Punjab Education, Curriculum, Training & Assessment Authority

Smart Syllabus / Accelerated Learning Program (ALP) for Computer Science & Entrepreneurship-9

For the convenience of Grade-9 students, the following content from the Computer Science & Entrepreneurship textbook has been removed to reduce and streamline the syllabus. It is mandatory for BISE Paper Setters not to include any questions, whether objective, subjective, or other types, from the excluded content when preparing examination papers.

The detail is as under:

Unit #	Unit Name	Deleted Content and Questions
1	Introduction To Systems	Types of System Objectives (Pg. No. 3-4), Static vs Dynamic Systems (Pg. No. 5), Activity (Pg. No. 6), Types of Systems (Pg. No. 7-10), Design Science of Computer Science (Pg. No. 12), Computer as System (Pg. No. 13-15), Computing Systems (Pg. No. 18-20) **Exercise:** MCQs (Q. 4, 6, 7, 10) (Pg. 22-23), Short Questions (Q. 3, 4, 10) (Pg. 23), Long Questions (Q. 2-5, 8) (Pg. 23)
2	Number System	Binary Encoding of Integers(Z) and Real Numbers(R), Whole Numbers (W) and Integers (Z) (Page No. 31), Understanding Floating Point Representation (Page No. 33-36), Storing Images audio and video in computers (Page No. 43-44). **Exercise:** MCQs (Q. 7-10) (Page 47), Short Question (Q. 8-10) (Page No. 47)
3	Digital Systems and Logic Design	Application of Digital Logic (Page No. 62-66), Class Activity (Page No. 66) **Exercise:** MCQs (Q. 4), Short Question (Q. 5), Long Question (Q. 3-6, 8, 9)
4	System Troubleshooting	Trouble shooting strategies (Page No. 74), Addressing Security Threats (Page No. 79), Using Resources for Troubleshooting (Page No. 81-82). **Exercise:** MCQs (Q. 6, 9, 10), Long Questions (Q. 5, 6, 8, 9).
5	Software System	Introduction to system software and application software. (Page No. 89-96). **Exercise:** MCQs (Q. 1, 3, 5-7, 9, 10), Short Question (Q. 2-4, 6-8), Long Questions (Q. 2-6).
6	Introduction to Computer Networks	Key concepts in Network Security (Page No. 114-116) **Exercise:** MCQs (Q. 6), Short Questions (Q. 4, 6, 8-10), Long Questions (Q. 3, 5, 8)

7	Computational Thinking	Class Activity Algorithm Challenge Page 128, Did You Know? (Page No. 141)
8	Web Development with HTML, CSS and JavaScript	History of HTML (Page No. 155), Styling Background (Page No. 163-164), Positioning (Page No. 165-166), Adding animations and transitions to CSS (Page No. 167-168), Data Types (Page No. 170), Handling Events and User Input (Page No. 172-175), Debugging Techniques (Page No. 175-176) **Exercise:** Long Question No. 7, 8
9	Data Science and Data Gathering PECTAA Transformation, Innovation & Excellence	Examples of Data (Page No. 180), Types of Qualitative data (Page No. 181-182), Types of Quantitative data (Page No. 182-184), Class Activity (Page No. 185), Gathering data from Online Sources (Page No. 188-189), Data Storage Techniques (Page No. 190-191), Importance and Benefits of Data Visualization (only Paragraph) (Page No. 192), Visualizing Different Data Types (Page No. 192), Statistical Analysis (Page No. 195-196), Methods for Analyzing Qualitative Data (Page No. 196), Class Activity (Page No. 197), Collaborative Authoring (Page No. 198-199), Data Science Work Flow (Page No. 200), Class Activity (Page No. 201), Big Data and its Application (Page No. 201-206) **Exercise:** MCQs (Q. 3-5, 7, 12-14), Short Questions (Q. 2, 3, 6-8, 11), Long Questions (Q. 3, 5, 7, 8, 10)
10	Emerging Technologies	Historical Context of Artificial Intelligence (Page No. 212-213), Explainable Whitebox Algorithm (Page No. 216), Implications and Future of Emerging Technologies (Page No. 220-221). **Exercise:** MCQs (Q. 8-10), Short Questions (Q. 2, 7-10), Long Questions (Q 2, 5-9)
11	Ethical, Social, and Legal Concerns in Computer Usage	Class Activity (Page No. 227), Safe and Secure Operations of Digital Platforms (Page No. 228), Importance of Privacy Settings and Data Security Measures (Page No. 230), Legal Ethical Framework (Page No. 230-232), Ethical and Legal Responsibilities Regarding Intellectual Property (Page No. 233), Responsible Internet Use (Page No. 233-235), Class Activity Page No. 236, Impact of Computing on Society (Page No. 236-238). **Exercise:** MCQs (Q. 10, 11, 13-15), Short Questions (Q. 2-5, 14, 15, 18-21), Long Questions (Q. 3, 4, 6, 8)
12	Entrepreneurship in Digital Age	E-Commerce Platform (Page No. 249-252), Ideation and Problem Solving (Page No. 253), Class Activity and Did You know? (Page No. 257), Class Activity and Did You Know? (Page No. 258). **Exercise:** MCQs (Q. 4, 5), Short Question (Q. 5), Long Questions (Q. 3, 5)

Instructions for Preparation of Exam Paper of Computer Science & Entrepreneurship for Grade-9

ESSENTIAL INSTRUCTIONS FOR PAPER SETTERS

The paper of Computer Science & Entrepreneurship for class 9 will consist of 50 marks. The duration for the Multiple-Choice Questions (MCQs) section will be 15 minutes, while the time allocated for the short and long questions section will be 1 hour and 45 minutes. The paper will be made as per following details:

Part-I: **Objective:**	**Q-1:** 10 Multiple-Choice Questions. MCQs will be developed from the entire content of the textbook. One MCQ will be asked from Chapters 1- 4, 6 -11 except chapter 5.	1 × 10 = 10
Part-II: **Subjective:**	This section will contain three short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows:	2 × 4 = 8
	Q-2: Four short answer questions have to be answered out of 6. The detail is as follows: • One short answer question from Chapter No. 1 • Two short answer questions should be asked from each Chapter No. 2 and 3 • One short answer question from Chapter No. 4	
	Q-3: Four short answer questions have to be answered out of 6. The detail is as follows: • Two short answer questions should be asked from each Chapter No. 6 and 7 • One short answer question should be asked from each Chapter No. 5 and 8	2 × 4 = 8
	Q-4: Four short answer questions have to be answered out of 6. The detail is as follows: • Two short answer questions should be asked from each Chapter No. 9 and 12 • One short answer question should be asked from each Chapter No. 10 and 11	2 × 4 = 8
Part-III: **Subjective:**	This section will contain three detailed questions and students have to attempt two questions carrying 8 marks each. Each detailed question should be asked form the exercises of the textbook. The detail is as follows: **Q-5:** • One detailed question should be asked from Chapter No. 3. **Q-6:** • One detailed question should be asked from Chapter No. 6. **Q-7:** • One detailed question should be asked (Part a and b) from Chapter 7 and Chapter 8 respectively.	2 × 8 = 16

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MODEL PAPER
Computer Science and Entrepreneurship Grade-9
Objective Type

Question # 1 **Time Allowed: 15 mins**

Multiple Choice Questions (MCQ)

Choose the correct option **(1 x10 = 10)**

i. What is one of the fundamental concepts of any system?

a) size b) age c) objective d) price

ii. How many bits are used in the standard ASCII encoding?

a) 7 bits b) 7 bits c) 16 bits d) 32 bits

iii. What is the decimal equivalent of the binary numbers 1101?

a) 11 b) 12 c) 13 d) 14

iv. Which step involves coming up with a theory about what might be causing a problem?

a) Test the theory to determine the cause

b) Establish a theory of probable cause

c) Implement the solution

d) Verify full system functionality

v. Which device is used to connect multiple networks and direct data packets between them?

a) Switch b) Hub c) Router d) Modem

vi. Which term refers to the process of ignoring the detail to focus on the main idea?

a) Decomposition b) Pattern Recognition

c) Abstraction d) Algorithm design

vii. Which HTML attribute is used to define inline styles?

a) Class b) Style c) font d) Styles

viii. What is data?

a) Process information b) Raw facts gathered about things

c) A collection of numbers only d) a list of observed events

ix. **Which of these AI algorithms is considered an "Explainable" model?**

a) Neural Networks b) Decision Trees

c) Random Forest d) Convolutional Neural Networks

x. **Why is it important to use computers safely and responsibly?**

a) To ensure we can use them more frequently

b) To protect our personal information and make wise choice about hardware and software

c) To make the computer run faster

d) To avoid paying for software

Subjective Type

Max. Marks: 40 **Time Allowed: 1:45 hours**

Question # 2

Write Short answers to any Four (04) questions. **(2 x 4 = 8)**

i. Define Artificial systems.

ii. Convert $(1286)_{10}$ to Hexadecimal.

iii. What do you know about ASCII?

iv. Make truth table of the expression.

F (X, Y, Z) = X.Y + X.Z

v. what do you know about full-adder Circuits?

vi. Define Security and maintenance.

Question # 3

Write Short answers to any Four (04) questions. **(2 x 4 = 8)**

i. Define (Switch)

ii. Difference between Simplex and Full duplex Communication.

iii. Difference between flowchart & Algorithm

iv. Define Pseudocode?

v. Difference Text Editor and web browser.

vi. Define CSS.

Question # 4

Write Short answers to any FOUR (4) questions. **(2 x 4 = 8)**

i. Define qualitative Data.

ii. What do you know abord unstructured data?

iii. Define Linear Regression.

iv. Define data Security measures.

v. Why is entrepreneurship important?

vi. Define digital marketing strategies.

Long Question Solve any Two Questions. **(2 x 8 = 16)**

Question # 5

Explain the usage of Boolean functions in Computers.

Question # 6

What is Transmission Describe its types with the help of diagram.

Question # 7

a) Describe Symbols of flow Chart.

b) Describe Variables and data.