

POLICY GUIDELINES FOR GENERAL SCIENCE PAPER

Paper Pattern and Distribution of Marks General 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 should be designed in such a manner that no pet-definitions are asked or required from the candidates to be reproduced. Moreover the questions should be 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 15 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 two (02) with preferably 18 part questions – Short Response Questions (SRQs) of three (03) marks each. The candidates are required to attempt (respond to) any Twelve (12) SRQs for a maximum total of 36 marks in this section.

SECTION — C

This section consists of Four (04) Extended Response Question (ERQs). Candidates are required to attempt (respond to) any Three (03) 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.

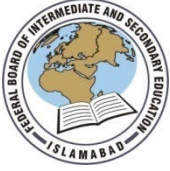
- e.g. 1. Paraphrase any ONE of the following stanzas.
a. Stanza 1
b. Stanza 2
2. Translate the following: (Some sentences for translation are given)

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
General Science Model Question Paper**

SECTION – A

Time allowed: 20 minutes

Marks: 15

Note: Section-A is compulsory. 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.

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

- i. Physics is a branch of science that deals with the physical properties of matter and
A. Water B. Energy
C. Waves D. Power
- ii. Which of the following Pakistani Scientist work(ed) in the field of Missile technology?
A. Samar Mubarak Mand B. Atta ur Rehman
C. Abdul Qadeer Khan D. Ashfaq Ahmed Khan
- iii. Percentage of oxygen element in the human body is:
A. 65% B. 18%
C. 10% D. 50%
- iv. Which of the following plays an important role in the energy release during cellular metabolism in plants?
A. Iron B. Phosphorus
C. Magnesium D. Calcium
- v. Which of the following gases is responsible for fermentation?
A. Oxygen B. Nitrogen
C. Carbon dioxide D. Hydrogen
- vi. Aids is caused by:
A. Virus B. Bacteria
C. Fungus D. Plasmodium
- vii. All the following methods are used to cure cancer **EXCEPT**:
A. Chemotherapy B. Surgery
C. Radio therapy D. Hydrotherapy
- viii. Which of the following is a liver disease?
A. Influenza B. Measles
C. Hepatitis D. Polio
- ix. Which of the following is a widely used pollution free form of energy?
A. Sound B. Heat
C. Wind D. Electricity



Federal Board SSC-I Examination General Science Model Question Paper

Time allowed: 2.40 hours

Total Marks: 60

Note: Attempt any twelve parts from Section 'B' and any three questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

SECTION – B (Marks 36)

Q.2 Attempt any **TWELVE** parts from the following. All parts carry equal marks. ($12 \times 3 = 36$)

- i. Write down the role of telescope in the field of Astronomy.
- ii. Discuss the contributions of Dr. Abdul Qadeer Khan in the field of Science
- iii. Differentiate between Botany and Zoology.
- iv. Why ice has lower density than the water?
- v. Give any three uses of sodium in daily life.
- vi. Write the at least three uses of chlorine in daily life
- vii. How are Calcium Oxide, Calcium Carbonate and Calcium Sulphate useful for us?
- viii. What precautions may be adopted to control the ringworm?
- ix. Write three identification symptoms of cancer.
- x. Explain Biological, inherited and social factors of mental disorder.
- xi. Write down the adverse effects of heroin on the human body.
- xii. What are the three main types of Hepatitis? How do they affect the immune system of the patient?
- xiii. Discuss briefly the parts of heating system of 'solar house heating plants'.
- xiv. What are the three main requirements of conservation of energy?
- xv. What is the relation between work and energy?
- xvi. Differentiate between N-type and P-type semiconductor.
- xvii. Briefly discuss the process of modulation of radio waves.
- xviii. Draw the circuit diagrams of forward biased and reverse biased diode.

SECTION – C (Marks 24)

Note: Attempt any **THREE** questions. Each question carries equal marks. ($3 \times 8 = 24$)

- Q.3** How is the growth of scientific process divided into four periods? Discuss in detail.
- Q.4** Describe the types of iron depending upon its purity and impurities, tabulate your answer.
- Q.5** What are the effects of Smoking on human body?
- Q.6** Write notes on the following
- a) Energy from Biomass
 - b) Cable Television