

**BAHAWALPUR BOARD**  
**GRADE 10**  
**PHYSICS**  
**2018 GROUP 1**

Section-A (MCQs)

i) Waves transfer:

(Mark 1)

- A. Energy
- B. Frequency
- C. Wavelength
- D. Velocity

Answer:

A. Energy

ii) Image formed by a camera is

(Mark 1)

- A. Real, Inverted and Diminished
- B. Virtual, Upright and diminished
- C. Virtual, Upright and Magnified
- D. Real, Inverted and Magnified

Answer:

A. Real, Inverted and Diminished

iii) The index of refraction of ice is:

(Mark 1)

- A. 1.52
- B. 1.31
- C. 1.00

D. 2.42

Answer:

B. 1.31

iv) For a normal person, audible frequency range for sound lies between:  
(Mark 1)

A. 10 Hz - 10 kHz

B. 20 Hz - 20 kHz

C. 25 Hz - 25 kHz

D. 30 Hz - 30 kHz

Answer:

B. 20 Hz - 20 kHz

v) A positive electric charge:

(Mark 1)

A. Attracts other positive charge

B. Repels other positive charge

C. Attracts a neutral charge

D. Repels a neutral charge

Answer:

B. Repels other positive charge

vi) An example of Mutual Induction?

(Mark 1)

A. A.C. Generator

B. D.C. motor

C. Transformer

D. Relay

Answer:

C. Transformer

vii) The unit of electric power is:

(Mark 1)

A. Watt

B. Ampere

C. Joule

D. Volt

Answer:

A. Watt

viii) The combined resistance of two identical resistors, connected in series is  $8\Omega$ . Their combined resistance in a parallel arrangement will be:

(Mark 1)

A.  $2\Omega$

B.  $4\Omega$

C.  $8\Omega$

D.  $12\Omega$

Answer:

A.  $2\Omega$

ix) The particles emitted from a hot cathode surface are:

(Mark 1)

A. Positive ions

B. Negative ion

C. Protons

D. Electrons

Answer:

D. Electrons

x) When a heavy nucleus splits into two lighter, the process would:

(Mark 1)

A. Release Nuclear Energy

B. Absorb Nuclear Energy

C. Release Chemical Energy

D. Absorb Chemical Energy

Answer:

A. Release Nuclear Energy

xi) Which of the following is not processing:

(Mark 1)

A. Arranging

B. Manipulating

C. Calculating

D. Gathering

Answer:

C. Calculating

xii) The brain of any computer is:

(Mark 1)

A. Control Unit

B. C.P.U

C. Memory

D. Monitor

Answer:

B. C.P.U

- Q.2 i) Define amplitude. (Marks 2)
- Q.2 ii) Define restoring force. (Marks 2)
- Q.2 iii) What is meant by silent whistle. (Marks 2)
- Q.2 iv) What is meant by zerobel? (Marks 2)
- Q.2 v) Calculate the frequency of a sound wave a speed of speed 340 ms<sup>-1</sup> and wavelength is 0.5 m. (Marks 2)
- Q.2 vi) Define ampere, the unit of current. (Marks 2)
- Q.2 vii) State joule's law. (Marks 2)
- Q.2 viii) Define unit of resistance. (Marks 2)
- Q.3 i) State law of refraction. (Marks 2)
- Q.3 ii) Define Power of lens. (Marks 2)
- Q.3 iii) What is variable capacitor? (Marks 2)
- Q.3 iv) Define dielectric. (Marks 2)
- Q.3 v) What are the Hazards of static electricity? (Marks 2)
- Q.3 vi) What is meant by cell phone? (Marks 2)
- Q.3 vii) What is Flash drive? (Marks 2)
- Q.3 viii) What is meant by internet. (Marks 2)
- Q.4 i) Describe the method to find the direction of Magnetic lines of force produce by current carrying solenoid. (Marks 2)
- Q.4 ii) Write the factors on which the magnitude of induced emf depend. (Marks 2)
- Q.4 iii) Name two factors which can enhance Thermionic Emission. (Marks 2)
- Q.4 iv) Write the name of components of cathode ray oscilloscope. (Marks 2)
- Q.4 v) How can you compare the logic Operation  $X = A.B$  with usual operation of multiplication? (Marks 2)
- Q.4 vi) Define Natural Radioactivity. (Marks 2)
- Q.4 vii) Write any properties of beta particles. (Marks 2)

Q.4 viii) What are two common radiation hazards? Describe the precaution that are taken against them. (Marks 2)

Q.5 a) Define wave motion. Explain with example "Waves as Carriers of Energy". (Marks 4)

Q.5 b) An object 30 cm tall is located 10.5 cm from a concave mirror with focal length 16 cm.

i) Where is the image located?

ii) How high is it? (Marks 5)

Q.6 a) What is Gold leaf electroscope? Discuss its working principle with a labelled diagram. (Marks 4)

Q.6 b) If a current of 0.5 A passes through a bulb connected across a battery of 6 V for 20 seconds, then find the rate of energy transferred to the bulb. Also find the resistance of the bulb. (Marks 5)

Q.7 a) What is Computer? What is the role of Computer in everyday life? (Marks 4)

Q.7 b) Cobalt-60 is a Radioactive element with half life of 5.25 years. What fraction of the original sample will be left after 26 years? (Marks 5)

**BAHAWALPUR BOARD**  
**GRADE 10**  
**PHYSICS**  
**2018 GROUP 2**

Section A-(MCQs)

Ali Azeem

i) The amount of carbon dioxide in expired air is: (Mark 1)

A. 0.04%

B. 21%

C. 4%

D. 16%

Answer:

C. 4%

ii) The maintenance of internal body temperature is called: (Mark 1)

A. Osmoregulation

B. Excretion

C. Thermoregulation

D. Homeostasis

Answer:

C. Thermoregulation

iii) The length of the spinal cord is about: (Mark 1)

A. 40mm

B. 40nm

C. 40cm

D. 40 inch

Answer:

C. 40cm

iv) The example of stimulus is: (Mark 1)

A. Ear

B. Brain

C. Cold

D. Muscles

Answer:

C. Cold

v) Which disease can be caused due to deficiency of estrogen hormone.  
(Mark 1)

- A. Gout
- B. Osteoporosis
- C. Rheumatoid arthritis
- D. Osteoarthritis

Answer:

- B. Osteoporosis

vi) Which animal is not able to reproduce in summer months. (Mark 1)

- A. Monkey
- B. Rabbit
- C. Dog
- D. Cat

Answer:

- B. Rabbit

vii) In which process of reproduction, buds are produced: (Mark 1)

- A. Fragmentation
- B. Regeneration
- C. Budding
- D. Binary fission

Answer:

- C. Budding



viii) In 4'O clock plants, which allele colour does not present. (Mark 1)

- A. Red
- B. White
- C. Pink
- D. Black

Answer:

- D. Black

ix) How many hydrogen bonds are present between cytosine and guanine.  
(Mark 1)

- A. 1
- B. 2
- C. 4
- D. 3

Answer:

- D. 3

x) The thickness of biosphere is about: (Mark 1)

- A. 15 km
- B. 20 km
- C. 25 km
- D. 30 km

Answer:

- B. 20 km

xi) The enzyme used for joining gene is: (Mark 1)

- A. Lipase
- B. Ligase
- C. Amylase
- D. Endonuclease

Answer:

- B. Ligase

xii) Reduce the possibilities of infection on skin: (Mark 1)

- A. Antibiotics
- B. Antiseptics
- C. Analgesics
- D. Disinfectants

Answer:

- B. Antiseptics

Q.2 i) Write four symptoms of bronchitis. (Marks 2)

Q.2 ii) What is meant by epiglottis? (Marks 2)

Q.2 iii) Differentiate between guttation and dew. (Marks 2)

Q.2 iv) Differentiate between renal cortex and renal medulla. (Marks 2)

Q.2 v) What is meant by lithotripsy? (Marks 2)

Q.2 vi) Where midbrain lies? Write down its function. (Marks 2)

Q.2 vii) What is nerve? Write names of its three types. (Marks 2)

Q.2 viii) What is spinal cord? Give its length. (Marks 2)

Q.3 i) Differentiate between origin and insertion in skeletal muscle. (Marks 2)

Q.3 ii) Define antagonism. (Marks 2)

Q.3 iii) Describe the process of reproduction in hydra and corals. (Marks 2)

- Q.3 iv) How reproduction of plants takes place by bulbs? Give any two examples. (Marks 2)
- Q.3 v) What is micropyle? Describe its function. (Marks 2)
- Q.3 vi) Enlist the nitrogenous bases present in the double helix of DNA. (Marks 2)
- Q.3 vii) Define Mendel's law of segregation. (Marks 2)
- Q.3 viii) Differentiate between breeders and cultivars. (Marks 2)
- Q.4 i) Write biotic and abiotic factors of ecosystem. (Marks 2)
- Q.4 ii) What are the effects of air pollution? (Marks 2)
- Q.4 iii) What is meant by genetic engineering? (Marks 2)
- Q.4 iv) For which purposes microbes are used? (Marks 2)
- Q.4 v) What is the use of thymosin? (Marks 2)
- Q.4 vi) What are the effects of hallucinogens? Write the name of one hallucinogen. (Marks 2)
- Q.4 vii) How cephalosporins work? For which disease these are used. (Marks 2)
- Q.4 viii) Which medicines are used for lowering the blood pressure? (Marks 2)
- Q.5 a) Explain the types of dialysis. (Marks 5)
- Q.5 b) Explain the thyroid and adrenal glands. (Marks 4)
- Q.6 a) Explain the components of human skeleton. (Marks 5)
- Q.6 b) Describe the two methods of artificial vegetative propagation. (Marks 4)
- Q.7 a) Describe the effects of water pollution in detail. (Marks 5)
- Q.7 b) Describe the important industrial products which are made with the help of fermentation. (Marks 4)