**Balochistan Board of Intermediate and Secondary Education, Quetta**

Model Paper for SSC Examination 2017 and Onwards

Subject: Physics Total Marks = 63 Class 10th

**PART – I** 1 x 12

Q 1: (a) Choose the correct answer

1. The bending of waves around the corners is called

(Reflection, Refraction, Diffraction)

1. The characteristics of sound by which a shrill sound can be distinguished from a grave one is called

(Loudness of sound, Pitch of sound, Quality of sound)

1. The focal length of concave mirror is

(Positive, negative, greater, smaller)

1. The device which store the charge is called

(Voltmeter, Ripple tank, Capacitor)

1. The equation of Einstein mass energy is

(E=mc2, Em2=c, E2=mc, F=ma)

1. In a N-type crystal, the majority carries are

(Holes, free electrons, proton, positron)

1. The number of Proton or Electron in an atom is called

(Atomic number, Mass number, Isotopes)

(b) Fill in the blanks.

1. Waves carry \_\_\_\_\_\_\_\_\_\_\_\_\_ from one place to another.
2. The depth of an ocean can be measured by using \_\_\_\_\_\_\_\_
3. The instrument used for detecting and testing the nature of change on a body is called \_\_\_\_\_\_\_\_

(c) Choose true and false of sentences

1. Ultra sonic can be used to find the depth of Ocean.
2. The number of protons will change in any element’s isotopes.

**PART – II** 2 x 12

Attempt any twelve (12) questions.

1. Name the characteristics of wave motion.
2. What is pitch of sound?
3. Define concave and convex mirror.
4. For what purpose the electroscope is used?
5. Describe any two properties of Beta rays.
6. What is nuclear fission and Nuclear fusion process?
7. Define IT (Information Technology)
8. Name any two semi-conductors.
9. What is computer and write the names of computer parts.
10. Why fuse is important in our homes?
11. What is Columb’s Law? And write the equation of Columb’s law.
12. What is total internal reflection and also define critical angle.
13. What are N type and P type semi-conductors?
14. Define Data managing and graphic designing.

**PART – III** 3 x 5 = 15

Attempt any three questions

Q 1: How stationary ware generated? Explain the formation of nodes and antinodes in stationary waves.

Q 2: What are optical fibres? Write down the uses of optical fibre in our daily life.

Q 3: Explain the Coulumb’s law. And also write the formula of Coulumb’s law.

Q 4: What are mutual and self Induction and also write the structure of transformer.

Q 5: Describe briefly about floppy and hard disk.

**PART – IV** 3 x 4 = 12

Attempt any four(04) questions

Q 1: The wave length of a wave passing through a medium is 0.5 m. If wave speed is 4m/s then calculate the wave frequency.

Q 2: An object is placed at a distance of 15 cm from a concave mirror. If the radius of curvature of the concave mirror is 15 cm, determine the position and nature of the image.

Q 3: The capacitors of capacitance 5 µF and 10 µC are connected in parallel. Find the equivalent capacitance of the combination. If a battery of 20 V is connected across this combination, find the charge stored in each capacitor.

Q 4: an electric bulb is marked with 220 V and 100 W, find the resistance of the filament of the bulb. If the bulb is used 5 hours daily, find the energy in kilowatt-hour consumed by the bulb in one month (30 days).

Q 5: Two bodies are oppositely charged with 500 µC and 100 µC. find the force between the two charges if the distance between them in air is 0.5 m.

Q 6: The half-life of krypton is 3.16 minutes. Out of the 100 g of krypton, how much will be left after 9.48 minutes?