CBSE | DEPARTMENT OF SKILL EDUCATION
INFORMATION TECHNOLOGY (SUBJECT CODE - 802)

Blue-print for Sample Question Paper for Class XII (Session 2024-2025)

Max. Time: 3 Hours   Max. Marks: 60

PART A - EMPLOYABILITY SKILLS (10 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	**2 MARKS EACH**	
1.	Communication Skills- IV	1	1	2
2.	Self-Management Skills- IV	2	1	3
3.	ICT Skills- IV	1	1	2
4.	Entrepreneurial Skills- IV	1	1	2
5.	Green Skills- IV	1	1	2
TOTAL QUESTIONS		**6**	**5**	**11**
NO. OF QUESTIONS TO BE ANSWERED		**Any 4**	**Any 3**	**07**
TOTAL MARKS		**1 x 4 = 4**	**2 x 3 = 6**	**10 MARKS**

PART B - SUBJECT SPECIFIC SKILLS (50 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANS. TYPE QUES.- I	SHORT ANS. TYPE QUES.- II	DESCRIPTIVE/ LONG ANS. TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	**2 MARKS EACH**	**3 MARKS EACH**	**4 MARKS EACH**	
1	Database Concepts	10	2	1	1	14
2	Operating Web Based Applications	9	0	0	1	10
3	Fundamentals of Java Programming	12	2	1	3	18
4	Work Integrated Learning IT	1	1	1	0	3
TOTAL QUESTIONS		**32**	**5**	**3**	**4**	**45**
NO. OF QUESTIONS TO BE ANSWERED		**26**	**Any 3**	**Any 2**	**Any 3**	**34**
TOTAL MARKS		**1 x 26= 26**	**2 x 3 = 6**	**3 x 2 = 6**	**4 x 3 = 12**	**50 MARKS**

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Sample Question Paper for Class XII (Session 2024-2025)

Max. Time: 3 Hours   **Max. Marks: 60**

General Instructions:

1. Please read the instructions carefully.

2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.

3. Section A has Objective type questions whereas Section B contains Subjective type questions.

4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**

5. All questions of a particular section must be attempted in the correct order.

6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**

   i. This section has 06 questions.

   ii. There is no negative marking.

   iii. Do as per the instructions given.

   iv. Marks allotted are mentioned against each question/part.

7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**

   i. This section contains 18 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

Q. 1	**Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)**	
i.	A _____is the most basic type of sentence, its purpose is to relay information, and it is punctuated with a period. a) Declarative sentences b) Interrogative sentences c) Imperative sentences d) Exclamatory sentences	1
ii.	Which of the following are not true for Physiological motivation? a) Physiological motivation is based on the physical needs to satisfy hunger or thirst. b) Psychological motivations can be guided by need for achievement and need for affiliation. c) Physiological motivation directs the behaviour towards satisfying specific bodily needs. d) Physiological motivation are made up of emotional, behavioral and mental set of characteristics.	1
iii.	Samiara spends all her after-school hours practicing more and more sample question papers. She wants to do well in her exams so that she can get admission in her dream college in the city. This is an example of: a) Internal motivation b) External motivation c) Inspiration d) Self-management	1
iv.	_____rearranges the range of cells but filtering only hides temporarily the rows/columns you do not want. a) Charts b) Built in functions c) Sorting d) Solve	1
v.	Dhruv had multiple factories in different states of India. On an unfortunate day one of his factory caught fire, and everything got burnt down. There was a huge financial loss, but luckily there was no threat to anyone's life, and no injuries. On the day of the fire, the workers of the factory had tried all possible ways to extinguish the fire, but to no avail. The next day when Dhruv reached the factory, he got to know about the details from the Fire Brigade Incharge about the valour shown by the workers, without fearing for their lives to save the factory. Dhruv was moved on hearing the details. He always had respect for loyalty. So that he did not lose the loyal workers that were working in the factory, he got them relocated to another factory of his, by the time the damaged factory of his was rebuilt, as it was insured. a) Self Confidence b) Effective Monitoring c) Concern for Employees Welfare d) Goal Setting	1
vi	Individuals, who focus on developing solutions that benefit the society, are called _____. a) Social Entrepreneurs b) Industrial entrepreneurs c) Agricultural entrepreneurs d) Technical entrepreneurs	

Q. 2	**Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)**	
i.	Which of the following is not an example of relational operator? a) > b) = c) < d) !=	1
ii.	How many primitive data types are supported by Java ? Name any two of them.	1

iii.	Which command will display all those names from a table which have the alphabet 'a' present anywhere in the Name column in a table Employee?
	    a) SELECT Name FROM Employee where Name in ("a", "%a");
	    b) SELECT Name FROM Employee where Name in ("a", "%a");
	    c) SELECT Name FROM Employee where Name in ("a", "%a");
	    d) SELECT Name FROM Employee where Name ="%a%";
		1

iv.	_____is a set of attributes in a relation, for which no two tuples in a relation state have the same combination of values. a) Superkey b) Candidate Key c) Primary Key d) Candidate Key	1
v.	What is a method?	1
vi.	An application that can be accessed via a web browser, over a network connection is called a _____.	1
vii.	Complete the sentence: The web-based online applications can be broadly categorized into _____	1
Q. 3	**Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)**	
i.	Name the National Portal of India.	1
ii.	What are the two ways of writing comments in a Java program?	1
iii.	Consider the table, **Vehicle** given below: Table: VEHICLE | MID	NAME	BRAND	CAPACITY	COLOR
---	---	---	---	---
H101	I20	Hyundai	5	WHITE
M012	XUV500	Mahindra	5	BLUE
T107	Innova	Toyota	7	SILVER
H131	Verna	Hyundai	5	BLUE
M010	Celerio	Maruti	5	RED
R100	Duster	Renault	7	WHITE | Identify the degree and cardinality of the table Vehicle.	1
iv.	Internet transactions are susceptible to frauds. The combination of username and password is the most common method of user identification and authentication. List any one Some actions that can be taken to make the passwords safer. Page 50	1

v.	Consider the following tables – **ORDERS** and **PRODUCTS**: **Table: ORDERS**		1

Table: ORDERS

ORDERNO	DATE	ID	QTY
1001	2022-01-12	P001	180
1002	2022-12-31	P002	175
1003	2023-01-20	P001	125
1004	2023-12-25	P003	190
1005	2023-11-20	P002	155
1006	2022-11-15	P001	130

Table : PRODUCTS

ID	PNAME	PRICE
P001	PEN	50
P002	NOTEBOOK	120
P003	PENCIL	20

Identify the Primary key and Foreign Key of the table **ORDERS**

vi.	Which of the following ICT-enabled services have not been set up by the Indian Government?
	    a) Booking of railway tickets,
	    b) Registration of birth/death certificate
	    c) Purchase of movie tickets
	    d) RTI application submission
	    e) Registration of birth certificate
		1

vii.	Find the invalid identifier from the following: **a) While** **b) Score1** **c) My_Name** **d) break**	1
Q. 4	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	

i.	Adrisa wanted to book her flight to attend an international conference on "Women and AI" . She needs to book her tickets using on online reservation system. Help her to follow the correct sequence of steps to do the same.
	    A. Make the payment
	    B. Open the online reservation website
	    C. Choose the dates of travel
	    D. Browse and search for the required information
	a) B, D, C, A
	b) A, B, C, D
	c) A, D, C, B
	d) B, A, D, C
		1

ii.	The _____ aggregate function in SQL is used to find the average values of a numeric column :
	    a) **AVERAGE()**
	    b) **MEAN()**
	    c) **AVG()**
	    d) **MID()**
		1

iii.	Which of the following is not true for Online Shopping?
	    a) The customer can view the goods that are displayed along with the details of the goods.
	    b) Once the goods are purchased they cannot be returned or exchanged
	    c) The goods are then delivered at the address specified by the customer.
	    d) The customer can select the goods to be purchased and store them in their online shopping basket.
		1

iv.	**State TRUE or FALSE** Private data members of a class cannot be accessed outside the class however, you can give controlled access to data members outside the class through getter and setter methods.	1

v.	Which of the following will display the highest and lowest value of the column Fee from the table COACH?
	    a) **SELECT HIGH(FEE), LOW(FEE) FROM COACH;**
	    b) **SELECT HIGHEST(FEE), LOWEST(FEE) FROM COACH;**
	    c) **SELECT MAXIMUM(FEE), MINIMUM(FEE) FROM COACH;**
	    d) **SELECT MAX(FEE), MIN(FEE) FROM COACH;**
		1

vi.	Predict the output System.out.println(4*4*4==8*8);	1
Q. 5	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	*State True or False* Fixing of all the application bugs and fixing them is part of the Testing Phase of the project.	1
ii.	Aparna wanted to remove the table PERSONAL permanently from the database SCHOOL. Write the command to help her do the same.	1
iii.	A named constraints in a table can be easily deleted or updated using the _____ command.	1
iv.	Differentiate between the following two java statements: **char Alpha='A' ;** **//Statement #1** **String Name="Manish";** **//Statement #2**	1

v.	A special method member called the _____method is used to initialize the data members of the class.
	    a) Variable
	    b) Constructor
	    c) Private
	    d) Package
		1

vi.	A Java compiler instead of translating Java code to machine language code, translates it into _____.	1
Q. 6	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	Which of the following is an invalid variable declaration? a) **char Section='A';** b) **String First_Name="Arun";** c) **int Num==10;** d) **double percentage = 87.6;**	1
ii.	A _____ is an arithmetic operator that returns the remainder of division of values of operands.	1
iii.	An application that can be accessed via a web browser, over a network connection is called a _____ application.	1
iv.	Prerna wants to ensure that while data entry, the ADMNO field should not be left blank. Name the constraint that should be used.	1
v.	Which of the following command is used to retrieve information from a database? a)INSERT b)SELECT c)UPDATE d) CREATE	1
vi.	How does e-governance benefits its citizens ?	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)
Answer each question in 20 – 30 words.

Q. 7	List any two importance of self-motivation.	2
Q. 8	What is active listening? List any two factors that affect active listening.	2
Q. 9	Do you think there are toxins in our environment? What is your view of toxins in our homes?	2
Q. 10	What is sorting in a spreadsheet? Can data be sorted on more than one column?	2
Q. 11	Name any two Qualities of a successful entrepreneur.	2

Answer any 3 out of the given 5 questions (2 x 3 = 6 marks)

Q.12	Give the output of the following code segment-
	
	``
	    int Num=4;
	  int Fact=1;
	  for (int i=1;i<=Num;i++)
	  {
	    Fact*=i;
	    System.out.println(Fact);
	  }
	``
		2

Q.13	Rajni is assigned the task to maintain the SQL database for PowerStock Ltd. She has created a table named **STOCKDATA** with the following structure: **Stock_id integer PRIMARY KEY** **Symbol char(10)** **Value integer(5)** **Type char(10)** The table presently contains following data: | Stock_id	Symbol	Value	Type
---	---	---	---
2624	REL	6653	Sell
7660	INFY	3064	Buy
4361	NFY	3117	Buy

7292	TC	6865	Buy |
			
			The company wants the attribute **Value** for the table to store values as real numbers with a precision upto 4 decimal places.
			   a) What SQL statement Rajni should write to make the desired change?
			   b) What SQL statement will she write if all the values of the **Value** attribute in the existing table **STOCKDATA** are to be increased by **25%**?
				2

Q.14	Mention any two usages of a Database Management System in Education	2
Q.15	A school is making database of its teachers and students. Table TEACHER includes TeaCode, TName, TSubject, TDOJ, TDesig. Give details of table STUDENT along with its schema.	1+1

Q.16	Rewrite the following code after correcting the syntax errors, <u>underline</u> each correction made:	1+1
	```int number= = 1; while (number <= 5); { System.out.print("Square of " + number); System.out.println(" = " , number*number); Number+=1; }```	

Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)

Q.17	Convert the following Java code from for loop to while loop without changing the logic.	3
	``` int X=4,Y=3; int Pow=1; for (int i=1;i<=Y;i++) Pow*=X; System.out.println(Pow);```	
Q.18	a) Define Referential Integrity. b) Consider the following table **TEACHER** and answer the following questions: **Table: TEACHER**	1+2

TID	TNAME	DOA	DEPT	PAY
501	SUBHAV JAIN	2014-07-09	COMPUTER	450000
203	SHUBH NANGIA	2009-11-23	CHEMISTRY	340000
510	VARUN KAPOOR	2015-02-15	HINDI	320000
307	KAMAL PATRA	2010-12-29	ACCOUNTS	310000
490	SUJAN REDDY	2012-09-11	ENGLISH	270000
370	IKAT GOSWAMY	2011-05-08	COMPUTER	510000

DOA - Date of Appointment, DEPT - Department

Write the statements:
i) To display the number of teachers and the corresponding department name, in each department.
ii) To display the minimum PAY of teachers whose Date of Appointment is after 2010.

Q.19	Differentiate between **DROP** and **DELETE** commands in SQL with appropriate examples.	3

Answer any 3 out of the given 5 questions (4 x 3 = 12 marks)

Q.20	a) Give the output for the following code:
	    String myString = "Welcome to Java";
	   System.out.println (myString.concat("Session"));
	   System.out.println (myString.length());
	   System.out.println (myString.replace("to","2"));
	
	   b.) Expand the term OOP.
		3+1

Q.21	a) Name any two educational websites that provide online courses for free, in collaboration with various universities across the globe. b) What is a project? c) The process of development of web based applications is broadly categorized in four phases. List down the Phases in a Web Application Project.	1+1+2
Q.22	a. Consider the following co and answer the following questions: static int MyMethod(int N) { return (N*N); } public static void main(String[] args) { System.out.println(MyMethod(7)); } i)Name the user defined method. ii)What will be the output on executing the above code? b. What is exception handling in Java? Explain the terms try and catch in exception handling.	2+2

Q.23	a) What are Arrays? Give an example.
	b) Write Java code to do the following:
	    i) Create an array Marks that stores values 78,65,85,91,82
	    ii) To print all the values of the array Marks using a loop.
	    iii) Display the average stored in the array Marks.
		1+3

Q.24	Consider the following tables – TRAIN and PASSENGER:	4

Table: TRAIN

TID	TName	Boarding	Destination	Cost
305	VandeBharat	New Delhi	Katra	2500
206	Shatabdi	Mumbai	Delhi	3500
307	Superfast	Lucknow	Chennai	4500
208	HolidayExpress	Goa	Delhi	2000

Table: PASSENGER

PID	TID	Name	DOT
P108	307	Gagandeep Singh	14-10-2022
P209	206	Rahat Ali	01-01-2023
P110	305	Cristopher	10-12-2022
P677	208	Diksha Luther	11-09-2019
P555	307	Nira Kadam	06-11-2020
P211	208	Ritam Ahuja	17-12-2021

Write SQL queries for the following:
a) To display the count of passengers travelling by each train
b) To add a new record in the table TRAIN:
   (12471, "Garib Rath", "New Delhi", "Mumbai", 1105)
c) To display TName, Name and Boarding of all passengers.
d) To display details of all trains whose cost is between 3000 and 5000.