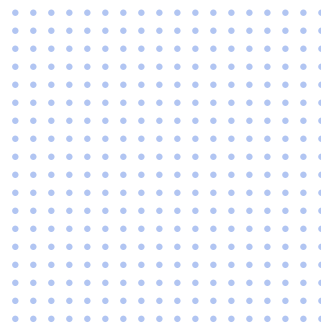




FOR CBSE CLASS 12 PREPARATION

CBSE Class 12 Sample Paper 2027 Solution (Marking Scheme) for Informatics Practices

EXAM

CBSE Class 12

YEAR

2027

TYPE

Solutions

SUBJECT

Informatics Practices

INFORMATICS PRACTICES (Code No. 065)
MARKING SCHEME
Class - XII (2026-27)

Time Allowed: 3 Hours

Maximum Marks: 70

General Instructions:

- All questions are compulsory.
- The examination paper contains five sections, from Section A to Section E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 4 questions (29 to 32). Each question carries 3 Marks.
- Section D consists of 2 questions (33 to 34). Each question carries 4 Marks.
- Section E consists of 3 questions (35 to 37). Each question carries 5 Marks.
- There is no overall choice. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.
- All programming questions are to be answered using Python Language only.

QNO	Section-A (1 to 21) 21 x 1 = 21 Marks	MARKS
1	False (1 mark for correct answer)	1
2	C. LENGTH() (1 mark for correct answer)	1
3	C. Patent (1 mark for correct answer)	1
4	B. ylabel() (1 mark for correct answer)	1
5	C. Modem (1 mark for correct answer)	1
6	C. UPDATE (1 mark for correct answer)	1
7	B. Refurbishing (1 mark for correct answer)	1
8	A. A Series with values 5, 5, 5 (1 mark for correct answer)	1
9	HAVING (1 mark for correct answer)	1
10	C. Cookies (1 mark for correct answer)	1
11	A. DESC (1 mark for correct answer)	1
12	C. NaN (1 mark for correct answer)	1
13	C. Reduce (1 mark for correct answer)	1
14	D. MID() (1 mark for correct answer)	1
15	C. index (1 mark for correct answer)	1
16	Web hosting or Hosting (1 mark for correct answer)	1

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17	B. WHERE Commission IS NOT NULL (1 mark for correct answer)	1
18	C. Column labels (1 mark for correct answer)	1
19	True (1 mark for correct answer)	1
20	D. Assertion (A) is False, but Reason (R) is True. (1 mark for correct answer)	1
21	C. Assertion (A) is True and Reason (R) is False. (1 mark for correct answer)	1
Section-B (22 to 28) 7X2 = 14 Marks		
22	(A) (i) The head() function displays the first n rows of a DataFrame. (ii) If n is not specified in head(), it returns the first 5 rows by default. (1 mark for each correct part) OR (B) Boolean indexing is a technique used to select subsets of data based on the actual values in the DataFrame rather than row/column labels. Example import pandas as pd data = [{'Name': 'Aarav', 'Age': 24}, {'Name': 'Priya', 'Age': 30}] df = pd.DataFrame(data) print(df['Age'] > 25) Output 0 False 1 True (1 mark for each correct part)	2
23	Active digital footprint: An active digital footprint is created when a person intentionally shares or submits information online. Passive digital footprint: A passive digital footprint is created when information is collected automatically, often without the user's knowledge or direct involvement. (2 mark for correct differentiation)	2
24	Data visualization is the graphical or pictorial representation of data using graphs, charts, etc. Its primary purpose is to visualize variations or show relationships between variables, helping users to infer conclusions that might not be easily visible by looking at raw numerical data. (1 mark for each correct part)	2
25	(A) In star topology, each node is directly connected to a central controller (hub or switch). Advantage: Failure of one node does not affect the rest of the network. (1 mark for each correct part) OR (B) VoIP stands for Voice over Internet Protocol, which allows voice transmission over a computer network rather than traditional telephone lines. Advantages:	2

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	Very economical/free compared to traditional international calls. (1 mark for each correct part)									
26	(i) SELECT RIGHT(Ename, 3) FROM EMPLOYEE; (ii) SELECT INSTR('Informatics', 'ma'); (1 mark for each correct part)	2								
27	Be Ethical: Do not violate copyright laws; always seek permission before using or sharing copyrighted material. Be Respectful: Respect the privacy, opinions, and cultural diversity of others, especially in public online forums. (1 mark for each correct guidelines)	2								
28	(A) import pandas as pd dict1 = {'a': 10, 'b': 20} dict2 = {'a': 5, 'b': 10, 'c': 20} df = pd.DataFrame([dict1, dict2]) print(df) (2 mark for correct program) OR (B) read_csv() is used to load data from a CSV file into a Pandas DataFrame. sep: Specifies the delimiter (e.g., comma, semicolon). (1 mark for each correct part)	2								
Section-C (29 to 32) 4X3 = 12 Marks										
29	(i) Phishing (ii) Cyber Bullying (iii) Be Credible/Use polite language (1 mark for each correct part)	3								
30	(A) (i) import pandas as pd stock = {'Pens': 150, 'Erasers': 80, 'Sharpener': 60, 'Notebooks': 200} Inventory = pd.Series(stock) print(Inventory) (ii) Output: a NaN b 50.0 c NaN (2 marks for correct program) (1 mark for correct output) OR (B) (i) df['Total'] = [183, 181, 158] (ii) df.rename(columns={'Name': 'Student'}, inplace=True) (iii) df.drop(columns=['Maths'], inplace=True) (1 mark for each correct part)	3								
31	(i) SELECT LOWER(PName) FROM HOSPITAL WHERE Dept = 'Cardiology'; (ii) SELECT PNo, DAYNAME(DOA) FROM HOSPITAL; (iii) SELECT PName FROM HOSPITAL ORDER BY PName ASC; (1 mark for each correct part)	3								
32	(A) (i) <table border="1"><tr><td>UPPER(Name)</td><td>LENGTH(Name)</td></tr><tr><td>VINOD</td><td>5</td></tr></table> (ii) <table border="1"><tr><td>DAY(DOB)</td><td>YEAR(DOB)</td></tr><tr><td>1</td><td>2004</td></tr></table>	UPPER(Name)	LENGTH(Name)	VINOD	5	DAY(DOB)	YEAR(DOB)	1	2004	3
UPPER(Name)	LENGTH(Name)									
VINOD	5									
DAY(DOB)	YEAR(DOB)									
1	2004									

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	(iii) <table><tr><td>RIGHT(Name, 3)</td></tr><tr><td>man</td></tr></table> (1 mark for each correct part) OR	RIGHT(Name, 3)	man														
RIGHT(Name, 3)																	
man																	
	(B) (i) 9 (ii) INDIA (iii) 11 (1 mark for each correct part)																
	Section-D (33 to 34) 2X4 = 8 Marks																
33	import matplotlib.pyplot as plt months = ['Jan', 'Feb', 'Mar', 'Apr'] sales = [12000, 15000, 11000, 18000] plt.plot(months, sales, label="Sales") plt.title("Sales Performance") plt.xlabel("Month") plt.ylabel("Amount") plt.legend() plt.show() (1 mark for correct imports) (1 mark for correct use of plot with label) (1/2 mark for title) (1/2 mark for labels) (1/2 mark for legend) (1/2 mark for show)	4															
34	(A) (i) SELECT Game, SUM(Fees) FROM SPORTS GROUP BY Game HAVING SUM(Fees) > 1000; (ii) SELECT SName, CName FROM SPORTS, COACH WHERE SPORTS.Game = COACH.Game; (2 mark for correct part(i), 2 mark for correct part(ii)) OR (B) (i) <table><tr><td>DeptID</td><td>COUNT(*)</td><td>MAX(Salary)</td></tr><tr><td>D1</td><td>2</td><td>5200</td></tr><tr><td>D2</td><td>2</td><td>7500</td></tr></table> (ii) <table><tr><td>Name</td><td>DeptName</td></tr><tr><td>Riya</td><td>IT</td></tr><tr><td>Kabir</td><td>IT</td></tr></table> (2 mark for correct part(i), 2 mark for correct part(ii))	DeptID	COUNT(*)	MAX(Salary)	D1	2	5200	D2	2	7500	Name	DeptName	Riya	IT	Kabir	IT	4
DeptID	COUNT(*)	MAX(Salary)															
D1	2	5200															
D2	2	7500															
Name	DeptName																
Riya	IT																
Kabir	IT																
	Section-E (35 to 37) 3X5 = 15 Marks																
35	(i) Block D. It is the most suitable because it has the maximum number of computers (150). (ii) LAN (Local Area Network). The distance is within a single campus/limited area. (iii) Switch: Every block (A, B, C, D) should have a switch to connect multiple computers within that block. (iv) Dynamic Website. Since it involves user logins and real-time data updates from a database, a dynamic site is required.	5															

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	(v) Between Block A and Block D, & Block C and Block D, because Repeaters are needed as distance exceeds ~100m for Ethernet. (1 mark for each correct part)	
36	(i) import pandas as pd data = { 'Items': pd.Series(['Bread', 'Milk', 'Eggs']), 'Quantity': pd.Series([50, 100, 120]), 'Unit_Price': pd.Series([30, 25, 6]) } StoreDF = pd.DataFrame(data) print(StoreDF) (ii) StoreDF.loc[3] = ['Butter', 40, 55] (iii) print(StoreDF['Items']) (3 mark for correct part(i), 1 mark for correct part(ii), 1 mark for correct part(iii))	5
37	(A) (i) INSERT INTO BOOK VALUES (205, 'The White Tiger', 'Aravind Adiga', 350); (ii) UPDATE BOOK SET Price = 325 WHERE BookID = 202; (iii) DELETE FROM BOOK WHERE Author = 'R. K. Narayan'; (iv) ALTER TABLE BOOK ADD Publisher VARCHAR(30); (v) DROP TABLE BOOK; (1 mark for each correct part) OR (B) (i) SELECT PName, ROUND(Price, 1) FROM PRODUCT; (ii) SELECT PName FROM PRODUCT WHERE RIGHT(PName,1) = 's'; (iii) SELECT PName, Category FROM PRODUCT WHERE Price <= 500; (iv) SELECT SUM(Qty) FROM PRODUCT; (v) SELECT LTRIM(PName) FROM PRODUCT; (1 mark for each correct part)	5

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