

# **POLICY GUIDELINES FOR COMPUTER SCIENCE PAPER**

## Paper Pattern and Distribution of Marks

### Computer Science SSC-I

The question paper is organized into following three sections, namely: "Section A, B & C": Questions posed may be text based or derived/unseen but in similar pretext and difficulty level as per the lessons taught in the course. Distribution of the questions with respect to cognitive domain within each section shall roughly be around 30 percent Knowledge (K), 50 percent Understanding (U) and 20 percent Application (A).

The Questions in these subjects are designed in such a manner that no pet-definitions are asked or required from the candidates to be reproduced. Moreover the questions are appropriately designed whilst keeping in consideration the time for thought-process (particularly in U and A Cognitive Domain questions) and the length of the subsequent text to be produced by the candidates.

#### **SECTION — A**

This section consists of question number one with 12 compulsory structured part questions - Multiple Choice Questions (MCQs) of one mark each. These MCQs should preferably be designed in such a way that they cover the whole course taught. These MCQs should objectively test the understanding of the concepts of the candidates in these subjects.

#### **SECTION — B**

This section consists of question number 2 with preferably 13 part questions – Short Response Questions (SRQs) of three (03) marks each. The candidates are required to attempt (respond to) any nine SRQs for a maximum total of 27 marks in this section.

#### **SECTION — C**

This section consists of three (03) Extended Response Questions (ERQs). Candidates are required to attempt (respond to) any two of these ERQs as per their choice and convenience. These questions may comprise of two or more part questions each if deemed necessary by paper setter in order to balance out the distribution various concepts and knowledge areas from different Cognitive Domains taught in course. None of these part questions shall be of less than 04 marks.

# Annexure for Policy Guidelines for Question Paper

## Definitions and Disclaimer

Policy guidelines for paper setting vide Notification No.6-8/FBISE/RES/CC/SSC/823 dated 8 June 2019 have been conveyed for general information. Definitions of some terminologies and disclaimers are given in this annexure.

### 1. Definitions

#### I. Cognitive Domains

Cognitive domain refers to development of mental skill and acquisition of knowledge.

In the questions papers developed by Federal Board of Intermediate & Secondary Education, Islamabad from hereon will be intended to test the following cognitive domains of the candidates:

- Knowledge: Approximately 30% Question in each section
- Understanding: Approximately 50% Question in each section
- Application: Approximately 20% Question in each section

##### i. Knowledge (K)

Knowledge refers to the ability of the candidates to recall the learned or memorized information or data.

##### Examples

- A child reciting the alphabets of English
- Memorization and reproducing the dates and other facts etc.

e.g. Pakistan came into being on 27th Night of Ramadan-ul-Mubarak.

##### Related Verbs (Command Words)

Arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce, state etc.

##### ii. Understanding (U)

Understand (also called Comprehension) refers to ability of the candidates to comprehend (a set of) information and/or situation and provide his/her response to it accordingly.

##### Examples

- Performing analyses and illustrating the observations
- Comprehending the concepts of Social, Natural and Physical Sciences

e.g. Discuss different types of noise and their impact on human health briefly.

##### Related Verbs (Command Words)

Classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate, rephrase, differentiate, compare etc.

##### iii. Application (A)

Application refers to the ability to use learned material in new and concrete situation to solve problems and/or to design a schedule or task.

##### Examples

- Performing analyses and illustrating the observations
- Comprehending the concepts of Social, Natural and Physical Sciences

e.g. Illustrate the similes and metaphors given in the poem Daffodils.

### **Related Verbs (Command Words)**

Apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write etc.

## **II. Sections of Paper**

There are three or four (03 or 04) sections in each question paper:

### **i. Section-A**

Contains Multiple Choice Questions (MCQs). All questions are compulsory without any external or internal choice. Usually comprises of 20% of total marks of the (theory if applicable) paper.

### **ii. Section B**

Contains Short Response Questions (SRQ). Candidates may have external choice up to 33%. In addition to that internal choice may also be offered based upon model, content and/or nature of the subject.

- This section may contain almost 50% of total marks in some subjects of the (theory if applicable) paper.

### **iii. Section C**

This section usually contains Extended Response Questions (ERQ). Candidates may have external choice in the questions. In addition to that internal choice may also be offered based upon model, content and/or nature of the subject. For ERQs it should contain around 30% of total marks in some subjects of the (theory if applicable) paper.

## **III. Choice**

Sometimes the candidates are required to attempt a certain number of questions from a given pool or group of questions, it is commonly known as choice in questions.

There are two types of choices

### **i. External Choice**

Whenever the candidates are required to solve (respond to) a certain number of questions from a given pool it is called external choice. This choice may be around 33% in a section.

- e.g.
1. Answer any six parts in about 30-40 words each.  
(Out of eight questions)
  2. Attempt any eight questions from the following.  
(Out of eleven questions)

### **ii. Internal Choice**

Whenever the candidates have to solve (respond to) a question mandatorily but they have an option within the question it is called internal choice.

- e.g.
1. Paraphrase any ONE of the following stanzas.
    - a. Stanza 1
    - b. Stanza 2

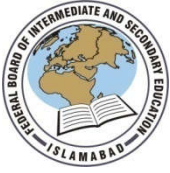
2. Translate the following: (Some sentences for translation are given)

**OR**

Write a Dialogue between a beggar and a citizen

**2. Disclaimers**

- I.** The cognitive levels written in sample model paper are for explanation purpose only. In the actual question papers administered during examination shall not contain description of these cognitive domains.
- II.** Association of the cognitive domains is solely based on subject expert's judgment and may be subject to errors and/or omissions.
- III.** In the class rooms and during teaching the candidates (students) need to be taught about the time management in accordance with allocation of marks to the questions.



Roll No: \_\_\_\_\_

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Answer Sheet No: \_\_\_\_\_

Sig. of Candidate: \_\_\_\_\_

Sig. of Invigilator: \_\_\_\_\_

Federal Board SSC-I Examination  
Computer Science Model Question Paper

**SECTION – A**

Time allowed: 20 minutes

Marks: 12

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Note: Section-A is compulsory and comprises two pages. All parts of this section are to be answered on the question paper itself. It should be completed in the first 20 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

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**Q.1 Encircle the correct option i.e. A / B / C / D. All parts carry equal marks.**

- i. Which of the following does **NOT** belong to the category of system software?  
A. Device drivers  
B. Utility programs  
C. Shareware  
D. Language processors
  
- ii. An example of impact printer is:  
A. Inkjet printers  
B. Dot Matrix Printer  
C. Laser Printers  
D. Bubble jet Printers
  
- iii. Which of the following devices stores data in more compressed form?  
A. Hard Disk  
B. CD  
C. DVD  
D. Flash Drive
  
- iv. Which of the following is similar between Synchronous and Asynchronous transmission?  
A. Addition of control information  
B. Start and stop bits  
C. Transfer of characters  
D. Data transfer rate
  
- v. Rate of change of electrical signals per second is called:  
A. Data rate  
B. Baud rate  
C. Bandwidth  
D. Signal-to-Noise ratio
  
- vi. Which of the following is **NOT** a communication device?  
A. Router  
B. Modem  
C. Switch  
D. Cache
  
- vii. 'Pairing' of devices is done in:  
A. Bluetooth Network  
B. Metropolitan Area Network  
C. Wide Area Network  
D. Personal Area Network
  
- viii. DOS is \_\_\_\_\_ type of Operating System.  
A. Command Line Interface  
B. Menu driven Interface  
C. Time sharing Interface  
D. Graphical user Interface

**DO NOT WRITE ANYTHING HERE**

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- ix. A person who illegally breaks into other's computer system is called:  
A. Computer Engineer                      B. System Programmer  
C. Hacker                                      D. Cracker
- x. 'Multimodal Authentication' means:  
A. Use of username and password  
B. Use of two or more authentication methods  
C. Use of access cards  
D. Use of biometrics
- xi. Google Chrome is an example of:  
A. Open Source Software                      B. Freeware  
C. Shareware                                      D. Entertainment
- xii. 'D6' with reference to a spreadsheet means:  
A. Column D, Row 6                      B. Column D6  
C. Row D6                                      D. Row D, Column 6

**For Examiner's use only:** \_\_\_\_\_

**Total Marks:**

**12**

**Marks Obtained:**



Federal Board SSC-I Examination  
Computer Science Model Question Paper

Time allowed: 2.40 hours

Total Marks: 43

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Note: Sections 'B' and 'C' comprise page 1 and questions therein are to be answered on the separately provided Answer Book. Use supplementary answer sheet i.e., sheet B if required. Write your answers neatly and legibly.

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**SECTION – B (Marks 27)**

**Q.2** Attempt any **NINE** parts from the following. All parts carry equal marks. (9 × 3 = 27)

- i. How can the relative cell addressing and absolute cell addressing be differentiated?
- ii. What is the advantage of Ribbon used in MS Word? Elaborate with an example of a TAB on it.
- iii. Enlist the components of communications system with a neat sketch.
- iv. What are utility programs? Briefly describe with at least two examples.
- v. Differentiate between Half Duplex and Full Duplex with examples.
- vi. What is Cache memory? Write down its two features.
- vii. Write any advantage of INPAGE over MS Word 2010.
- viii. Which authentication method would suit you best? Justify your response.
- ix. Differentiate between Baud Rate and Bandwidth? Also give their difference.
- x. Give at least one practical example of application of 'timesharing system' and 'real time system' each from daily life.
- xi. Compare Worm and Virus.
- xii. Between Linux and Macintosh, which operating system would you prefer? Write briefly.
- xiii. What moral guidelines should be followed for ethical use of computer? Write at least three.

**SECTION – C (Marks 16)**

**Note:** Attempt any **TWO** questions.

(8 × 2 = 16)

- Q.3** a. Explain four types of application software. (04)  
b. Write a note on Dial-up and DSL Internet Connection. (04)
- Q.4** Explain Bus and Star Topologies diagrammatically by giving their advantages and limitations. (08)
- Q.5** Explain in detail types of network based on geographical area. (08)