

ANSWER KEY

SECTION 1 Science and Technology

Part A | General Science and Technology

unit 1 Classifying Life

1. (D) 2. (B) 3. (C) 4. (B)
5. (A), (B), (F)

unit 2 Northern Lights

1. (C) 2. (C) 3. (D) 4. (B)
5. (B), (E), (F)

unit 3 The Eye

1. (A) 2. (C) 3. (A) 4. (B)
5. (A) and (F) are not used.

Process	Statements
Focusing on an image	<p>Select 2</p> <ul style="list-style-type: none"> • (B) The eye refracts light rays entering the eye so they meet at the same point on the back of the retina. • (E) The lens constantly changes shape to accommodate light received from a range of distances from the eye.
Creating depth	<p>Select 3</p> <ul style="list-style-type: none"> • (C) The brain receives slightly different versions of an image from each eye. • (D) Images from the retina are processed by the brain to recreate actual proportions and perspectives. • (G) The eyes move together so that the light rays from an object will converge at the same spot on both retinas.

unit 4 Plastics

1. (D) 2. (D) 3. (A) 4. (B)
5. (A), (B), (E)

unit 5 Flight: Conquering the Air

1. (D) 2. (A) 3. (C) 4. (B)
5. (A), (B), (D)

unit 6 Gemstones

1. (D) 2. (B) 3. (A) 4. (C)
5. (A), (E), (F)

SECTION 2 Medicine and Healthcare

Part A | Medical Science: Discoveries and Inventions

unit 7 The Microscope

1. (B) 2. (C) 3. (A) 4. (B)
5. (A) and (E) are not used.

Microscope	Statements
Optical	<p>Select 3</p> <ul style="list-style-type: none"> • (G) Uses systems of refracting lenses to magnify microscopic details of specimens • (C) Can magnify objects up to 2,000 times their original size • (D) Often has additional features which provides such advantages as showing depth or allowing observers to view specimens with both eyes
Electron	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Has the highest image resolution of the two types of microscopes • (F) Can create a visual image of details much smaller than those seen by a compound microscope

unit 8 Penicillin and Other Antibiotics

1. (C) 2. (D) 3. (B) 4. (A)
5. (B), (C), (E)

unit 9 Breakthroughs in Medical Science

1. (D) 2. (C) 3. (D) 4. (A)
5. (B), (C), (D)

unit 10 Imaging Technology

1. (C) 2. (A) 3. (D) 4. (B)
5. (C) and (E) are not used.

Imaging Tool	Statements
Radiation	<p>Select 2</p> <ul style="list-style-type: none"> • (G) Can be harmful to human tissues • (A) Uses X-rays to create two dimensional pictures of radiopaque structures on film
Magnetism	<p>Select 2</p> <ul style="list-style-type: none"> • (D) Measures the signals released by the atoms of internal tissues to produce a visual • (F) Uses radio signals to initiate bodily responses to be processed by a computer into a picture
Sound	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Makes images of structures deep inside the human body but with poor resolution • (H) Creates images by reflecting high frequency waves off internal structures.

unit 11 Herbal Medicine

1. (C) 2. (A) 3. (D) 4. (B)
5. (A), (D), (E)

Part B | Medical Science and Public Health

unit 12 Polio

1. (A) 2. (A) 3. (D) 4. (D)
5. (A), (B), (D)

unit 13 Eradicating Smallpox

1. (B) 2. (B) 3. (A) 4. (A)
5. (B), (C), (F)

unit 14 Vaccination

1. (C) 2. (D) 3. (B) 4. (C)
5. (B) and (H) are not used.

Vaccination	Statements
For	<p>Select 3</p> <ul style="list-style-type: none"> • (D) Viral related deaths and illnesses have subsided worldwide. • (E) The cost of treating sick individuals should be considered. • (F) Preventing individuals from contracting viruses impacts the risk of epidemics.
Against	<p>Select 3</p> <ul style="list-style-type: none"> • (S) Vaccines are only affective in some cases. • (C) People taking anti-viral medications often experience side effects. • (G) Epidemics often subside naturally.

unit 15 Surgery

1. (A) 2. (A) 3. (C) 4. (D)
5. (C), (E), (F)

Part C | Healthcare: Social and Practical Concerns

unit 16 Disease and Epidemics

1. (D) 2. (A) 3. (C) 4. (B)
5. (B), (D), (E)

unit 17 The World Health Organization

1. (B) 2. (D) 3. (A) 4. (D)
5. (A), (D), (E)

unit 18 Pharmaceuticals

1. (D) 2. (C) 3. (B) 4. (B)
5. (C), (D), (E)

ANSWER KEY

unit 19 Subsidized Healthcare Programs

- (A)
- (C)
- (A)
- (D)
- (E) and (H) are not used.

Type of Healthcare system	Statements
Universal Social Healthcare	Select 2 <ul style="list-style-type: none">(D) The government usually holds a healthcare monopoly.(F) Healthcare is completely provided for through taxation.
Subsidized Healthcare	Select 2 <ul style="list-style-type: none">(A) Both citizens and the government contribute to the system.(B) The poor may not benefit since they must pay a portion of expenses.
Private Healthcare	Select 2 <ul style="list-style-type: none">(C) Care is paid for in full by the individual.(G) The highest degree of competition is fostered by this system.

SECTION 3 Chemistry

Part A | Elements and Compounds

unit 20 The Periodic Table of Elements

- (C)
- (A)
- (C)
- (B)
- (B), (D), (E)

unit 21 The Universal Solvent

- (A)
- (B)
- (D)
- (D)
- (A), (D), (E)

unit 22 Chlorine

- (C)
- (A)
- (D)
- (D)
- (B), (D), (E)

unit 23 The Precious Metals

- (A)
- (A)
- (B)
- (D)
- (B), (C), (E)

unit 24 Petroleum

- (B)
- (A)
- (B)
- (C)
- (A), (D), (E)

unit 25 Mercury

- (C)
- (C)
- (B)
- (A)
- (A), (C), (E)

unit 26 Fluorine

- (D)
- (A)
- (C)
- (C)
- (A), (B), (F)

Part B | States of Matter

unit 27 Solid, Liquid, and Gas

- (A)
- (B)
- (C)
- (B)
- (A), (E), (F)

unit 28 Water to Ice

- (B)
- (D)
- (C)
- (D)
- (B), (C), (E)

Part C | Acids, Bases and Salts

unit 29 Acids

- (C)
- (C)
- (A)
- (B)
- (C), (D), (F)

unit 30 Bases

- (D)
- (A)
- (C)
- (A)
- (A), (D), (E)

unit 31 The Salt of the Earth

- (C)
- (D)
- (A)
- (B)
- (B), (C), (E)

Part D | Biochemistry

unit 32 A History of Biochemistry

- (B)
- (A)
- (A)
- (B)
- (A),(D),(F)

unit 33 Enzymes and Hormones

1. (D) 2. (A) 3. (A) 4. (B)
5. (B) and (E) are not used.

Category	Statements
Enzymes	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Catalyze reactions • (H) Bind only to specific substrates • (C) Aid in the conversion of substrates into useful substances
Hormones	<p>Select 3</p> <ul style="list-style-type: none"> • (D) Relay information from one cell to another • (G) Initiate a series of chemical reactions upon binding to receptors • (F) Trigger gene transcription

unit 34 Carbohydrates

1. (B) 2. (A) 3. (C) 4. (C)
5. (C) and (H) are not used.

Carbohydrates	Statements
Monosaccharides	<p>Select 2</p> <ul style="list-style-type: none"> • (D) Cannot be made into smaller compounds • (E) Have an equal number of carbon and oxygen atoms
Disaccharides	<p>Select 2</p> <ul style="list-style-type: none"> • (A) Are formed by the joining of two simple sugars • (G) Have one more carbon atom have oxygen atoms
Polysaccharides	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Provide the main structural material of plants • (F) Are often large chains of glucose

unit 35 Cracking the Genetic Code: DNA

1. (C) 2. (C) 3. (A) 4. (A)
5. (C), (D), (E)

unit 36 New Techniques in Biochemistry

1. (C) 2. (A) 3. (A) 4. (B)
5. (A) and (D) are not used.

Application	Statements
Molecular structure	<p>Select 2</p> <ul style="list-style-type: none"> • (H) Can be viewed using an electron microscope • (C) Can be seen as a pattern produced by X-rays passing through a molecule
Molecular movement	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Can be traced by including radionuclides in a molecular substance • (F) Is detected in the form of emitted radiation
Molecular interaction	<p>Select 2</p> <ul style="list-style-type: none"> • (G) Is best understood using computer simulation to predict chemical reactions • (E) Can be somewhat understood by separating out the products of chemical reactions from other substances in a mixture

SECTION 4 Linguistics

Part A | Sounds and Speech

unit 37 The Oral Tradition

1. (C) 2. (D) 3. (B) 4. (A)
5. (A), (C), (E)

unit 38 Learning to Speak

1. (B) 2. (B) 3. (C) 4. (A)
5. (C) and (G) are not used.

Type of Theory	Statements
Imitation Theory	<p>Select 3</p> <ul style="list-style-type: none"> • (D) The primary way a child learns the language is through repetition. • (E) The use of child-directed speech is important in teaching the child to speak. • (F) Interacting with the child through devised conversations is useful.
Conditioning Theory	<p>Select 2</p> <ul style="list-style-type: none"> • (A) Word associations play a large role in the formation of speech in a child. • (B) The parent encourages the child toward proper usage of the language.

ANSWER KEY

unit 39 Phonetics and Pronunciation

1. (A) 2. (B) 3. (A) 4. (B)
5. (E) and (H) are not used.

Types of Phonetics	Statements
Acoustic	<p>Select 2</p> <ul style="list-style-type: none"> • (C) Looks at the ways in which sound waves impact speech • (D) Used to determine how pronunciation is formed
Articulatory	<p>Select 2</p> <ul style="list-style-type: none"> • (A) Looks at the ways in which vocal organs produce speech • (F) Can be used to discover treatments for speech impediments
Auditory	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Focuses on studying the perception of sounds • (G) Examines the ways frequency affects the brain and ear

unit 40 Helen Keller

1. (A) 2. (C) 3. (B) 4. (D)
5. (B), (C), (D)

Part B | The English Language

unit 41 A History of the English Language

1. (A) 2. (D) 3. (D) 4. (A)
5. (C), (D), (E)

unit 42 American English

1. (D) 2. (B) 3. (B) 4. (C)
5. (C) and (F) are not used.

Type of English	Statements
American English	<p>Select 2</p> <ul style="list-style-type: none"> • (A) Less complicated sentence structures • (E) A higher degree of uniformity within the written form
British English	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Far more usage inconsistencies within it • (D) Inconsistent use of slang across socio-economic levels

Part C | Language Analysis

unit 43 Thoughts into Words: The Development of Language

1. (A) 2. (C) 3. (D) 4. (A)
5. (A) and (D) are not used.

Linguistic Theories	Statements
Structuralism	<p>Select 3</p> <ul style="list-style-type: none"> • (B) Believes that language operates in understandable ways • (F) Draws heavily upon the ideas of Saussure • (G) Attempts to expose language to scientific understanding
Poststructuralism	<p>Select 2</p> <ul style="list-style-type: none"> • (E) Posits that attempts to understand language may be harmful • (C) Argues that language cannot be reduced into a series of rules

unit 44 Vocabulary and Grammar

1. (B) 2. (D) 3. (A) 4. (C)
5. (C) and (F) are not used.

Parts of Language	Statements
Grammar	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Employed to provide a structure to the language • (E) Composed of various, more specific abstract rules • (G) Used to make a language more efficient by creating words
Vocabulary	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Learned at an early age before other aspects of language • (D) Used to reference ideas or objects in language

unit 45 Language Variety

1. (B) 2. (D) 3. (A) 4. (A)
5. (A) and (E) are not used.

Parts of Language	Statements
Katharevousa	<p>Select 3</p> <ul style="list-style-type: none"> • (B) Developed by Adamantios Korais • (F) Created as an act of resistance against Ottoman occupation of Greece • (G) Used Greek vocabulary and structure exclusively
Dhimotiki	<p>Select 2</p> <ul style="list-style-type: none"> • (C) Incorporated aspects of Greek and foreign dialects • (D) Spoken by the lower classes of Greece for some time

unit 46 Language Analysis Tools

1. (C) 2. (B) 3. (D) 4. (A)
5. (B), (D), (F)

SECTION 5 World History

Part A | Early Civilizations

unit 47 The First Civilizations

1. (D) 2. (A) 3. (A) 4. (C)
5. (B), (C), (F)

unit 48 Egypt: The People Who Built the Pyramids

1. (D) 2. (B) 3. (B) 4. (D)
5. (A), (E), (F)

unit 49 Greek Civilization

1. (C) 2. (B) 3. (D) 4. (B)
5. (B), (C), (F)

unit 50 The Rise and Fall of the Roman Empire

1. (B) 2. (D) 3. (A) 4. (B)
5. (B), (D), (F)

unit 51 China: Beyond the Great Wall

1. (C) 2. (A) 3. (B) 4. (D)
5. (A), (D), (E)

unit 52 The Peoples of Britain

1. (D) 2. (C) 3. (D) 4. (C)
5. (B), (C), (F)

unit 53 The Legend of King Arthur and the Knights of the Round

Table

1. (B) 2. (D) 3. (A) 4. (B)
5. (A), (D), (F)

Part B | The Middle Ages in Europe

unit 54 The Feudal Life

1. (C) 2. (D) 3. (A) 4. (A)
5. (D) and (G) are not used.

Group	Statements
Lords and Nobles	<p>Select 2</p> <ul style="list-style-type: none"> • (C) Recruited knights to fight battles • (F) Enjoyed feasts and games
Clergymen	<p>Select 2</p> <ul style="list-style-type: none"> • (A) Devoted their lives to religious ceremony and teaching • (H) Gave advice and helped rectify disagreements
Peasants	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Paid taxes • (E) Provided services around the manor

unit 55 Literature in the Middle Ages

1. (D) 2. (C) 3. (B) 4. (C)
5. (B), (D), (F)

Part C | The European Renaissance

unit 56 Rebirth

1. (C) 2. (A) 3. (D) 4. (A)
5. (A), (B), (D)

unit 57 Renaissance Art

1. (B) 2. (B) 3. (A) 4. (D)
5. (B), (C), (F)

unit 58 The Genius of Leonardo da Vinci

1. (B) 2. (C) 3. (D) 4. (C)
5. (B), (D), (F)

Part D | Rulers of the World

unit 59 Alexander the Great

1. (A) 2. (B) 3. (D) 4. (C)
5. (B), (C), (D)

ANSWER KEY

unit 60 Genghis Khan and his Descendants

1. (A)
2. (A)
3. (B)
4. (D)
5. (B), (E), (F)

unit 61 Shah Jahan's Taj Mahal

1. (C)
2. (A)
3. (A)
4. (B)
5. (A), (B), (E)

unit 62 The Tsars of Russia

1. (C)
2. (D)
3. (B)
4. (A)
5. (B), (D), (E)

unit 63 The French Revolution

1. (B)
2. (A)
3. (A)
4. (C)
5. (A), (D), (E)

unit 64 The British Monarchy

1. (C)
2. (D)
3. (A)
4. (D)
5. (B), (D), (F)

unit 68 Equity and Social Justice

1. (A)
2. (D)
3. (A)
4. (D)
5. (A) and (B) are not used.

Concept	Statements
Equity law	<p>Select 3</p> <ul style="list-style-type: none"> • (C) Provides a legally-binding decision from a judge • (D) Concerns itself with issues of fairness in the law • (G) Draws upon a series of abstract, unspecific maxims
Justice	<p>Select 2</p> <ul style="list-style-type: none"> • (F) Fails to provide a solid definition of its aims or goals • (E) Presents a vision of an ideal state of affairs in various

SECTION 6 The Humanities

Part A | Social Science

unit 65 The Industrial Revolution

1. (B)
2. (C)
3. (B)
4. (C)
5. (A), (B), (D)

unit 66 Conquest and Colonization

1. (C)
2. (D)
3. (A)
4. (B)
5. (E) and (F) are not used.

International System	Statements
Neocolonialism	<p>Select 3</p> <ul style="list-style-type: none"> • (G) Allows foreign manipulation of governments via cash payments • (C) Results from developments of the twentieth century • (B) Avoids the use of foreign military measures
Colonialism	<p>Select 2</p> <ul style="list-style-type: none"> • (D) Follows the military defeat of a country by a foreign power • (A) Manages a defeated country with military and cultural presence

unit 67 Marriage and Family

1. (A)
2. (A)
3. (C)
4. (C)
5. (A), (D), (F)

Part B | Political Science

unit 69 Political Theory and Philosophy

1. (C)
2. (B)
3. (A)
4. (A)
5. (D), (E), (F)

unit 70 World Political Systems

1. (B)
2. (A)
3. (A)
4. (C)
5. (B) and (F) are not used.

Government Type	Statements
Democracy	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Places power in the hands of the people • (E) Works with some authoritarian devices in some governments • (G) Relies upon the voice of the public at large for direction
Authoritarianism	<p>Select 2</p> <ul style="list-style-type: none"> • (C) Gives power to a single individual or a few individuals in society • (D) Provides the structure for most medieval governments of Europe

unit 71 The Ideas of Karl Marx

1. (A) 2. (A) 3. (D) 4. (C)
5. (A) and (G) are not used.

Marxist Theories	Statements
Karl Marx's beliefs	<p>Select 3</p> <ul style="list-style-type: none"> • (C) A dictatorship of the proletariat may be achieved without violence. • (D) Factory conditions necessarily create an environment that alienates people from themselves. • (E) Within capitalism, it is inevitable that the lower classes will join together against injustice.
Contemporary Marxist thought	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Economic determinism can be applied to disciplines that are not associated with economics. • (F) Economic considerations can be used to understand and interpret literature.

unit 72 Socialism, Capitalism, and Democracy

1. (A) 2. (B) 3. (C) 4. (C)
5. (D) and (F) are not used.

Economic Theories	Statements
Capitalism	<p>Select 3</p> <ul style="list-style-type: none"> • (G) The laws of supply and demand allow those motivated to make money. • (C) Government control of economies is unnecessary. • (B) Socialism evolves by agitating otherwise satisfied workers.
Socialism	<p>Select 2</p> <ul style="list-style-type: none"> • (E) The blatant inequalities of capitalism will be met with working class resistance. • (A) Capitalist control of cultural outlets allows it to remain intact.

Part C | Economics and Law

unit 73 An Overview of Economics

1. (B) 2. (C) 3. (B) 4. (C)
5. (B) and (E) are not used.

Economic Factors	Statements
Cannot be Controlled by Government	<p>Select 3</p> <ul style="list-style-type: none"> • (D) Consumers' willingness to spend • (C) Individual choice in a marketplace • (G) Trading behavior in stock markets
Can be Controlled by Government	<p>Select 2</p> <ul style="list-style-type: none"> • (A) Output of actual printed currency • (F) Interest rates charged to borrowers

unit 74 World Economic Systems

1. (D) 2. (C) 3. (A) 4. (A)
5. (C), (D), (F)

unit 75 Civil Law and Jurisdiction

1. (A) 2. (D) 3. (B) 4. (A)
5. (D) and (F) are not used.

Types of Law	Statements
Civil Law	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Can evolve or change with the verdict provided • (G) Settles a dispute between two private parties • (E) May utilize the judge as questioner
Criminal Law	<p>Select 2</p> <ul style="list-style-type: none"> • (C) Uses judge as mediator between two parties in court • (B) Results in someone being fined or incarcerated

ANSWER KEY

unit 76 The Legal Profession

1. (D) 2. (B) 3. (A) 4. (C)
5. (B) and (F) are not used.

Legal Systems	Statements
Neocolonialism	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Requires certification to be practiced in most countries • (G) Typically breaks down into criminal and civil branches • (E) Is very complex, necessitates specialization
Early legal systems	<p>Select 2</p> <ul style="list-style-type: none"> • (D) Is less structured and more general • (C) Can fall under the purview of religious authorities

Part D | Philosophy

unit 77 Eastern Philosophy

1. (A) 2. (D) 3. (C) 4. (A)
5. (C) and (G) are not used.

Eastern Philosophies	Statements
Confucianism	<p>Select 3</p> <ul style="list-style-type: none"> • (D) Focuses on social interactions • (E) Emphasizes deference towards parents and the state • (F) Tends to be focused outward
Taoism/Buddhism	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Focuses on control and development of the self • (A) Aspires towards an ideal goal

unit 78 The History of Western Philosophy

1. (C) 2. (D) 3. (B) 4. (C)
5. (D) and (F) are not used.

Branches of Western Philosophy	Statements
Metaphysics	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Focused on by earlier philosophers • (C) Concerned with the physical makeup of the world. • (B) Divided into two distinct philosophical camps
Epistemology	<p>Select 2</p> <ul style="list-style-type: none"> • (E) Explored the boundaries and limits of our knowledge • (G) Framed most debates in contemporary philosophy

unit 79 Ethics

1. (C) 2. (A) 3. (A) 4. (D)
5. (A), (D), (E)

unit 80 Considering Beauty: Aesthetics

1. (C) 2. (D) 3. (A) 4. (B)
5. (C) and (D) are not used.

Philosophers of Aesthetics	Statements
Kant	<p>Select 3</p> <ul style="list-style-type: none"> • (A) Abandoned the empirical dedication to perception • (E) Required that an agent must be disinterested in order to find something beautiful • (G) Recognized a difference in the agreeable and the beautiful
Hume	<p>Select 2</p> <ul style="list-style-type: none"> • (B) Held steadfast to the tenets of empiricism • (F) Failed to show how taste could originate from perception alone