Punjab Education, Curriculum, Training & Assessment Authority

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

Note: All types of questions for BISE Examination paper will be prepared from the entire content of the textbook other than those topics and questions which have been excluded / deleted in the Smart Syllabus (ALP) for Computer Science & Entrepreneurship-9 (Session 2025-26).

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), **Both Activities (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. **2,** 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),** 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 Questions No. 7, 8
9	Data Science and Data Gathering	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), 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 Applications (Page No. 201-206) **(Revised)** **Exercise:** MCQs (Q. 3-5, 7, 12-14), Short Questions (Q. 2, 3, 6-8, 11), Long Questions (Q. 3, 5, 7, 8, **9,** 10)
10	Emerging Technologies	Historical Context of Artificial Intelligence (Page No. 212-213), Explainable Whitebox Algorithm **(Rule Based 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 Frameworks (Page No. 230-232), Ethical and Legal Responsibilities Regarding Intellectual Property **Rights** (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 Platforms **(Till Online Marketing Tools)** (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. **2,** 3, 5)

PUNJAB EDUCATION, CURRICULUM, TRAINING AND ASSESSMENT AUTHORITY

Pairing Scheme / Instructions for Preparation of Exam Paper of Computer Science & Entrepreneurship for Grade-9 (REVISED)

ESSENTIAL INSTRUCTIONS FOR PAPER SETTERS

The paper of Computer Science & Entrepreneurship for Grade-9 will consist of 50 marks.
Objective Type = 10 + Subjective Type = 40 marks.
Timing of the paper will be 2 hours.
(Objective Type = 15 minutes + Subjective Type = 1:45 hours)
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 and from Chapters 6 -11.**	1 × 10 = 10
Part-II: Subjective:	This section will contain three short answer questions. Each short answer question will be asked from the **content** of the textbook. The detail is as follows:	2 × 4 = 8
	Q-2: Four short answer questions have to be answered out of six. The detail is as follows: • One short answer question will be given from Chapter No. 1 • Two short answer questions will be given from each Chapter No. 2 and 3 • One short answer question will be given from Chapter No. 4	
	Q-3: Four short answer questions have to be answered out of six. The detail is as follows: • **Two short answer questions will be given each from Chapter No. 7 and 8** • **One short answer question will be given each from Chapter No. 5 and 6**	2 × 4 = 8
	Q-4: Four short answer questions have to be answered out of six. The detail is as follows: • **One short answer question will be given each from Chapter No. 9 and 12** • **Two short answer questions will be given each from 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 **content** of the textbook. The detail is as follows: **Q-5:** • **One detailed question will be given from Chapter No. 1** **Q-6:** • One detailed question will be given from Chapter No. 6 **Q-7:** • **One detailed question will be given from Chapter 9 or Chapter 12**	2 × 8 = 16

Model Paper
Computer Science and Entrepreneurship Grade-9

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

Multiple Choice Questions (MCQs)

Choose the correct option. درست آپشن کا انتخاب کریں۔ **(1×10 = 10)**

i. کسی بھی سسٹم کا بنیادی تصور کیا ہے؟

i. What is the fundamental concept of any system?

a) size سائز b) age عمر

c) objective مقصد d) price قیمت

ii. معیاری آسکی (ASCII) انکوڈنگ میں کتنے بٹس استعمال ہوتے ہیں؟

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

a) 7 bits 7 بٹس b) 8 bits 8 بٹس

c) 16 bits 16 بٹس d) 32 bits 32 بٹس

iii. مندرجہ ذیل میں سے کون سا بولین ایکسپریشن AND آپریشن کو ظاہر کرتا ہے؟

iii. Which of the following Boolean expression represents the AND operation?

a) A+B b) A.B

c) $\overline{A.B}$ d) $A \oplus B$

iv. مندرجہ ذیل میں سے کون سا مرحلہ منصوبے کو عمل میں لانے کے لیے استعمال کیا جاتا ہے؟

iv. Which of the following step is used to put the plan into action?

a) Verify full system functionality پورے سسٹم کی فعالیت کی تصدیق کرنا

b) Establish a plan of action حل کرنے کا منصوبہ تیار کرنا

c) Implement the solution حل نافذ کرنا

d) Documents finding and actions اقدامات اور نتائج کو ڈاکومنٹ کرنا

v. مندرجہ ذیل میں سے کون سی ڈیوائس مختلف نیٹ ورکس کو آپس میں جوڑتی ہے اور ان کے درمیان ڈیٹا پیکٹس کو ہدایات دیتی ہے؟

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

a) Switch سوئچ b) Hub ہب

c) Router راؤٹر d) Modem موڈیم

vi. کسی الگورتھم کی کارکردگی کو مندرجہ ذیل پیمانے سے ماپا جاتا ہے:

vi. Efficiency of an algorithms is measured in terms of:

a) Time Complexity ٹائم کمپلیکسٹی

b) Space Complexity سپیس کمپلیکسٹی

c) Cost Complexity کاسٹ کمپلیکسٹی

d) Both a and b دونوں a اور b

vii. مندرجہ ذیل میں سے کون سا ٹیگ پیراگراف کے لیے استعمال ہوتا ہے؟

vii. Which of the following tag is used for paragraph?

a) <b> b) <p>

c) d) <pr>

viii. ڈیٹا کیا ہے؟

viii. What is data?

a) Processed information پروسیس کی گئی انفارمیشن

b) Raw facts gathered about things چیزوں کے بارے میں جمع کردہ خام حقائق

c) A collection of numbers only صرف نمبروں کا مجموعہ

d) a list of observed events مشاہدہ کیے گئے واقعات کی فہرست

ix. ذیل میں سے کس AI الگورتھم کو قابلِ وضاحت ماڈل سمجھا جاتا ہے؟

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

a) Neural Network نیورل نیٹ ورک

b) Decision Trees ڈیسیزن ٹریز

c) Random Forest رینڈم فارسٹ

d) Convolutional Neural Networks کنوولوشنل نیورل نیٹ ورک

x. کمپیوٹر کو محفوظ طریقے اور ذمہ داری سے استعمال کرنا کیوں ضروری ہے؟

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

a) To ensure we can use them more frequently

اس بات کو یقینی بنانے کے لیے کہ ہم انھیں زیادہ کثرت سے استعمال کر سکیں۔

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

ہماری ذاتی معلومات کی حفاظت کرنے اور ہارڈ ویئر اور سوفٹ ویئر کے بارے میں دانشمندانہ انتخاب کرنے کے لیے

c) To make the computer run faster

کمپیوٹر کو تیزی سے چلانے کے لیے

d) To avoid paying for software

سوفٹ ویئر کی ادائیگی سے بچنے کے لیے

Model Paper
Computer Science and Entrepreneurship Class 9
SUBJECTIVE

Total Marks: 40 **Time Allowed: 1 hour and 45 minutes**

Q. 2: Write Short answers to any four (4) questions. کوئی سے چار سوالات کے مختصر جواب دیں۔ **(2×4=8)**

i. وان نیومین آرکیٹیکچر کی کوئی ایک خصوصیت لکھیں۔

i. Write characteristics of Von Neumann Architecture (any one).

ii. $(1286)_{10}$ کو ہیکساڈیسی مل میں تبدیل کریں۔

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

iii. ASCII اِن کوڈنگ سکیم کا بنیادی مقصد کیا ہے؟

iii. What is the primary purpose of ASCII Encoding Scheme?

iv. درج ذیل ایکسپریشن کا ٹروتھ ٹیبل بنائیں۔

iv. Make truth table of the expression.

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

v. درج ذیل فنکشن کی لوجک ڈایاگرام بنائیں۔

v. Create logic diagram of the following function?

$$F(x, y, z) = x.\bar{y} + y.\bar{z} + x.z$$

vi. سکیورٹی اور دیکھ بھال کی تعریف کریں۔

vi. Define Security and maintenance.

Q. 3: Write Short answers to any four (4) questions. کوئی سے چار سوالات کے مختصر جواب دیں۔ **(2×4=8)**

i. سسٹم سوفٹ ویئر کی تعریف کریں۔

i. Define system software.

ii. سوئچ کی تعریف کریں۔

ii. Define Switch.

iii. تجرید (Abstract) کا تصوّر بیان کریں۔

iii. Write the concept of abstract?

iv. سوڈو کوڈ کے مقصد کی وضاحت کریں۔

iv. Explain the purpose of Pseudocode?

v. HTML میں <head> ٹیگ کا مقصد کیا ہے؟

v. What is the purpose of <head> tag in HTML?

vi. CSS کی تعریف کریں۔

vi. Define CSS.

Q. 4: Write Short answers to any four (4) questions. کوئی سے چار سوالات کے مختصر جواب دیں۔ **(2×4=8)**

i. کوالیٹیٹیو ڈیٹا کی تعریف کریں۔

i. Define qualitative Data.

ii. قابلِ وضاحت الگورتھم کی تعریف کریں۔

ii. Define explainable Algorithm?

iii. انٹرنیٹ آف تھنگز کی تعریف کریں۔

iii. Define Internet of Things.

iv. کلاؤڈ سروسز کی وضاحت کریں۔

iv. Explain cloud services.

v. 2FA کیا ہے؟

v. What is 2FA?

vi. ای میل مارکیٹنگ سے کیا مراد ہے؟

vi. What is E-mail marketing?

Write detailed answers to any two (2) questions. کوئی سے دو سوالات کے تفصیلی جواب دیں۔ **(2×8=16)**

Q. 5:

کمپیوٹر کے وان نیومین آرکیٹیکچر کی وضاحت کریں۔

Explain the Von Neumann Architecture of Computer.

Q. 6:

OSI ماڈل کی کوئی چار لیئرز کو تفصیل سے بیان کریں۔

Describe OSI Model layers in Detail (any four).

Q. 7:

انٹرپرینیور شپ میں ڈیجیٹل ٹیکنالوجیز کے کردار کی وضاحت کریں۔

Discuss the role of digital Technologies in Entrepreneurship.