

CBSE – DEPARTMENT OF SKILL EDUCATION

Information Technology (SUBJECT CODE 802)

Sample Question Paper with Marking Scheme

Class XII (Session 2019–2020)

Time: 3 Hours

Max. Marks: 60

General Instructions:

1. *This Question Paper consists of two parts viz. Part A: Employability Skills and Part B: Subject Skills.*

Part A: Employability Skills (10 Marks)

- i. Answer any 4 questions out of the given 6 questions of 1 mark each.*
- ii. Answer any 3 questions out of the given 5 questions of 2 marks each.*

Part B: Subject Skills (40 Marks):

- iii. Answer any 10 questions out of the given 12 questions of 1 mark each.*
 - iv. Answer any 5 questions from the given 7 questions of 2 marks each.*
 - v. Answer any 5 questions from the given 7 questions of 3 marks each.*
 - vi. Answer any 3 questions from the given 5 questions of 5 marks each.*
2. *This question paper contains 42 questions out of which 30 questions are to be answered.*
3. *All questions of a particular part/section must be attempted in the correct order.*
4. *The maximum time allowed is 3 hrs.*

PART A: EMPLOYABILITY SKILLS (10 MARKS)

Answer any 4 questions out of the given 6 questions of 1 mark each:

| | | |
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| 1. | A complex sentence is a sentence that combines one _____ clause with at least one dependent clause. Answer – independent | (1) |
| 2. | Self – motivation increases individuals' _____ and _____. Answer – Energy , Activity | (1) |
| 3. | What is the shortcut key to insert current date in a cell? A. CTRL + ; B. CTRL + T C. CTRL + D D. CTRL + ' Answer -A. CTRL + ; | (1) |

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| 4. | In _____ form of business, the finished product can be directly sold to the customer. | (1) |
| | Answer – manufacturing | |
| 5. | Green building offers a chance to be part of the solution to _____. | (1) |
| | Answer- global challenges | |
| 6. | Music is one of the source of _____. | (1) |
| | Answer - Self Motivation | |

Answer any 3 questions out of the given 5 questions of 2 marks each:

| 7. | <p>Explain the any two types of Verbal Phrases with the help of suitable examples.</p> <p>Answer- Verbal Phrases - There are three types of verbal phrases: participial phrases, gerund phrases, and infinitive phrases.</p> <p>a) Participial Phrase - Participial phrases start with either a present or past participle. Example Phrase with present participles: •Watching silently Phrases with past participles: •Driven to succeed</p> <p>b) Gerund Phrase - A gerund phrase is a present participle (and its modifiers) that acts like noun. It can take on a variety of jobs in the sentence. Examples: •Practicing helped a lot. (subject) •I love reading. (direct object)</p> <p>(Any other type of Verbal Phrase)</p> | (2) | | | | |
|--|--|------------------------|------------------|--|--|-----|
| 8. | <p>What is the source of self motivation?</p> <p>Answer - Sources of self motivation are -</p> <ul style="list-style-type: none"> • Thinking and discussing big and positive ideas motivates us to reach to our highest potential. • Keep good company. | (2) | | | | |
| 9. | <p>Write down the steps to insert picture from file.</p> <p>Answer- The steps to insert a picture from a file are:</p> <ol style="list-style-type: none"> 1. Select Insert → Picture → From File. 2. The Insert picture dialog box appears. 3. Select the picture you want to insert and click Open. | (2) | | | | |
| 10. | <p>Differentiate between Manufacturing business and trading business.</p> <p>Answer-</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Manufacturing business</th> <th>Trading business</th> </tr> </thead> <tbody> <tr> <td>A manufacturing business is one that converts raw material(s) into finished product(s) to meet the demands of the customer. In this form of business, the finished product can be directly sold to the customer.</td> <td>A trading business does not manufacture a good or product but only facilitates the act of bringing the finished goods from the manufacturing unit to the buyer or customer (who is ready to pay for the produced good)</td> </tr> </tbody> </table> | Manufacturing business | Trading business | A manufacturing business is one that converts raw material(s) into finished product(s) to meet the demands of the customer. In this form of business, the finished product can be directly sold to the customer. | A trading business does not manufacture a good or product but only facilitates the act of bringing the finished goods from the manufacturing unit to the buyer or customer (who is ready to pay for the produced good) | (2) |
| Manufacturing business | Trading business | | | | | |
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| 11. | Write any four steps that green jobs can take to reduce greenhouse gas emission. | (2) |
| | <p>Answer - (Any four of the following)</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 e. Replace your light bulbs | |

PART B: SUBJECT SKILLS (50 MARKS)

Answer any 10 questions out of the given 12 questions:

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| 12. | <p>_____ is a collection of raw facts which have not been processed to reveal useful information.</p> <p>Ans Data</p> | (1) |
| 13. | <p>Define Data Redundancy.</p> <p>Ans Same information is stored in more than one file which result in wastage of space.</p> | (1) |
| 14. | <p>_____ constraint is used to restrict the values of an attribute within a range.</p> <p>Ans Check</p> | (1) |
| 15. | <p>_____ command is used to modify the base table definition.</p> <ol style="list-style-type: none"> a. Create Table b. Alter Table c. Update Table d. Modify Table <p>Ans Alter Table</p> | (1) |
| 16. | <p>_____ is a special method that every Java application must have.</p> <ol style="list-style-type: none"> a. Getter b. Setter c. Main d. Default <p>Ans Main</p> | (1) |
| 17. | <p>_____ method test whether this string end with the given suffix or not.</p> <p>Ans endsWith</p> | (1) |
| 18. | <p>The _____ method of Array class is used to arrange the Array of integers in ascending order.</p> <p>Ans sort()</p> | (1) |

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| 19. | <p>Which of the following is not an example of eGovernance?</p> <ul style="list-style-type: none"> a. To file property tax b. To apply for renewal of Passport c. To start an online coding course for 3 months d. To get Voters ID card issued <p>Ans c. To start an online coding course for 3 months</p> | (1) |
| 20. | <p>What are webinars?</p> <p>Ans Webinars are real time online lectures, where users participate in the lecture, may ask questions, and get their queries answered.</p> | (1) |
| 21. | <p>Finding of Bugs and Fixing them happens in _____ .</p> <ul style="list-style-type: none"> a. Design Phase b. Testing Phase c. Implementation Phase d. Reuirement Definition Phase <p>Ans Testing Phase</p> | (1) |
| 22. | <p>Choose the correct sequence to be followed while buying online.</p> <ul style="list-style-type: none"> a. Provide your details (Or login into your bank account) b. Add items in shopping cart c. Choose payment option (Make payment if not cash on delivery) d. Select Buy option <ul style="list-style-type: none"> i. c,d,b,a ii. b,d,c,a iii. d,b,c,a iv. a,c,b,d <p>Ans ii. b,d,c,a</p> | (1) |
| 23. | <p>Predict the output of the following expression of the initial value of x is 5.</p> $x=((++x)*2)+7$ <ul style="list-style-type: none"> a. 19 b. 21 c. 18 d. 20 <p>Ans a. 19</p> | (1) |

Answer any 5 questions out of the given 7 questions of 2 marks each:

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| 24. | Illustrate any two DML commands with the help of suitable example. Ans Insert command is used to insert/add a tuple in a table Example INSERT INTO Student VALUES (101,"Ananya", "Grover", 'F', '1984-08-11', 1); Delete Command is used to remove the data from a table. DELETE FROM Student WHERE admno=101; (Any two DML commands) | (2) |
| 25. | List any four advantages of DBMS. Ans Following are the advantages 1. Reduction in Redundancy 2. Improved Consistency 3. Improved Availability 4. Improved Security 5. User Friendly (Any four) | (2) |
| 26. | Explain the concept of Candidate Key with the help of a suitable example. Ans A candidate key is a column, or set of columns, in a table that can uniquely identifies a tuple and is not null. Each table may have one or more candidate keys . It is eligible to be a Primary key For example In a table PERSON following are the columns (Aadhar_number, PAN, Voter_ID_cardno, Name, Date_of_birth, Address). Out of these Aadhar_number, PAN, Voter_ID_cardno are the candidate keys | (2) |
| 27. | What is the pupose of using default in a switch statement? Ans If there is no match for the expression with any case group in switch statement, the statements in the default part are executed. For example: { switch(dy) { case 6: day = "Saturday"; break; case 7: day = "Sunday"; break; default: day = "Incorrect Day! break; } System.out.println (day); } if the value of dy is other that 6 or 7 default statement will be executed. | (2) |
| 28. | The following code has error(s). Rewrite the correct code underlining all the corrections made : int n=15, int i=10,x=1; do; { x=x*i; i++; | (2) |

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| | <pre>while[i<=n] jTextField1.setText(""+x); Ans int n=15; int i=10,x=1; do; { x=x*i; i++; }while(i<=n); jTextField1.setText(""+x);</pre> <p>(½ Mark each for any four corrections)</p> | |
| 29. | <p>Rewrite the following code using WHILE loop:</p> <pre>int x=100; for(int i=2;i<=22;i=i+4) { jTextArea1.append("\n"+(i+x)); x=x-2; }</pre> <p>Ans</p> <pre>int x=100,i=2; while(i<=22) { jTextArea1.append("\n"+(i+x)); x=x-2; i=i+4; }</pre> | (2) |
| 30. | <p>Explain important phases of Web Application Development.</p> <p>Ans</p> <ol style="list-style-type: none"> 1.Requirement Definition Phase: In this phase problem is identified for which the web application is to be developed. 2. Design Phase: The focus is on "how" the application is to be designed. 3. Implementation Phase: Create backend database, frontend and the connectivity between them. 4. Testing Phase: Test the complete application (Front-End and Back-End) with multiple sample sets of data. | (2) |

Answer any 5 questions out of the given 7 questions of 3 marks each:

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| 31. | <p>What is the purpose of group by command? How is it different from Order by command? Give example.</p> <p>Ans The GROUP BY statement is used with aggregate functions (COUNT, MAX, MIN, SUM, AVG) to group the result-set by one or more columns. The ORDER BY keyword is used to sort the result-set in ascending or descending order</p> <p>Example of Group By</p> <pre>SELECT Dept_No, COUNT(*) AS No_of_Teachers FROM Teacher GROUP BY Dept_No;</pre> <p>Example of Order By</p> | (3) |
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| | <pre>SELECT First_Name, Last_Name FROM Teacher ORDER BY First_Name;</pre> | |
| 32. | <p>Radha has given the following query, she is unable to run due to errors, rectify the errors and underline the correction made:</p> <p>(a) Select unique department from employee: Ans Select <u>distinct</u> department from employee:</p> <p>(b) Select * from employee where name ="%a"; Ans Select * from employee where name <u>like</u> "%a";</p> <p>(c) Select name, salary from employee where phone = Null; Ans Select name, salary from employee where phone <u>IS Null</u>;</p> <p>(1 mark each for suitable corection)</p> | (3) |
| 33. | <p>A garment Company is planning to launch its website and a Mobile App. Mention various factors that the company shall keep in mind to attract people for online shopping.</p> <p>Ans : Following are the factors to be kept in mind</p> <ol style="list-style-type: none"> 1. It shall have easy to use interface : simple design for the end user to interact easily. 2. Webiste must be secured and must be free from malware. 3. It shall not leak customer details and must provide different payment methods such as Credit card/ debit card/ COD etc. 4. Must provide good offers/ deals to the user. <p>(1 mark each for any 3 points or any other relevant point)</p> | (3) |
| 34. | <p>With an alarming rate of increase in Cyber fraud write at least three points to be kept in mind while making an online transactions.</p> <p>Ans Following points to be considered.</p> <ol style="list-style-type: none"> 1. Avoid using public wifi 2. Keep your device protected with updated antivirus 3. Always use SSL protected sites. <p>Some Precuations to keep safe passwords. Make a password complex, like mix case, use numbers and special characters. This decreases ability of automated attacks by trying different character combinations. Be cautious not to leave passwords around and do not share them with friends. Never use names of near and dear ones as passwords</p> <p>(1 mark each for correct/valid point)</p> | (3) |
| 35. | <p>What are variables? What are the rules to be followed while naming a variable. Give example.</p> <p>Ans A variable is a placeholder for data that can change its value during program execution. Technically, a variable is the <i>name</i> for a storage location in the computer's internal memory.</p> <ol style="list-style-type: none"> 1. Variable names can begin with either an alphabetic character, an underscore (<u>_</u>), or a dollar sign (<u>\$</u>). However, convention is to begin a variable name with a letter. They can consist of only alphabets, digits, and underscore. 2. Variable names must be one word. Spaces are not allowed in variable names. Underscores are allowed. "total_marks" is fine but "total marks" is not. 4. Variable Name must not be a reserved word. For example - int. 4. Java is a case-sensitive language. Variable names written in capital letters differ from variable names with the same spelling but written in small letters. | (3) |

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| | <p>int num1, num2, num3;</p> <p>(1 mark for correct definition, 1 mark for any 2 rules and 1 for example)</p> | |
| 36. | <p>How are exceptions handled in Java? Explain with the help of a suitable example.</p> <p>Ans An error situation that is unexpected in the program execution and causes it to terminate unexpectedly is called an exception. Java provides the following keywords to handle an exception: try - A try block surrounds the part of the code that can generate exception(s). catch – The catch blocks follow a try block. A catch block contains the exception handler - specific code that is executed when the exception occurs. The optional finally block is always executed when the try block exits. 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 ,1 for try and catch explanation and 1 for example)</p> | (3) |
| 37. | <p>State the potential areas of Work Integrated Learning in the field of education.</p> <p>Ans Work Integrated Learning can be used for</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 Teaching / Non Teaching / Support and staff members. 3. For storing details about school/college such as infrastructure details (transport/ Library /Fees, department and offered course details. <p>(1 mark each for correct point)</p> | (3) |

Answer any 3 questions out of the given 5 questions of 5 marks each:

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|-------------------|---|-------------|---------|-------------|-----------|-------------|----------|----------|-------------|--|---------|-------------|--|---------|---------|--|---------------------------------|
| <p>38.</p> | <p>Consider the following and answer the questions. (a) Write a query to create a table TravelAgency.</p> <table border="1" data-bbox="300 318 1112 497"> <tr> <td>AgenCode</td> <td>Char(4)</td> <td>Primary Key</td> </tr> <tr> <td>AgentName</td> <td>Varchar(20)</td> <td>Not Null</td> </tr> <tr> <td>Location</td> <td>Varchar(25)</td> <td></td> </tr> <tr> <td>Package</td> <td>Varchar(30)</td> <td></td> </tr> <tr> <td>Charges</td> <td>Decimal</td> <td></td> </tr> </table> <p>Ans Create table TravelAgency (AgentCode char(4) primary key, AgentName varchar(20), Location Varchar(25), Package Varchar(30), Charges decimal));</p> <p>(b) Write a query to add a new row to a table TravelAgency ("A006", "John Sharon", "Sam Ana Travel", "Domestic", 45000)</p> <p>Ans Insert into TravelAgency values ("A006", "John Sharon", "Sam Ana Travel", "Domestic", 45000);</p> <p>(c) Write a query to add a new column Emailld to a table TravelAgency Ans Alter table TravelAgency Add Emailld varchar(30);</p> | AgenCode | Char(4) | Primary Key | AgentName | Varchar(20) | Not Null | Location | Varchar(25) | | Package | Varchar(30) | | Charges | Decimal | | <p>(2 +1 +1 +1)</p> |
| AgenCode | Char(4) | Primary Key | | | | | | | | | | | | | | | |
| AgentName | Varchar(20) | Not Null | | | | | | | | | | | | | | | |
| Location | Varchar(25) | | | | | | | | | | | | | | | | |
| Package | Varchar(30) | | | | | | | | | | | | | | | | |
| Charges | Decimal | | | | | | | | | | | | | | | | |
| <p>39.</p> | <p>Mention any three advantages of Online reservation and two challenges faced by end user while booking online railway ticket.</p> <p>Ans: Advantages of Online reservations</p> <ol style="list-style-type: none"> 1. The user/consumer can book tickets anytime anywhere 2. Customer can check the prices, compare them and get the best deal 3. The user can see the arrangement of seats, select a particular seat, etc 4. Less man-power is required as every task is done through computers 5. Online reservation also reduces the bills for office rent, electricity <p>Challenges</p> <ol style="list-style-type: none"> 1. Security while making payments and while working on Public Networks 2. Different Cancellation Policies <p>(Any 3 from above or any other valid Point)</p> | <p>(5)</p> | | | | | | | | | | | | | | | |
| <p>40.</p> | <p>What are the objectives of eGovernance ? How does eGovernance empowers the citizens.</p> <p>Ans: E-Governance or electronic governance is the use of electronic i.e. information and communication technology (ICT) tools for governance by the government for the citizens. Basic Objective is to provide access to every piece of information of the Government and of public importance. For example: India.gov.in E-governance empowers the citizens socially and economically, and enhances their lives by providing them with quality information and better services. It enables citizens to access information directly, without paying any money to a middleman or a tout. It ushers transparency in the system.</p> | <p>(5)</p> | | | | | | | | | | | | | | | |

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| 41. | <p>(i) Write a JAVA program (method) to develop an application in JAVA to calculate Marks in 5 subjects and show the percentage of Students.</p> <p>Ans:</p> <pre>float m1,m2,m3,m4,m5,total,perc; m1=Float.parseFloat(jTextField1.getText()); m2=Float.parseFloat(jTextField2.getText()); m3=Float.parseFloat(jTextField3.getText()); m4=Float.parseFloat(jTextField4.getText()); m5=Float.parseFloat(jTextField5.getText()); total=m1+m2+m3+m4+m5; perc=(total/500)*100; jTextField6.setText(Float.toString(perc));</pre> <p>(1 Marks for variable declaration and getText()each 1 Mark for Total 1 Mark for percentage 1 Mark for Displaying the result)</p> | (5) |
| 42. | <p>(a) Define Constructors . Also write two characteristics of a constructor.</p> <p>Ans A constructor is a special method. It is used to initialize the data members of the class. two characteristics are</p> <ul style="list-style-type: none"> (i) The constructor has the same name as the class, has no return type, and may or may not have a parameter list. (ii) Whenever a new object of a class is created, the constructor of the class is invoked automatically. <p>(b) What is a wrapper class? Explain with the help of a suitable example.</p> <p>Ans A Wrapper class is a class whose object wraps or contains a primitive data types. When we create an object to a wrapper class, it contains a field and in this field, we can store a primitive data types. They convert primitive data types into objects. Objects are needed if we wish to modify the arguments passed into a method (because primitive types are passed by value Each of the eight primitive types has a wrapper class defined For example: Integer wrapper class converts a string into its integer value</p> | (5) |