



ZIAUDDIN UNIVERSITY
EXAMINATION BOARD

RESOURCES FOR SSC-II GENERAL SCIENCE

ZUEB EXAMINATIONS 2021



PREFACE:

The ZUEB examination board acknowledges the serious problems encountered by the schools and colleges in smooth execution of the teaching and learning processes due to sudden and prolonged school closures during the covid-19 spread. The board also recognizes the health, psychological and financial issues encountered by students due to the spread of covid-19.

Considering all these problems and issues the ZUEB Board has developed these resources based on the condensed syllabus 2021 to facilitate students in learning the content through quality resource materials.

The schools and students could download these materials from www.zueb.pk to prepare their students for the high quality and standardized ZUEB examinations 2021.

The materials consist of examination syllabus with specific students learning outcomes per topic, Multiple Choice Questions (MCQs) to assess different thinking levels, Constructed Response Questions (CRQs) with possible answers, Extended Response Questions (ERQs) with possible answers and learning materials.

ACADEMIC UNIT ZUEB:

















1: Multiple Choice Questions:

The Multiple-Choice Questions with a stem, correct answer and 3 distractors or plausible wrong answers format is designed to assess the content and thinking of students from; R (Remembering); U(Understanding) and A (Applying, Analyzing, Evaluating, Creating). The questions are also classified into three difficulty levels accordingly; D (DIFFICULT), M (MODERATE), E (EASY)

HOW TO ATTEMPT AN MCQ:

MCQ:

- EACH MCQ HAS FOUR OPTIONS, A, B, C AND D. SELECT ONE OPTION AS THE BEST ANSWER AND FILL IN THE CIRCLE OF THAT OPTION, FOLLOWING THE INSTRUCTIONS GIVEN BY THE INVIGILATOR.
- USE BLACK PEN/PENCIL TO FILL IN THE CIRCLE.

Correct Way	Wrong Ways		
1	1	2	3
			
			
			
			

Chapter	MCQs	Answer Key	Cognitive Level	Difficulty Level
Energy	1. Which one of the following is best to define Energy a) Fuel b) Work c) Force d) Ability of body to do work	D	K/R	90%
	2. Work is done whenever a) a car is crossed b) a body is moved by force c) a ball is thrown d) None	B	K/R	90%
	3. Force cannot be exerted without any source of a) light b) air c) any source of energy d) movement	C	U	80%
	4. The energy which is stored in a body due to its position is called a) Kinetic Energy b) Thermal Energy c) Potential Energy d) Radiant Energy	C	K/R	90%
	5. Kinetic Energy is also known as which one of the following energy? a) Positioned Energy b) Energy in Motion c) Stored up Energy d) Chemical Energy	B	K/R	90%
	6. Substances that contain potential energy in the form of heat are said to possess which of the following energy? a) Mechanical Energy b) Electrical Energy	D	U	90%

<p>c) Radiant Energy d) Heat Energy</p>			
<p>7. Coal, oil and natural gas are sources of which energy?</p> <p>a) Non-conventional b) Conventional c) Kinetic d) Stored</p>	B	K/R	90%
<p>8. An electrical energy which is formed by the heat of the earth is known as one of the following.</p> <p>a) Geo-thermal Energy b) Bio-mass Energy c) Tidal Energy d) Heat Energy</p>	A	K/R	90%
<p>9. Energy obtained from biological mass such as wood, molasses, straws, bagasse and animal dung is called</p> <p>a) Electrical Energy b) Mechanical Energy c) Bio-mass Energy d) Earth Energy</p>	C	K/R	90%
<p>10. Which of the following energy is released from the nucleus of atom?</p> <p>a) Uranium Energy b) Nuclear Energy c) Atomic Energy d) Heat Energy</p>	B	U	90%
<p>11. When running water moves a turbine the potential energy of water is changed into which of the following energy?</p> <p>a) Kinetic Energy b) Mechanical Energy c) Electrical Energy d) Heat Energy</p>	B	U	70%
<p>12. Solar Energy is also known as which of the following?</p> <p>a) Radiant Energy b) Thermal Energy c) Mechanical Energy</p>	A	K/R	90%

	<p>d) Chemical Energy</p> <p>13. Which of the following is the most dangerous air-pollutant?</p> <p>a) Dust Particles b) Garbage c) Carbon Dioxide d) Carbon Monoxide</p> <p>14. Which of the following causes air pollution the most these days?</p> <p>a) Animal Waste b) Burning of fuels c) Stone crushing industry d) Liquid waste from industries</p> <p>15. What are aerosols?</p> <p>a) Harmful gases b) Small material particles c) Radioactive substances d) Water vapour</p> <p>16. In order to reduce air pollution which of the following we should also reduce</p> <p>a) The number of vehicles b) The number of trees c) The electrical appliances d) Hydral Power plants</p>	<p>D</p> <p>B</p> <p>A</p> <p>A</p>	<p>U</p> <p>U</p> <p>K/R</p> <p>U</p>	<p>70%</p> <p>80%</p> <p>90%</p> <p>70%</p>
Current Electricity	<p>1. From following, through which the electrical energy can be easily transferred from one point to another</p> <p>a) Convertors b) Conductors c) Battery d) Copper wire</p> <p>2. Which of the following is in large number in a Copper wire?</p> <p>a) Electrons b) Free electrons c) Fast electrons d) Positive electrons</p>	<p>B</p> <p>B</p>	<p>K/R</p> <p>K/R</p>	<p>90%</p> <p>90%</p>

3. From following, which is the path through which an electric current passes?	D	K/R	90%
a) Electrons b) Current Circuit c) Electric terminal d) Electric circuit			
4. When electrons flow through a wire what is it called?	C	K/R	90%
a) Electric force b) Electric circuit c) Electric current d) Electric work			
5. The rate of flow of charge through a certain cross-section is called	A	K/R	90%
a) Current b) Unit current c) Amperes d) Ammeter			
6. Which of the following is used to measure flow of electrons?	A	K/R	90%
a) Voltmeter b) Ammeter c) Conductor d) Capacitor			
7. In which of the following voltage is the driving force?	D	U	80%
a) Electric current b) Electrical circuits c) Electric charges d) Electric circuits			
8. What is the “difference in potential energy” called in electric terms?	C	U	80%
a) Volts			

<p>b) Volts units c) Voltage d) Voltage units</p> <p>9. Energy or work (w) per unit charge (Q) is known as one of the following.</p> <p>a) Work b) volts c) Ampere d) Voltage</p> <p>10. Unit of voltage is which one of the following?</p> <p>a) Volts b) Volt c) Watts d) Voltmeter</p> <p>11. If the value of (V) is altered then the value of current (I) is also found to be one of the following?</p> <p>a) Increase b) Decrease c) Constant d) Change</p> <p>12. How many parts at least does every circuit has?</p> <p>a) Two b) Nine c) seven d) Three</p> <p>13. Which one of the following are commonly used for controlling, opening, closing of circuits?</p> <p>a) Controllers b) Conductors c) Switches d) Switch boards</p>	<p>D</p> <p>B</p> <p>D</p> <p>D</p> <p>C</p>	<p>U</p> <p>K/R</p> <p>U</p> <p>K/R</p> <p>K/R</p>	<p>90%</p> <p>90%</p> <p>70%</p> <p>90%</p> <p>90%</p>
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14. The term “pole” refers to which kind of arm in a switch?	A	K/R	90%
a) Movable b) Static c) Constant d) Continuous			
15. In electrical circuits the conductors are interconnected in how many ways	B	K/R	90%
a) Three b) Two c) Unlimited d) Limited			
16. If an insulator such as Glass, is introduced between the plates, how does its capacity to store charge reacts?	D	U	70%
a) Decreases b) Remain same c) Gradually decreases d) Increases			
17. In which of the following the stored electrical energy can be utilized according to need?	C	U	80%
a) Conductors b) Convertors c) Capacitors d) Insulator			
18. Which of the following is the unit of capacity?	B	K/R	90%
a) 1 volt b) Farad c) 1 coulomb d) Coulomb			
19. A Transformer is a device which makes use of one of the following induction for stepping up or down an alternating EMF.	C	K/R	90%

<p>a) Different</p> <p>b) Constant</p> <p>c) Mutual</p> <p>d) Continuous</p>				
<p>20. Coil which has the smaller number of turns carries which of the following current?</p> <p>a) Smaller</p> <p>b) Larger</p> <p>c) Higher</p> <p>d) Lighter</p>	B	K/R	90%	
<p>21. Which of the following occurs because a small amount of the flux associated with the primary coils fails to pass through the secondary.</p> <p>a) Loss of energy</p> <p>b) Gain of energy</p> <p>c) Loss of current</p> <p>d) Gain of current</p>	A	K/R	90%	
<p>22. Current which can be obtained by connecting the two ends of a conductor to the terminals of a battery known as which of the following</p> <p>a) Alternating current</p> <p>b) Direct current</p> <p>c) Negative flow of current</p> <p>d) Positive flow of current</p>	B	U	80%	
<p>23. Current which does not change its direction is known as which of the following?</p> <p>a) Alternating current</p> <p>b) Alternative current</p> <p>c) Direct current</p> <p>d) Continuous current</p>	C	U	80%	
<p>24. Unidirectional motion is used for which of the following?</p> <p>a) Alternating current</p> <p>b) Direct current</p> <p>c) Alternative current</p>	B	K/R	90%	

d) Continuous current			
25. Current which changes its direction many times a second known as which of the following?			
a) Direct current			
b) Alter current			
c) Discontinuous current			
d) Alternating current	D	K/R	90%
26. The number of cycles of current completed in one second is called which of the following of the A.C?			
a) Capacity			
b) Capability			
c) Frequency	C	U	80%
d) Energy			
27. The frequency of A.C generated by the different power stations in Pakistan is one of the following?			
a) 60 Hz			
b) 30 Hz			
c) 100 Hz			
d) 50 Hz	D	K/R	80%
28. If the ends of wire are connected to the terminals of a battery an electric field will be set up around which of the following?			
a) Around the wire	A	U	80%
b) Around the electric field			
c) Around the electric lines			
d) Around the path lines			
29. The path through which electric charge flows through the wires is called which of the following?			
a) Conduction wires			
b) Circuit lines			
c) Circuit	C	U	80%
d) Current lines			

<p>30. Ampere measures the flow of electricity or number of electrons that pass through any given point in an electrical conductor in which of the following duration?</p> <p>a) One second b) Ten seconds c) Three seconds d) One second</p>	A	K/R	80%
<p>31. A force of attraction exists between a positive and a negative charge known as which of the following?</p> <p>a) Current b) Flux c) Electric field d) Voltage</p>	D	K/R	90%
<p>32. (V) is symbol of one of the following.</p> <p>a) Watts b) work c) Volts d) Energy</p>	C	K/R	90%
<p>33. Which of the following amount of energy is used to move 1 coulomb of charge from one point to the other?</p> <p>a) 2.5 joule b) 10 joule c) 1 joule d) 12 joule</p>	C	U	80%
<p>34. The flow of electrons of electric current is offered resistance by the free electrons of the wire or conductor due to one of the following.</p> <p>a) Even moment b) Uneven moment c) Mutual nature d) Even nature</p>	B	U	80%

35. “The current passing through a conductor is directly proportional to the potential difference applied across its ends, provided the temperature and other physical condition of the conductor are kept as which of the following? a) Variable b) Discontinuous c) Constant d) Changeable	C	K/R	90%
36. The above statement (i-e MCQS 38) is referred to as one of the following. a) Newton’s law b) Coulomb’s law c) Ampere’s law d) Ohms law	D	K/R	90%
37. Scientist who gave the statement which is given above in MCQS 38 was from which of the following? a) German Physicist b) Greek Physicist c) Iranian Physicist d) Egyptian Physicist	A	K/R	90%
38. Electricity usually comes to our homes by two wires or lines, the live (L) and one of the following. a) Positive b) Negative c) Earth d) Neutral	D	U	80%
39. The commercial unit of electric energy is known as one of the following. a) Ohm b) Volt c) Farad d) Kilo-watt-hour	D	K/R	90%

	<p>40. Which one is connected in series with the live wire in the electric circuit of a house?</p> <p>a) Galvanometer b) Voltmeter c) Fuse d) Ammeter</p> <p>41. The substance used as a medium between the two plates of a capacitor is known as one of the following.</p> <p>a) Conductor b) Semi-conductor c) Dielectric d) Electrolyte</p>	C	U	80%
		C	U	80%
Basic Electronics	<p>1. Electronic is a branch of one of the following.</p> <p>a) Quantum physics b) Physics c) Nature d) Applied physics</p> <p>2. All four valence electrons of each atom form which of the following with their neighboring atoms?</p> <p>a) Covalent bond b) Ionic bond c) Coordinate covalent bond d) Sigma bond</p> <p>3. A p-n junction is fabricated by placing what amount of say indium on a plate of n-type germanium.</p> <p>a) Large amount b) Small amount c) zero amount d) maximum amount</p>	B	K/R	90%
		A	K/R	90%
		C	U	90%

4. Indium on heating to about which of the following melts and diffuses?	D	K/R	90%
a) 560 °C b) 500 °C c) 510 °C d) 550 °C			
5. Indium diffuses through a small part of which of the following germanium?	C	K/R	90%
a) p-type b) v-type c) n-type d) np-type			
6. Which of the following base is used to fix the p-n junction to which leads are attached?	D	K/R	90%
a) Copper b) Aluminum c) Cobalt d) Brass			
7. Diode allows electric current to flow in which direction?	A	K/R	90%
a) One direction b) Four directions c) Two directions d) Unlimited directions			
8. Diode helps to separate different frequencies or waves of different wave lengths of which of the following?	C	U	80%
a) Television waves b) Electric waves c) Radio waves d) Both A & C			

9.	Heinrich Hertz was which scientist?			
a)	Egyptian			
b)	Greek			
c)	German	C	K/R	90%
d)	Iranian			
10.	Like light waves radio waves go out in all directions from their source at the speed of light as one of the following.			
a)	186600 miles per second			
b)	186600 miles per minute			
c)	186000 miles per second	C	K/R	80%
d)	186000 miles per minute			
11.	In which year human sound was transmitted for the first time?			
a)	1906			
b)	1960			
c)	1967			
d)	1690	A	K/R	90%
12.	Kinescope is commonly known as one of the following.			
a)	Television tube			
b)	Frequency tube			
c)	Picture tube	C	K/R	90%
d)	None of these			
13.	Which of the following control the operations of satellites orbiting around the earth?			
a)	Satellite management			
b)	Electricians			
c)	Electronics	C	K/R	90%
d)	Physics			
a)	Satellites are designed to serve as worldwide communication networks to scan one of the following.			
	Earth's natural resources			
b)	Total number of fields			
c)	Both A & B			
d)	None of these	A	K/R-U	80%

14. Highly pure silicon and germanium crystals are almost complete insulators especially at which of the following?	C	K/R	90%
a) Medium temperatures b) Highest temperatures c) Low temperature d) Both A & B			
15. Germanium can also be made one of the following.	D	K/R	90%
a) p-type conductor b) n-type conductor c) p-type semiconductor d) n-type semiconductor			
16. Heinrich was the first scientist who produced waves through air. What are the waves called?	C	K/R	90%
a) Television waves b) Frequency waves c) Radio waves d) All of the above			
17. Radio tube in television is also known as one of the following.	D	K/R	90%
a) Television tube b) Mosaic c) Audio amplifier d) Iconoscope			
18. Radio tube is made entirely of which of the following?	B	K/R	90%
a) Silicon chip b) Glass c) Rubber d) Aluminum			

19. Long tube of a T.V set on which image appears is known as one of the following.	C	K/R	90%
a) Transmitter b) Television tube c) Kinescope d) Iconoscope			
20. Picture tube also known as one of the following.	B	K/R	90%
a) LCD b) Cathode ray tube c) Anode ray tube d) Both A & C			
21. Electronic television was first successfully demonstrated in which year?	A	K/R	90%
a) 1927 b) 1937 c) 1847 d) 1967			
22. The materials in which electric current can flow easily due to their low resistance are called one of the following.	C	U	80%
a) Insulators b) Semiconductor c) Conductors d) Capacitors			
23. The electric resistance of a semi-conductor behaves as one of the following if temperature is increased.	A	U	80%
a) Decreases b) Increases c) Does not change d) Changes			
24. The current passing through which of the following is directly proportional to the potential difference across its ends?	C	U	80%
a) Insulator b) Semi-conductor			

	<p>c) Conductor</p> <p>d) Capacitor</p>			
Science and Technology	<p>1. Pakistan Atomic Energy Commission (PAEC) was established in which year?</p> <p>a) 1959</p> <p>b) 1969</p> <p>c) 1949</p> <p>d) 1979</p> <p>2. Defense Sciences Organization (DSO) was created in which year?</p> <p>a) 1972</p> <p>b) 1952</p> <p>c) 1948</p> <p>d) 1962</p> <p>3. Irrigation Research Council (IRC) was created in which year?</p> <p>a) 1954</p> <p>b) 1964</p> <p>c) 1950</p> <p>d) 1949</p> <p>4. National Science Council of Pakistan was established in which of the following?</p> <p>a) 1990</p> <p>b) 1982</p> <p>c) 1962</p> <p>d) 1952</p> <p>5. Research Division of Science and Technology was constituted in which year?</p> <p>a) 1964</p> <p>b) 1962</p> <p>c) 1966</p> <p>d) 1968</p>	<p>A</p> <p>D</p> <p>B</p> <p>C</p> <p>A</p>	<p>K/R</p> <p>K/R</p> <p>K/R</p> <p>K/R</p> <p>K/R</p>	<p>90%</p> <p>90%</p> <p>90%</p> <p>90%</p> <p>90%</p>

6. Pakistan Science Foundation (PSF) was created in which year?	C	K/R	90%
a) 1976 b) 1980 c) 1973 d) 1950			
7. What number of organizations and research centers involved in carrying out and promoting scientific and technological research in Pakistan are there?	D	K/R	90%
a) 72 b) 46 c) 85 d) 60			
8. Laser was first obtained in which year?	B	K/R	90%
a) 1990 b) 1960 c) 1940 d) 1930			
9. Laser was obtained by passing ordinary composite light through which of the following?	A	U	90%
a) Ruby crystal b) Ruby diamond c) Ruby crystalline d) Ruby			
10. Which of the following are used for microsurgery of the retina of the eye	C	K/R	90%
a) Ultrasonic waves b) Light waves c) Laser d) Low energy lasers			

11. Radio activity was discovered accidentally in which year?	A	K/R	90%
a) 1896 b) 1869 c) 1966 d) 1899			
12. Radio activity was discovered by which of the following?	D	K/R	90%
a) German scientist b) Italian scientist c) Greek scientist d) French scientist			
13. The ionization capability of a α -ray is one of the following.	A	K/R	90%
a) Very large b) Very small c) Very weak d) Very strong			
14. Sound of frequencies higher than one of the following are called ultrasonic?	A	K/R	90%
a) 20000 Hz b) 22000 Hz c) 200 Hz d) 79000 Hz			
15. Frequencies below which of the following are called infrasonic?	D	K/R	90%
a) 10 Hz b) 40 Hz c) 50 Hz d) 20 Hz			
16. Which of the following is the most important organ of human body?	B	K/R	90%
a) Brain b) Heart			

	<p>c) Eyes d) Memory</p> <p>17. Which of the following is the correct full form of C.T Scan?</p> <p>a) Computerized Technology b) Computerized Tomography c) Computerized Tomographic d) Computerized Terminal</p> <p>18. What is the demonstration of physiology of heart called?</p> <p>a) Serology b) Tomography c) Angiography d) Chemotherapy</p>	B	K/R	90%
		C	K/R	90%
Space and Nuclear Programme of Pakistan	<p>1. Pakistan has established organization for space research. Which of the following is the correct name of the organization.</p> <p>a) SUPARCO b) SUPRACO c) SUPRRCO d) SUPAARO</p> <p>2. In which year an atomic power reactor was established near Karachi?</p> <p>a) 1971 b) 1972 c) 1975 d) 1977</p> <p>3. The reactor is capable of producing which of the following of electricity?</p> <p>a) 120 megawatt b) 180 watt c) 115 megawatt d) 170 megawatt</p>	A	U	90%
		B	K/R	90%
		D	K/R	90%

4. The energy generated in the core is used to produce which of the following systems to generate electricity through steam turbines?	C	U	80%
a) High pressure fuel b) High voltage current c) High pressure steam d) High pressure gas			
5. Scientists belonging to which country have successfully fabricated fuel rod from uranium mined?	C	K/R	90%
a) Chinese b) American c) Pakistani d) Indian			
6. Long time preservation of food and fruits by irradiating them are being introduced through the nuclear center of food and agriculture near one of the following cities.	B	U	80%
a) Karachi b) Peshawar c) Lahore d) Baluchistan			
7. Radioactive particles are carried away by which of the following?	C	K/R	90%
a) Gas b) Steam c) Wind d) Fire			
8. One of the following particles are harmful to all type of living beings	B	K/R	90%
a) Ultrasonic b) Radioactive c) Laser d) Atomic			

9.	Now a days big ships and submarines are operating through one of the following.	D	U	90%
a)	Gas			
b)	Steam energy			
c)	Hydro machines			
d)	Nuclear energy			
10.	Which of the following are used in detecting the diseased part of body	B	K/R	90%
a)	Radioactive rays			
b)	Radioisotopes			
c)	Radiographs			
d)	Radiology			
11.	Cells of body need one of the following for their activity.	A	U	90%
a)	Iodine			
b)	Protein			
c)	Sweet			
d)	Vitamin C			
12.	SUPARCO stands for one of the following.			
a)	Space and Upper Atmosphere Research Corporation			
b)	Space and Upper Atmospheric Research Corporation	A	K/R	90%
c)	Space and Upper Pakistan Atmosphere Research corporation			
d)	Space and Upper Atom Research Corporation			
13.	SUPARCO has its research and testing facilities at which of the following places?			
a)	Sonmiani			
b)	Shahdadpur	A	K/R	90%
c)	Sui			
d)	Sahiwal			

14. Submarine operated by an energy need not come to the surface for getting oil. What is the energy called?	C	K/R	90%
a) Hydro energy b) Steam energy c) Nuclear energy d) Atomic power			
15. Iodine is supplied to body by which of the following?	D	K/R	90%
a) Thyroid b) Throttling c) Thyroid muscle d) Thyroid glands			
16. Iodine starts accumulating in which of the following?	B	K/R	90%
a) Thyroid b) Thyroid glands c) Thyroid cells d) Thyroid muscle			
17. The presence and the rate of accumulation of iodine is checked by placing the which of the following near the neck of patient	C	K/R	90%
a) Oxygen cylinder b) Odometer c) Geiger counter d) Geiger mask			
18. Fast accumulation of iodine means which of the following?	A	U	90%
a) An active thyroid b) An active glands c) A slower glans d) A strong thyroid			

19. Slow accumulation of iodine indicates which of the following?	D	U	90%
a) An active Glands b) A less glans c) A weak thyroid d) A less active thyroid			
20. Human beings inhale radioactive particles from which of the following?	C	K/R	90%
a) Light b) Space c) Air d) Plants			
21. National Science Council of Pakistan was set up in	D	K/R	90%
a) 1962 b) 1963 c) 1972 d) 1973			