofuel is the nonconventional fuel that is sought for the run vehicles without creating pollution. since petrol and diesel create lot of pollution, there is a need to have clean fuel.it is felt that fuel from biomass or natural matter can help resolve this problem.</p>	1
Answer any 01 question out of the given 02 questions		1X2=2
Q.5	<p>Write any four steps that green jobs can take to reduce greenhouse gas emission.</p> <ol style="list-style-type: none"> a. Reuse, reduce, recycle. b. Drive less drive smart. c. Buy energy efficient products. d. Plant a tree. 	2
Q.6	<p>Explain the role of green jobs in:</p> <ol style="list-style-type: none"> i) Improving energy and raw material use ii) Limiting greenhouse gas emission. <p>Improving energy and raw material use – The energy produced through hydroelectric power plants, thermal power plants, nuclear power plants have grave consequences on the environment.</p> <p>Limiting greenhouse gas emission – With the promotion of use of renewable sources in our homes and daily life, green jobs promise to limit the emission of harmful gas.</p>	2

SECTION B**(5+6+6 = 17 marks)**

Answer any 05 question out of the given 07 questions		1X5=5
Q.7	<p>What is java?</p> <p>Java is a programming language was originally developed by Sun Microsystems. It is used to develop desktop Application, mobile Application, Web Application, web servers and application servers, Games etc.</p>	1
Q.8	<p>In java who is the responsible to convert .java. File to .class. File?</p> <p>a) Compiler b) interpreter c) Converter d) JRF</p> <p>a) Compiler</p>	1
Q.9	<p>What is wrapper class?</p> <p>Wrapper classes provide a way to use primitive data types (int, Boolean, etc....) as objects.</p>	1
Q.10	<p>Array index is always start from _____.</p> <p>a) 0 b) 1 c) 2 d) 4</p> <p>a) 0</p>	1
Q.11	<p>Write syntax of while loop.</p> <pre>While (test expression) { // statements }</pre>	1
Q.12	<p>What are getter and setter?</p> <p>In java, getter and setter are two conventional methods that are used for retrieving and updating value of a variable.</p>	1
Q.13	<p>What is an object?</p> <p>Object is an instance of a class.</p>	1

Answer any 03 question out of the given 05 question		2x3=6
Q.14	<p>Difference between = and == operator in java.</p> <p>= is an assignment operator. == is a comparison operator For example, int a =10; will assign a value 10 to variable a whereas a == 10 will check whether the value of a is 10.</p>	2
Q.15	<p>What are the two keywords in java exception handling?</p> <ol style="list-style-type: none"> 1. try – a try block surrounds the part of the code that can generates exception (s) 2. catch – the catch blocks follow a try block. A catch blocks contains the exception handler – specific code that is executed when the exception occurs. 	2
Q.16	<p>Write four benefits of online shopping?</p> <ol style="list-style-type: none"> 1. saves time and efforts. 2. the convenience of shopping at home. 3. wide variety/range of products are available. 4. good discounts/lower prices. 5. get detailed information about the product. 6. we can compare various models/brands. <p>(Any four points to be mentioned)</p>	2
Q.17	<p>The following code has some errors(s). rewrite the correct code underlying all corrections. Also categorize the loop as entry/exit control loops.</p> <pre>int p P=14; do P= p-2 System. out. display (p); While(p>=2); Int p; P=14; do { P=p-2; System. out. display(p); } While(p>=2);</pre> <p>Exit control loop.</p>	2

Q.18	<p>Define control flow? What are the 3 types of control flow statement supported by java programming language.</p> <p>Control flow statement, changes or break the flow of execution by implementing decision making, looping, and branching your program to execute particular blocks of code based on the conditions.</p> <p>3 types of control flow statements are –</p> <ol style="list-style-type: none"> 1. Decision- making statements: if, if-else, nested if else, switch. 2. Looping statements: for, while, do-while. 3. Branching statements: break, continue, and return. 	2
Answer any 02 questions out of the given 04 question		3X2=6
Q.19	<p>Write a program in java to find area of a square.</p> <pre> Public class Area { Public static void main (string args []) { int side= 13; int area_square= side*side; system.out.println ("Area of the square=" +area_square); } } </pre>	3
Q.20	<p>Give three 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>(1 mark for each difference)</p>	3

Q.21	<p>Write a java program to display the values from 1 to 10 using For loop.</p> <pre> Public class use_ for _loop { Public static void main (string [] args) { For (int i =1; i <=10; i++); { System .out.print1n(i); } } } </pre>	3
Q.22	<p>How database management system is useful in education sectors?</p> <ol style="list-style-type: none"> 1) For storing information such as student details, marks and result. 2) For storing information about faculty and staff members. 3) For storing details about school/college such as infrastructure details, department and offered course detail 	3

SECTION C

(2x4=8 marks)

(COMPETENCY BASED QUESTION)

Answer any 02 questions out of the given 03 questions		
Q.23	<p>What are variable? What are the rules to be followed while naming a variable give example?</p> <p>A variable is placeholder for data that can change its value during program execution. Technically, a variable is the name for a storage location in the computer's internal memory.</p> <ol style="list-style-type: none"> 1. the first character must be a letter or an underscore (_). you cannot use a number as the first character. 2. the rest of the variable name can include any letter, any number, or the underscore. You can't use any other Characters, including spaces, symbols, and punctuation marks. 3. java is a case – sensitive language. variable names written in capital letters differ from variable name with the same spelling but written in small letters. E.g., variable named Interest _Rate is treated as an entirely different variable than one named interest _rate. 4. there's no limit to the length of variable. <p>(1 mark for definition.2 marks for correct rule)</p>	1+3

Q.24	<p>What is the purpose of default in a switch statement? explain with the help of an example.</p> <p>When none of the case values are equal to the expression of switch statement then default case is executed. In the example below, value of number is 4 so case 0, case 1 and case 2 are not equal to number. hence print1n statement of default case will get executed printing "value of number is greater than two" to the console.</p> <p>Example:</p> <pre> Public class Switch Example { Public static void main (string [] args) { Int number = 4; Switch(number) { Case 0: System.out.print1n ("value of number is zero"); break; Case 1: System.out.print1n ("value of number is one"); break; Case 2: System.out.print1n (value of number is two"); break; Default: System.out.print1n ("value of number is greater than two"); break; } } } </pre> <p>(2 marks for explanation.2marks for example)</p>	2+2
Q.25	<p>What are four main OOP concept in java and what are the benefits of object-oriented programming?</p> <ol style="list-style-type: none"> 1) Inheritance 2) Encapsulation 3) Abstraction 4) Polymorphism <p>Benefits-</p> <ol style="list-style-type: none"> 1) Re-useability 2) Data redundancy 3) Code maintenance 4) Security 5) Design benefits 6) Better productivity. <p>(Any 4 benefits to be mentioned)</p>	2+2