

LAHORE BOARD

GRADE 10

PHYSICS

2016 GROUP 1

MCQ's

Section A-(MCQs)

i) Email is abbreviation of:

(Mark 1)

- A. Emergency mail
- B. Electronic mail
- C. Urgent mail
- D. None of these

Answer:

- B. Electronic mail

ii) In which process, sun gain energy:

(Mark 1)

- A. Nuclear fission
- B. Nuclear fusion
- C. Burning of gases
- D. Chemical reaction

Answer:

- B. Nuclear fusion

iii) The output of OR gate will be 0 when:

(Mark 1)

- A. $A = 0, B = 0$
- B. $A = 1, B = 1$
- C. $A = 0, B = 1$
- D. $A = 1, B = 0$

Answer:

- A. $A = 0, B = 0$

iv) Frequency is equal to:

(Mark 1)

- A. $f = 1/T$
- B. $f = l/g$

C. $f = 2\pi v(l/g)$

D. $f = kx$

Answer:

A. $f = 1/T$

v) The refractive index of ice is:

(Mark 1)

A. 1.00

B. 1.33

C. 1.31

D. 2.42

Answer:

C. 1.31

vi) The unit of electric intensity is:

(Mark 1)

A. Watt

B. Ns^{-1}

C. NC^{-1}

D. Nm

Answer:

C. NC^{-1}

vii) Transformer is used for

(Mark 1)

A. Increase voltage

B. Increase resistance

C. Both A & B

D. None of these

Answer:

A. Increase voltage

viii) One mega byte is equal to:

(Mark 1)

A. 1024 kB

B. 1035 kB

C. 1044 kB

D. 1054 kB

Answer:

A. 1024 kB

ix) The spring constant is:

(Mark 1)

A. $k = F/x$

B. $F = ma$

C. $w = mg$

D. $k = -x/m$

Answer:

A. $k = F/x$

x) Mathematical form of current is:

(Mark 1)

A. $I = t/Q$

B. $I = Q/t$

C. $I = QR$

D. $I = VR$

Answer:

b. $I = Q/t$

xi) The electroscope is an instrument which is used for:

(Mark 1)

A. Detecting charge

B. Detecting current

C. Detecting radiations

D. None of these

Answer :

A. Detecting charge

xii) The speed of sound in air at 0°C is:

(Mark 1)

A. 317 ms^{-1}

B. 346 ms^{-1}

C. 386 ms^{-1}

D. 331 ms^{-1}

Answer:

D. 331 ms^{-1}

Section B-Q.2

Q.2 i) Define refraction of waves.

(Marks 2)

Q.2 ii) Define quality of sound.

(Marks 2)

Q.2 iii) What is meant by echo of sound?

(Marks 2)

Q.2 iv) What is meant by SONAR?

(Marks 2)

Q.2 v) What is the difference between convex mirror and concave mirror?

(Marks

2)

Q.2 vi) Write medical use of light pipe.

(Marks 2)

Q.2 vii) What is meant by power of lens? What is its unit?

(Marks 2)

Q.2 viii) What is electroscope?

(Marks 2)

Q.2 ix) How can be conductors and insulators identified by electroscope?

(Marks 2)

Q.3 i) Define variable capacitor and fixed capacitor.

(Marks 2)

- Q.3 ii) Write two uses of the capacitor. (Marks 2)
- Q.3 iii) What is meant by ohmic and non-ohmic conductors? (Marks 2)
- Q.3 iv) Define Farad. (Marks 2)
- Q.3 v) What is meant by earth wire? (Marks 2)
- Q.3 vi) Define ampere. (Marks 2)
- Q.3 vii) What is electric current? Write its formula to calculate it. (Marks 2)
- Q.3 viii) What is meant by mutual induction? (Marks 2)
- Q.4 i) Define electromagnetic induction. (Marks 2)
- Q.4 ii) Define digital electronics. (Marks 2)
- Q.4 iii) Write the parts of cathode ray oscilloscope. (Marks 2)
- Q.4 iv) What is global web? (Marks 2)
- Q.4 v) What is flash drive? (Marks 2)
- Q.4 vi) What is hard disc? (Marks 2)
- Q.4 vii) What is neutron number? (Marks 2)
- Q.4 viii) Define isotopes. (Marks 2)
- Q.5 a) What are damped oscillations? Explain it. (Marks 4)
- Q.5 b) A sound wave has a frequency of 20 kHz and wave length 35 cm. How long will it take to travel 1.5 km? (Marks 3)
- Q.6 a) What are optical fibres? Describe how total internal reflection is used to light propagation through optical fibres. (Marks 4)
- Q.6 b) The power of a convex lens is 5D. At what distance the object should be placed from the lens so that its real and two-time larger image is formed? (Marks 3)
- Q.7 a) Discuss the main features of parallel combination of resistors and determine the equivalent resistance also. (Marks 4)
- Q.7 b) The potential at a point in an electric field is 10^4 V. If a charge of $+100 \mu\text{C}$ is brought from infinity to this point. What would be the amount of work done on it? (Marks 3)
- Q.8 a) What is electric motor? Write the principle of D.C motor. (Marks 4)

Q.8 b) What is the difference between analogue and digital quantities? Write the two examples of each also.

(Marks 3)

Q.9 a) Write safety measures to save from hazards of radiations.

(Marks 3)

Q.9 b) Explain briefly the transmission of radio waves in space.

(Marks 4)

LAHORE BOARD

GRADE 10

PHYSICS

2016 GROUP 2

MCQ's

Section A-(MCQs)

i) The step down transformer:

(Mark 1)

- A. Decreases the input current
- B. Decreases the input voltage
- C. Has more turns in secondary coil
- D. Has less turns in primary coil

Answer:

- B. Decreases the input voltage

ii) Term "e-mail" stands for:

(Mark 1)

- A. Emergency mail
- B. Extra mail
- C. External mail
- D. Electronic mail

Answer:

- D. Electronic mail

iii) Electroscopes are used to detect:

(Mark 1)

- A. Charge
- B. Voltage
- C. Pressure
- D. Temperature

Answer:

- A. Charge

iv) Example of primary memory is:

(Mark 1)

- A. Read only memory (ROM)
- B. Hard disk
- C. Floppy disk
- D. Audio cassette

Answer:

A. Read only memory (ROM)

v) If mass of the bob of a pendulum is increased by a factor of 3, the period of pendulum's motion will: (Mark 1)

A. Be increased by factor 2

B. Remain the same

C. Be decreased by factor 2

D. Be decreased by factor 4

Answer:

B. Remain the same

vi) If $X = A.B$, then X is '1' when: (Mark 1)

A. $A = 1, B = 1$

B. $A = 0, B = 0$

C. $A = 0, B = 1$

D. $A = 1, B = 0$

Answer:

A. $A = 1, B = 1$

vii) Example of mechanical waves is: (Mark 1)

A. Radio waves

B. X-rays

C. Light waves

D. Sound waves

Answer:

D. Sound waves

viii) A lamp connected to a 12V source, when it carries 2.5A current, power will be: (Mark 1)

A. 4.8 W

B. 14.5 W

C. 30 W

D. 60 W

Answer:

C. 30 W

ix) The focal length (f) is related to radius of curvature (R) as : (Mark 1)

A. $f = 2R$

B. $R = f/2$

C. $f = R/2$

D. $fR = 2$

Answer:

C. $f = R/2$

x) The characteristic of sound by which we can distinguish between two sounds of same loudness and pitch is called: (Mark 1)

- A. intensity
- B. Quality
- C. Loudness
- D. Pitch

Answer:

- B. Quality

xi) One of isotopes of Uranium is $^{238}_{92}\text{U}$. The number of neutrons in this isotopes is: (Mark 1)

- A. 92
- B. 146
- C. 238
- D. 330

Answer:

- B. 146

xii) In series combination of capacitors, each capacitor will have the same: (Mark 1)

- A. Voltage
- B. Charge
- C. Capacitance
- D. Charge and voltage

Answer:

- B. Charge

Q.2 i) Define transverse waves. (Marks 2)

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

Q.2 iii) What is meant by D.A.C? (Marks 2)

Q.2 iv) What is meant by audible frequency range? (Marks 2)

Q.2 v) Define spherical mirrors. (Marks 2)

Q.2 vi) Define pole of mirror. (Marks 2)

Q.2 vii) What is endoscope? (Marks 2)

Q.2 viii) What is meant by electrostatic induction? (Marks 2)

Q.2 ix) Define conductors. (Marks 2)

Q.3 i) What is mica capacitor? (Marks 2)

Q.3 ii) What is electrostatic air cleaner? (Marks 2)

Q.3 iii) Define electric current and write its mathematical expression. (Marks 2)

Q.3 iv) What is thermistor? Write its one use. (Marks 2)

Q.3 v) Differentiate between direct current and alternating current. (Marks 2)

Q.3 vi) What is the SI unit of electric power? Define it. (Marks 2)

Q.3 vii) If 0.5 C charge passes through wire in 10s, then what will be the value of current flowing through the wire? (Marks 2)

Q.3 viii) Write any two factors on which magnitude of induced e.m.f depends. (Marks 2)

Q.4 i) State the rule by which the direction of the line of force of the magnetic field around a current carrying conductor can be determined. (Marks 2)

Q.4 ii) What is meant by fluorescent screen? (Marks 2)

Q.4 iii) What is meant by D.A.C? (Marks 2)

Q.4 iv) Define word processing. (Marks 2)

Q.4 v) What is meant by compact disc? (Marks 2)

Q.4 vi) Define operating system and give an example. (Marks 2)

Q.4 vii) Write two common hazards of radiation. (Marks 2)

Q.4 viii) Write two characterizations of beta radiation. (Marks 2)

Q.5 a) Define simple harmonic motion and prove that motion of ball in ball and bowl system is simple harmonic motion. (Marks 4)

Q.5 b) A marine ship sends a sound wave straight to the sea-bed. It receives an echo 1.5 sec later. The speed of sound in seawater is 1500 ms^{-1} . Find the depth of the sea at this position. (Marks 3)

Q.6 a) Describe the defect of vision. (Marks 4)

Q.6 b) A convex lens of focal length 6 cm is to be used to form a virtual image three times the size of object. where must the lens be placed? (Marks 3)

Q.7 a) Define resistance and its unit. (Marks 4)

Q.7 b) Three capacitors with capacitance of 3pF, 4pF, and 5pF are arranged in parallel combination to a battery of 6V. Find the quantity of charge on each capacitor. (Marks 3)

Q.8 a) What is electric motor? Explain the working principle of D.C motor. (Marks 4)

Q.8 b) What is cathode ray oscilloscope? Write its two uses. (Marks 3)

Q.9 a) What is meant by radioisotopes? Describe their uses in medicine and industries. (Marks 4)

Q.9 b) Differentiate between the primary and secondary memory.

(Marks 3)