PT-2/HALF YEARLY EXAMINATION, 2022-23

SCIENCE

Time – 3 hours **Class – VIII** **M.M. : 80**

Date – 10.09.2022 (Saturday)

Name of the student _____ **Section** _____

GENERAL INSTRUCTIONS:

- **All questions are compulsory**.
- This paper consists of **38** questions.
- Q. No.**01 to 20** - **1 marks** each.
- Q. No. **21 to 23** - **2 marks** each.
- Q. No. **24 to 31** - **3 marks** each.
- Q. No. **32 to 36** - **4 marks** each.
- Q. No. **37& 38** - **5 marks** each.

Q.1 Which of the following is **not** true for fertilisers? 1

(a) They increase the yield

(b) Their excessive use disturbs the balance of nutrients in soil

(c) They are generally used in small quantity

(d) They are environment friendly

Q.2 The process of loosening and turning of soil is called- 1

(a) irrigation and manuring (b) digging and winnowing

(c) tilling or ploughing (d) harvesting and storage

Q.3 The gas released during the preparation of bread is- 1

(a) oxygen (b) carbon dioxide (c) nitrogen (d) sulphur dioxide

Q.4 Bacteria have been grouped into four different types based on their shapes. Identify the different types and select the correct statement regarding it. 1

(a) Vibrio cholerae is an example of type S, which causes cholera.

(b) Lactobacillus is an example of type P, which helps in curdling of milk.

(c) Type R bacteria are rod-shaped and are called as bacilli bacteria.

(d) Streptococcus is an example of type Q bacteria that causes pneumonia

Q.5 Coal is processed in industries to get some useful products. Which of the following is not obtained from coal? 1

(a) Coke (b) Coal tar (c) Coal gas (d) CNG

Q.6 Which of the following is not a constituent of petroleum? 1

(a) Paraffin wax (b) Lubricating oil (c) Petrol (d) Coke

Q.7 Naphthalene balls are obtained from coal tar and are used as - 1

(a) mosquito repellant (b) honeybee repellant

(c) moth repellant (d) snake repellent

Q.8 Which of the following is a **pair** of exhaustible natural resources? 1

(a) Coal and soil (b) Air and sunlight

(c) Water and petroleum (d) Wildlife and minerals

Q.9 Magnesium ribbon on burning in air produces - 1

(a) magnesium oxide, water and light (b) magnesium oxide and heat

(c) magnesium oxide, heat and light (d) magnesium oxide, water and heat

Q.10 The substance that does not burn with flame is - 1

(a) LPG (b) camphor (c) dry grass (d) charcoal

Q.11 The ignition temperatures of four substances P, Q, R and S are 125^0C, 270^0C, 155^0C and 310^0C respectively. Which of the following pairs of substances catches fire at 250^0C ? 1

(a) Q and S (b) P and R (c) R and S (d) P and Q

Q.12 The given table lists some of the fuels along with their calorific values and ignition temperatures. 1

Fuel	Calorific value (KJ/g)	Ignition temperature (^{0}C)
P	100	5
Q	80	50
R	30	60
S	20	70

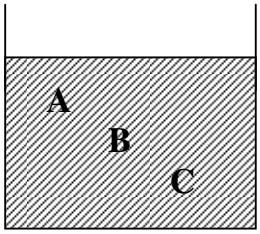
Which of the following fuel is an ideal fuel ?

(a) P (b) Q (c) R (d) S

Q.13 During dry weather, while combing hair, sometimes we experience hair flying apart. The force responsible for this is - 1

(a) force of gravity (b) electrostatic force (c) force of friction (d) magnetic force

Q.14 Figure, shows a container filled with water. Which of the following statements is correct about pressure of water? 1



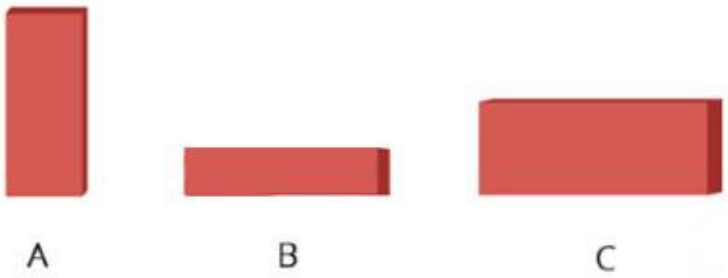
(a) Pressure at A > Pressure at B > Pressure at C

(b) Pressure at A = Pressure at B = Pressure at C

(c) Pressure at A < Pressure at B > Pressure at C

(d) Pressure at A < Pressure at B < Pressure at C

Q.15 A brick is kept in three different ways on a table as shown in figure. The pressure exerted by the brick on the table will be - 1



(a) maximum in position A (b) maximum in position C

(c) maximum in position B (d) equal in all cases

Q.16 Which one of the following force is a contact force? 1

(a) Force of gravity (b) Force of friction (c) Magnetic force (d) Electrostatic force

Q.17 To sharpen the blade of a knife by rubbing it against a surface, which of the following will be most suitable? 1

(a) Stone (b) Plastic block (c) Wooden block (d) Glass block

Q.18 Whenever the surfaces in contact tend to move or move with respect to each other, the force of friction comes into play 1

(a) only if the objects are solid

(b) only if one of the two objects is liquid

(c) only if one of the two objects is gaseous

(d) irrespective of whether the objects are solid, liquid or gas.

Q.19 Friction due to fluid is called – 1

(a) force (b) pressure (c) drag (d) none of the above

Q.20 A student investigated the relationship between the weight of a block and the friction between it and the surface. As he added weights to the block, he found that the force needed to move the block: 1

(a) increases (b) decreases (c) remains same (d) none of the above

Q.21 For growing a crop, sufficient sunlight, _____ and _____ from the soil are required. 2

Q.22 Answer the following – 2

a) Name the petroleum product used as fuel for stoves, lamps and jet aircrafts.

b) Name the force exerted by the earth to pull the object towards itself.

Q.23 Write True (T) or False (F) for the following - 2

a) A man exerts same pressure on the ground whether he is standing or he is lying. (T / F)

b) Cells of our body produce antibodies to fight pathogens. (T / F)

Q.24 What are antibiotics? What precautions must be taken while taking antibiotics ? (**any 2**) 3

Q.25 Differentiate between manure and fertilisers. (Any three differences) 3

Q.26 Draw a labelled diagram of candle flame.

Q.27 Give reasons – 1.5x2

a) Water is not used to control fires involving electrical equipment.

b) Paper by itself catches fire easily whereas a piece of paper wrapped around an aluminium pipe does not.

Q.28 Answer the following – 1+2

a) What do you understand by 'carbonisation'?

b) Mention the names of product obtained from destructive distillation of coal.

Q.29 Solve – 1.5x2

a) Calculate the magnitude of force required in Newton to produce a pressure of 28500 Pa on an area of 100 m^2.

b) A force of 1200 N acts on the surface of area 10 m^2 normally. Calculate the pressure exerted on the surface?

Q.30 Name the forces acting on a plastic bucket containing water held above the ground level in your hand. Discuss why the forces acting on the bucket do not bring a change into state of its motion. 3

Q.31 Answer the following – 2+1

a) Explain why sliding friction is less than static friction.

b) Give any two examples to show that friction is foe.

Q.32 What are weeds ? Why it should be removed? Mention any two methods of weeding. 4

Q.33 Define the following – 2x2

a) Calorific value of fuel. b) Nitrogen fixation.

Q.34 Answer the following – 3+1

a) Two women are of the same weight. One wears sandals with pointed heels while the other wears sandals with flat soles. Which one would feel more comfortable while walking on a sandy beach? Give reasons for your answer.

b) We do not feel atmospheric pressure on our body. Give reason.

Q35. Rohit came to play Kabaddi for the first time with his friends. He saw that all his team mates and opponent team players applied oil very properly on their body. Rohit also did the same thing. Then after the start of the game Rohit caught a player of the opponent team but the player somehow escaped from Rohit's hand. Then a friend of Rohit suggested him to rub his palms on the soil properly.

a) Why did the players apply oil on their body? 1

b) Why do you think the player of the opponent team got escaped from Rohit's hand? 1.5

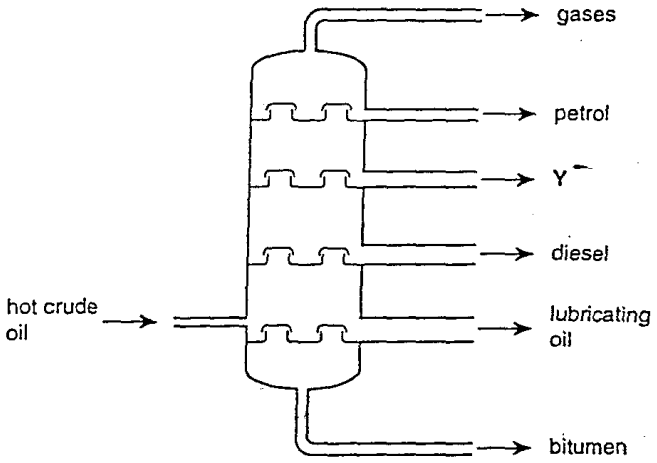
c) Why did Rohit's friend suggest him to rub his palm on soil properly ? 1.5

Q36. Answer the following –

a) Imagine that an object is falling through a long straight glass tube held vertical, air has been removed completely from the tube. The object does not touch the walls of the tube. Will the object experience any force of friction? Give reason. 2

b) When the cutting edge of a knife is put against a fast rotating stone to sharpen it, sparks are seen to fly. Explain the reason. 2

Q37. Observe the diagram & answer the questions given below.



a) Identify the product Y. 1

b) Write 2 uses of Y. 2

c) At what temperature this product Y is vaporized? 1

d) How CNG is a good fuel than petrol & diesel? 1

Q38. Answer the following –

a) See the adjacent figure and answer the following questions:

(i) Why the tyres are provided with grooves? 1

(ii) Is friction a friend or foe in this case? 2

b) The handle of a cricket bat or a badminton racquet is usually rough. Explain the reason. 2