BCM SCHOOL, BASANT AVENUE, LUDHIANA

INFORMATION TECHNOLOGY (402) – CLASS IX

ASSIGNMENT – ELECTRONIC SPREADSHEET

Higher-Order & Competency-Based Questions

Total Marks: 30 | Time: 45 Minutes

General Instructions

1. The assignment contains 15 MCQs (15 marks) and 15 marks of higher-order competency-based theory questions.
2. Read each situation carefully and select/apply the most appropriate solution.
3. Show calculations or formula logic wherever required.
4. Answers should demonstrate understanding and application of spreadsheet concepts.

SECTION A – MCQs

15 × 1 = 15 Marks

Q1. A school maintains the marks of students in a spreadsheet. The teacher wants the total marks to update automatically whenever a subject mark is changed. Which feature should be used?

a) Manual calculation

b) Formula

c) Text formatting

d) Page border

Q2. A teacher enters 75 in cell B2 and 25 in cell C2. Which formula will correctly calculate their sum in LibreOffice Calc?

a) =B2+C2

b) B2+C2

c) SUM B2 C2

d) =B2*C2

Q3. A student copies the formula =B2*C2 from D2 to D3. Which formula will normally appear in D3?

a) =B2*C2

b) =B3*C3

c) =C2*D2

d) =B1*C1

Q4. A school wants to calculate the average marks of students from B2 to B31. Which formula is most appropriate?

a) =SUM(B2:B31)

b) =AVERAGE(B2:B31)

c) =COUNT(B2:B31)

d) =MAX(B2:B31)

Q5. A teacher wants to identify the highest mark obtained in a test without checking all values manually. Which function should be used?

a) MIN

b) COUNT

c) MAX

d) AVERAGE

Q6. A spreadsheet contains student names and their marks. The teacher wants to display only students who scored more than 80. Which feature would be most suitable?

a) Filter

b) Merge Cells

c) Page Break

d) Word Count

Q7. A teacher wants to arrange students from highest marks to lowest marks. Which operation should be performed?

a) Ascending sort

b) Descending sort

c) Filtering

d) Text wrapping

Q8. A cell displays ###### after a number is entered. What is the most likely reason?

a) The formula is always incorrect

b) The column is too narrow to display the value

c) The worksheet is protected

d) The cell contains text only

Q9. A student enters =SUM(B2:B6) in B7 and then accidentally deletes the value in B4. What will happen to the result?

a) It will remain unchanged

b) The formula will automatically ignore the deleted cell and include the remaining values

c) The spreadsheet will close

d) The formula becomes a text value

Q10. A school wants to compare the number of students in different sections visually. Which chart would generally be appropriate for comparing categories?

a) Column chart

b) Scatter chart only

c) Area chart only

d) Radar chart only

Q11. A teacher needs to calculate the percentage obtained by a student whose total marks are in E2 and maximum marks are in F2. Which formula is appropriate?

a) =E2+F2

b) =E2/F2*100

c) =F2/E2*100

d) =E2*F2

Q12. A spreadsheet contains a long list of students. The teacher applies a filter to display only Class IX-A. What happens to the other records?

a) They are permanently deleted

b) They are temporarily hidden from the displayed result

c) They are converted into formulas

d) They are moved to another workbook

Q13. A student uses the formula =A1+B1 in C1 and copies it down. Why is this useful?

a) Relative cell references adjust automatically for different rows

b) It prevents all calculations

c) It converts numbers into text

d) It locks both cells permanently

Q14. A school wants to show monthly expenses using a graph so that the trend over several months can be understood easily. Which chart type is generally suitable?

a) Line chart

b) Pie chart only

c) Column width

d) Cell border

Q15. A teacher notices that a spreadsheet has many repeated calculations. Which approach would improve efficiency and reduce errors?

a) Perform every calculation manually

b) Use formulas and appropriate functions

c) Delete the worksheet

d) Convert all numbers to text

SECTION B – HIGHER-ORDER & COMPETENCY-BASED THEORY QUESTIONS

15 Marks

Q16. Case-Based Question – 3 Marks

A teacher maintains the following marks in LibreOffice Calc:

| Student | English | Maths | Science | Total |

| Aarav | 78 | 85 | 82 | ? |

| Mehak | 91 | 88 | 95 | ? |

| Riya | 67 | 74 | 71 | ? |

a) Write the formula that should be entered in the Total cell for Aarav if the subject marks are in B2:D2. (1)

b) Explain why using a formula is better than manually adding the marks. (1)

c) If the Maths mark of Aarav changes from 85 to 90, what will happen to the Total automatically? Explain. (1)

Q17. Application-Based Question – 3 Marks

A school has a spreadsheet containing 500 students. The teacher wants to:

• arrange students according to their percentage from highest to lowest;

• display only students who scored 90% or above;

• create a visual comparison of the number of students in each section.

a) Which spreadsheet feature should be used for the first task? (1)

b) Which feature should be used for the second task? (1)

c) Which type of chart would you recommend for the third task and why? (1)

Q18. Problem-Solving Question – 3 Marks

A student creates the following formula in cell E2:

=B2+C2+D2

He copies the formula down to E10. However, he later inserts another subject column between C and D.

a) What potential issue should the student consider after inserting the new column? (1)

b) Suggest a better approach for calculating the total if the subject marks occupy a continuous range. (1)

c) Give one reason why functions such as SUM can make a spreadsheet easier to maintain. (1)

Q19. Competency-Based Question – 3 Marks

A school wants to analyse the performance of four sections. The spreadsheet contains the number of students who scored above 90%, between 75–89%, and below 75%.

The coordinator wants the spreadsheet to help answer:

1. Which section has the highest number of high-performing students?

2. Which students belong to a particular performance category?

3. How does the performance of sections compare visually?

Identify a suitable spreadsheet operation/feature for each requirement and justify your choice. (3)

Q20. HOTS Question – 3 Marks

A teacher has created a result spreadsheet but has made the following observations:

• Some percentages were calculated incorrectly.

• Students appear in an unsuitable order.

• The spreadsheet contains too many records to inspect manually.

• A chart is difficult to understand because inappropriate data was selected.

Suggest four specific actions/features in LibreOffice Calc that could help improve the spreadsheet and explain how each would solve one of the problems. (3)