SUMMATIVE ASSESSMENT-I

(2019-2020)

GENERAL SCIENCE-Paper-I

Physical Science

Principle of Evaluation

PART-A

Section-I

1. i) Applying oil or grease between the moving parts of a machine
   ii) Applying soap solution
   iii) Applying powder
   iv) using Ball bearings
   v)Polish the rough surface
   vi)By using lubricants

   Note: Write any two relevant points give 1 mark

2.Metals are sonorous where as wood mainly contains non metals. So they does not produce clink sound.Hence bells are made up of metals.

3.Due to attraction (or) repulsion forces are developed between the needle of magnetic compass and bar magnet when we place a bar magnet near it.

4.Sound requires material medium for its propagation. But vacuum doesn't have any material medium. So sound does not travel in vacuum.

(OR)

Sound waves are mechanical waves. So it can not travel in vacuum.

Section-II

5.Net force in horizontal direction F_x=20-3=17N

Net force in vertical direction F_Y=6-6=0 N

$\mathbf{F_{net}}$=17 N

6. i) Earth will more in its tangential direction instead of in its prescribed orbit.
   ii) All the elements at surface of earth will be free to float in free space.

   Note: Any two relevant points

7.**Physical Properties Metals**:-

i) Melleability:-Metal can be beaten into sheets.
ii) Ductility:-Metals can be drawn into wires.
iii) Lustrous:-They have shiny surface
iv) Sonority:- They produce clink sound when beaten with hard object.
v) They are good conductors of heat and electricity.

8.**Aim**:-To prove synthetic fibres are strength than steel

Material required:- Iron stand, clamp, pan, weights, nylon and steel threads

Procedure:-Take an iron stand with a clamp. Take 50cm of nylon and steel wires.Tie nylon to stand so that it hangs freely from it. At the free end attach a pan so that weight can be placed on it. Add weight starting from 10g are by one, till the thread breaks. Repeat the experiment with 50cm of steel wire.

Obsevation:- Nylon bear mole weight than steel

Result:- Nylon is stranger than steel

Conclusion:-Synthetic fibres such as nylon is stronger than steel

9.Active metals react with acids and form salt with liberation of hydrogen gas

Metal + Acid→ Salt+ hydrogen

Section-III

10. a)

Recycling:- Recycling can be used to obtain materials from which the original products where made

Plastic household items:-

plastic household containers are market with number that indicates the type of resin or plastic.
It is essential two recycle the same codes in one lot otherwise the entire lot will be spoiled.
code 1 and 2 plastics major share in recycled plastics.

Use of recycling process:-

→New products are prepared
→ We can reuse the same plastic in another form of articles
→The environment pollution is avoided by manufacturing of new plastics instead of reusing the old plastics

(OR)

10. b) A material which is easily decomposed by natural process is called 'Biodegradable material'
Ex:- Vegetable, Paper, fruits etc
A material which is not decomposed by natural process is called 'Non-Biodegradable material'
Ex:-Polythene bags,Plastic materials etc

Impact of Non-Biodegradable material on environment:-

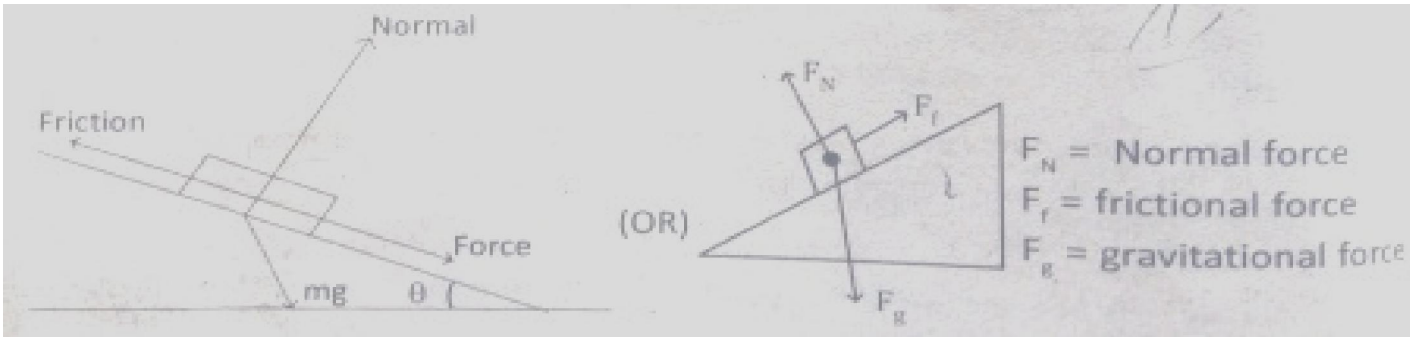
i) The polythene bags thrown around us responsible for clogging drains
ii) Animals eat polythene bags containing good material and dying
iii) If we burn plastic, creates lot of air pollution
(write any relevant points)

11. a) When someone calls to our Cell phones is produces a ring tone
When switch is on postion, our calling bell is produces a sound
When ringing the cycle bell, its produces sound
When talking to others ,our throat canal can vibrate
(Write any four examples)

(OR)

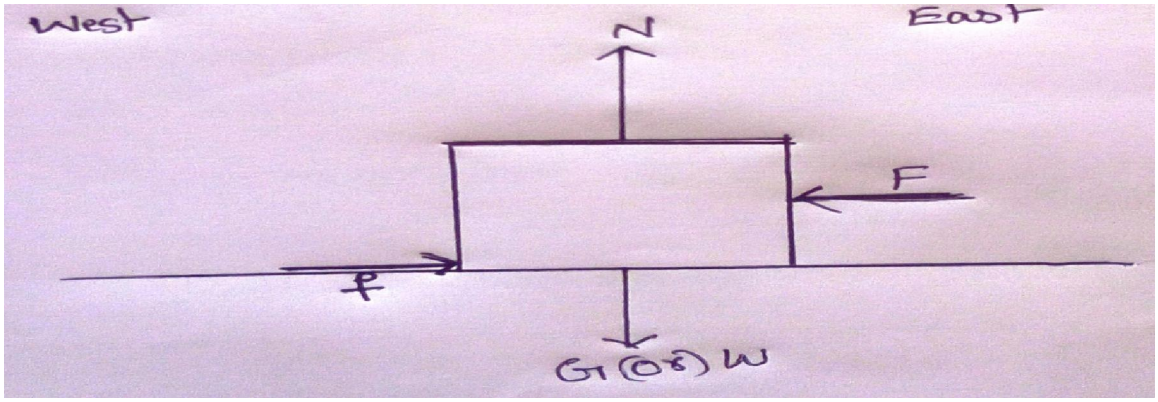
11.b)
a) Veena,Sitar
b) Flute
c) Vibrating part of Tabla is membrane where as vibrating part of Sitar is string
d) By changing the air column

12. a)



(OR)

12. b)



13.a)

Propagation of sound through liquids

Fig-14

Take a bucket till it with water. Take two stones and strike them against each other keeping your hands inside the water. Ask your friend to listen to the sound by keeping his / her ears touching walls of the bucket.

Ask your friend about the difference between sounds produced by striking the stones against each other in water and striking them in air.

Thus the conclusion is that sound propagates through matter in all the three states – solid, liquid and gas.

(OR)

13. b)

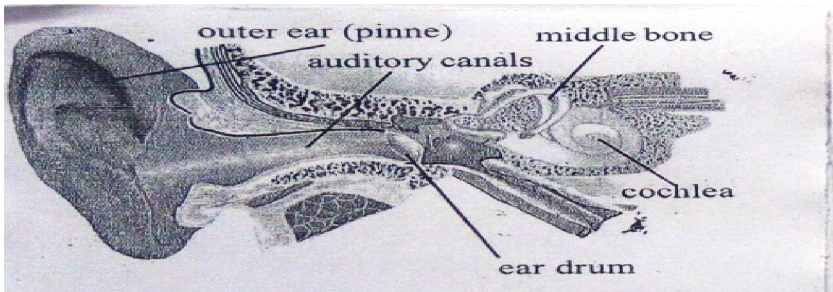


Fig-16: Structure of the ear drum

Structure and functioning of the eardrum

Our ear consists of three sections, the outer ear, the middle ear and the inner ear as shown in the figure-16. Pinna of external ear collects the sound vibrations. They enter into the ear canal. We have learnt that sound travels in the form of vibrations. These vibrations strike the tympanum (ear-drum) and make it to vibrate.

The vibrations from the tympanic membrane reach the middle ear (ear ossicles), contains three small bones malleus (hammer shaped), incus (anvil shaped) and stapes (stirrup shaped). They magnify the sound vibrations. The stapes transmits the vibrations to the membrane of oval window. The oval window has the surface area 1/20th of the ear-drum. By this the vibrations increase 30 to 60 times. The vibrations from the oval window transmit to the cochlea which is the inner part of the ear. The cochlea is filled with thick fluids which transmits the vibrations. The motion of the vibrations in the cochlea is detected by tiny hairs connected to nerves at this point. The vibrations are transformed into electrical signals and carried by the nerves to the brain where the sensation of the sound is realized. The

PART-B

14. D	15.C	16.C	17.B	18.C	19.B	20.B	21.A	22.C	23.C
24. C	25.D	26.A	27.B	28.D	29.A	30.B	31.B	32.A or B	33.B

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