Holiday Homework Instructions

1. **Use separate folders:** Keep your holiday homework organized by using separate folders for each subject.
2. **Sheets and Size:** Please use presentation sheets of A-4 size
3. **Neat and legible work:** Ensure your work is neat, legible, and well-presented.
4. **Follow instructions:** Read and follow the instructions for each assignment carefully.
    a. **Complete all tasks:** Make sure to complete all tasks and assignments as given by your teachers.
    b. **Use appropriate stationery:** Use the required stationery, such as A4 sheets, graph paper, or drawing sheets, as specified for each assignment.
    c. Submit your holiday homework by July 25, 2025.
    d. Submission of all assignment of all subjects are mandatory.

Tips for neat work:

- Use a ruler to draw margins and keep your work tidy.
- Write your name, class, and subject on each sheet.
- Use clear and legible School handwriting.
- Keep your work free of scribbles and erasures.

St. Anthony's High School Faisal Town Lahore

Biology Holidays Homework Class 9C

Instructions: Use Assignment sheets to answer the questions. Write your name, subject, adm.no., and follow school hand writing . Submit your homework in proper files.

Worksheet 1

1. **a** .A good blood supply is essential to the effective function of the lungs in mammals. Give three other features of the gas exchange system that enables a fast rate of gas exchange within the lungs. [3] **b**. State what is meant by the term concentration gradient in the context of human gas exchange. [2]

c. There is estimated to be a surface area of 4.2 square meter in the overall lung system of a typical new-born baby, around one twentieth of the overall surface area of a typical adult's lungs. Calculate the overall surface area of a typical adult's lungs. [2]

d. State the reagent used to test for the presence of carbon dioxide in a sample of air and the appearance of a positive result. [2]

e. State the number of times more carbon dioxide is in exhaled air than in inhaled air. [1]

f. State the name of the tissue type that supports the trachea and prevents it from collapsing under changes of pressure. [1]

2.a. **i**. Fig 2 shows the movement of water through a plant. Arrows indicate the direction of movement.

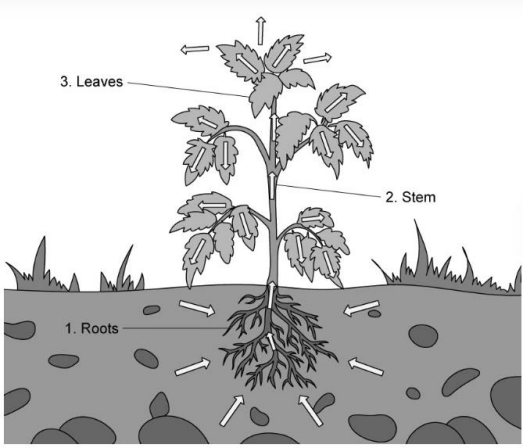


Fig 2

Explain how the transpiration stream happens in plants. Use the information in Fig 2.

ii. Suggest two reasons why transpiration is beneficial for the plant. [2]

b. State the condition of a plant whose water levels have fallen so low that the plant can no longer support itself. [1]

3 Proteins in the blood are involved in protection of the body. Three proteins found in the blood are • antibodies • thrombin • fibrinogen

(a) (i) Name the type of white blood cell that produces antibodies. [1]

(ii) Outline how antibodies protect the body. [2]

(b) Thrombin is an enzyme that catalyses the reaction:

Fibrinogen →

(i) State when this reaction occurs. [1]

(ii) Explain how fibrin protects the body. [3]

An investigation was carried out to determine the effect of different temperatures on the activity of thrombin. The results are shown in Fig. 3.1.

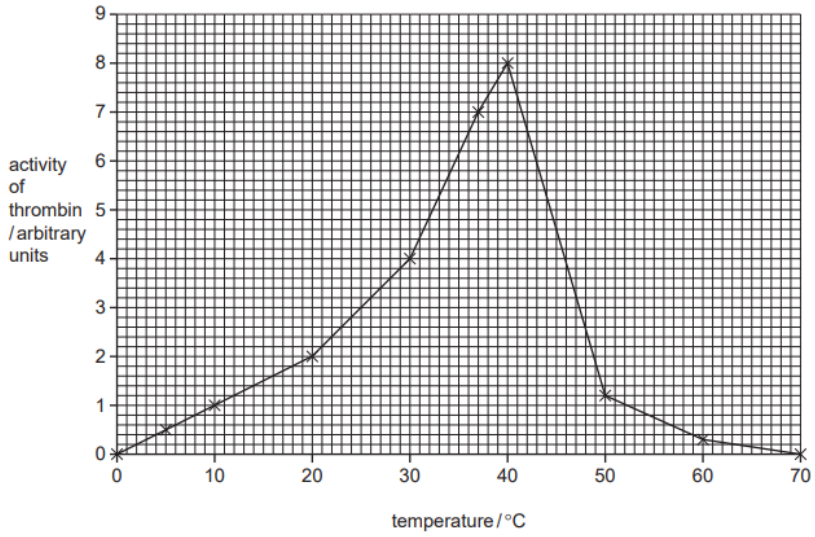


Fig 3.1

(c) (i) Explain why thrombin functions slowly at 5°C and does not function at all at 70 °C. [3]

(ii) Suggest how the activity of thrombin was determined. [1]

(iii) State two conditions that would have been kept constant during the investigation. [2]

Worksheet 2

1. Fig. 1.1 shows the human heart and the main blood vessels. The functions of the parts of the Heart and some of the blood vessels are given in Table 1.1.

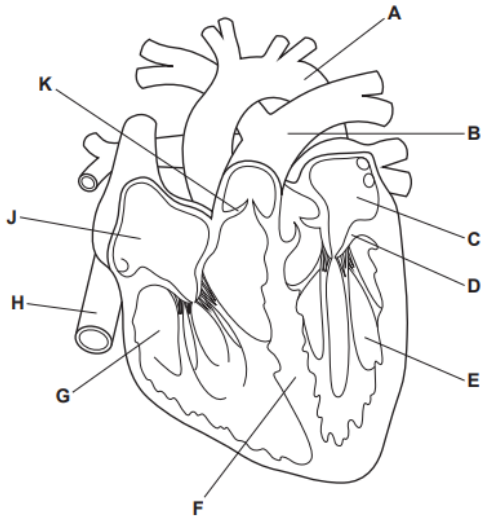


Fig 1.1

Complete Table 1.1. One row has been done for you. [6]

function	letter on Fig. 1.1	name
structure that separates oxygenated and deoxygenated blood		
structure that prevents backflow of blood from ventricle to atrium		
blood vessel that carries oxygenated blood	**A**	aorta
blood vessel that carries deoxygenated blood		
structure that prevents backflow of blood from pulmonary artery to right ventricle		
chamber of the heart that contains oxygenated blood		
chamber of the heart that contains deoxygenated blood		

Table 1.1

(b) A group of students used a heart monitor to record the pulse rate of an athlete during a 5000 metre race. The recordings started just before the race began and ended just after it had finished, as shown in Fig. 1.2.

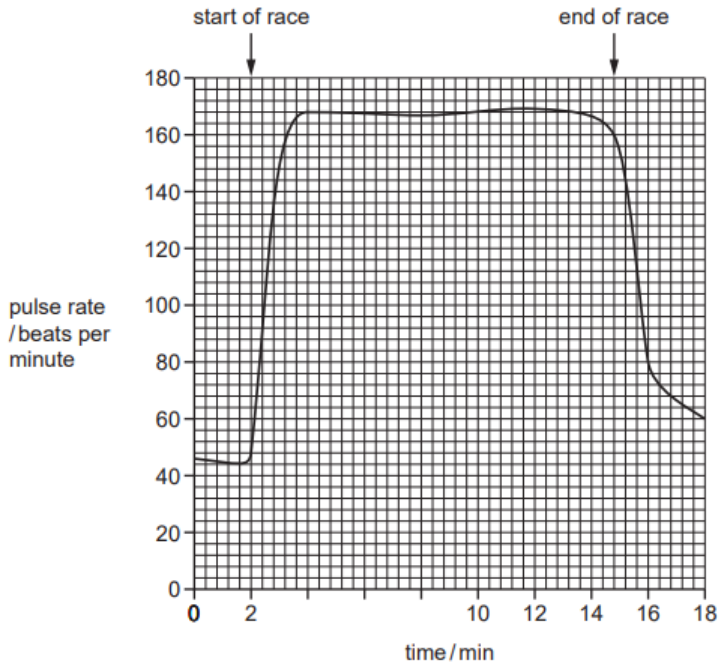


Fig 1.2

(i) Use data from Fig. 1.2 to describe the effect of exercise on the pulse rate of the athlete. **[3]**

(ii) Explain the change in pulse rate between 2 minutes and 3 minutes after the recordings started. **[4]**

2. Fig. 2.1 shows the appearance of stomata of two plants over a 24-hour period. The plants are growing side-by-side, but are of different species.

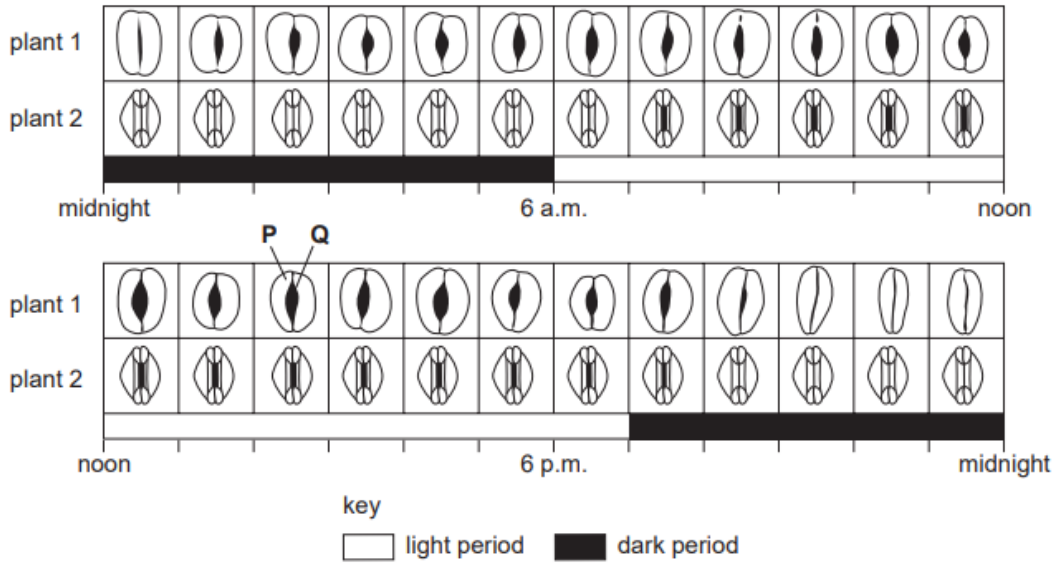


Fig 2.1

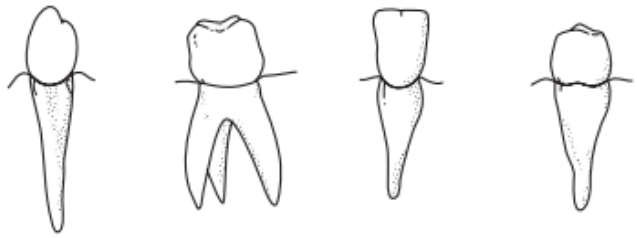
(a) Name P and Q. **[2]**

(b) (i) Name a process that can occur in plant 1 between 1 a.m. and 5 a.m. that might not occur during this time in plant 2. Explain your answer.

(ii) Name another process that can occur in plant 1 between 6 a.m. and 7 a.m. that might not occur during this time in plant 2. Explain your answer. **[4]**

(c) Suggest and explain what effect a shortage of soil water might have on the size of stomatal pores in plant 1. **[2]**

3. Fig. **3.1** shows different types of human teeth.



(a) Name the types of tooth shown. **T** **U** **V** **W**

Fig. 3.2 shows a view from above of teeth in a human lower jaw.

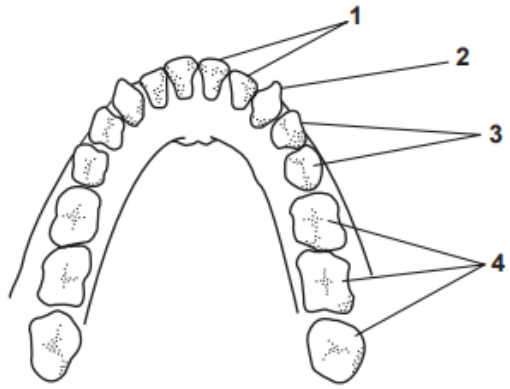


Fig 3.2

(b) By matching each letter from Fig. 5.1 with a number from Fig. 5.2, complete Table 5.1 to show the position occupied by each type of tooth. [2]

type of tooth	position number
T	
U	
V	
W	

(c) (i) State which type of tooth is used for grinding the walls of plant cells. [1]

(ii) Suggest why grinding is important in animals that are herbivores. **[1]**

(d) (i) Name the enzyme that is found in the mouth cavity and state its substrate and product. [**3**]

(ii) Explain why the reaction that this enzyme catalyses does not occur in the stomach, but does occur in the duodenum. **[3]**

Worksheet 3

1 Fig. 1.1 shows a flowering shoot of tiger lily, *Lilium tigrinum.*

Fig 1.1

(a) State the name of the genus of the tiger lily. **[1]**

(b) Name the parts labelled A to D. **[4]**

(c) The tiger lily plant is a monocotyledon. List two features, visible in Fig. 1.1, that show it is a monocotyledon. **[2]**

2. Toads are amphibians. Only two species are native to Britain, the Common toad (*Bufo bufo*) and the Natterjack toad (*Bufo calamita*). Natterjack toads like warm sandy soil in open and sunny habitats, with shallow pools for breeding. Examples of these habitats are heathland and sand dunes. Common toads like cooler, more shady habitats, such as woodland. Many areas of sand dunes are being developed for camp sites. Heathland can easily change to woodland as trees grow on it. In the summer, woodland is colder than heathland due to the shade the trees create. These conditions suit the Common toad, but not the Natterjack. As a result of the changing habitats the Natterjack toad is becoming an endangered species.

(a) (i) Name one external feature that identifies an animal as an amphibian. [1]

(ii) Amphibians are a class of vertebrate. Name two other vertebrate classes. [2]

(b) State one piece of information from the passage to show that the Common toad and Natterjack toad are closely related species. **[1]**

Worksheet 4

1. Fig. 1.1 shows an apparatus used to investigate fermentation, a form of anaerobic respiration that can take place in the cytoplasm of yeast cells. Fig. 1.1

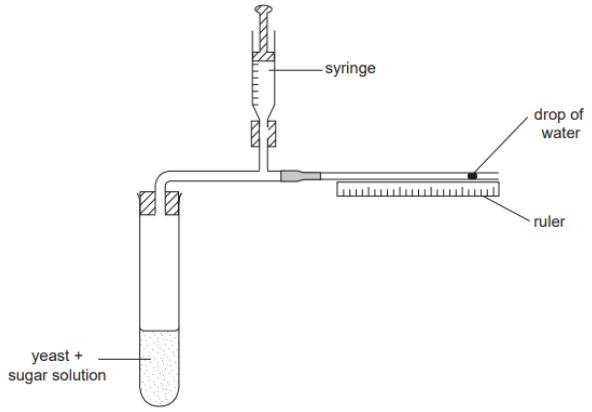


Fig 1.1

(a) Name the gas given off during fermentation. [1]

(b) State the use of the syringe in this apparatus. [1]

(c) In each case, state and explain the effect on fermentation of raising the temperature

(i) from 20 °C to 45 °C; effect and explanation

(ii) from 45 °C to 70 °C. effect and explanation [4]

Using the apparatus in Fig. 1.1, an experiment was carried out at 30 °C with each of three different sugars, E, F and G, all at the same concentration. Table 1.1 shows the distances moved by the drop of water over equal periods of time for each of the sugars.

sugar	distance / mm
E	250
F	50
G	0

One of the sugars was glucose. Glucose molecules are approximately half the size of the molecules of the other two sugars.

(d) State which sugar, E, F or G, is most likely to be glucose and give a reason for your answer.
sugar ..... reason [2]

(e) Suggest why no gas was given off when sugar G was used. [1]

2. (a) The movement of molecules within an organism can occur by diffusion and active transport. Complete Table 2.1 by placing ticks √ to show the correct features of each process.

Table 2.1

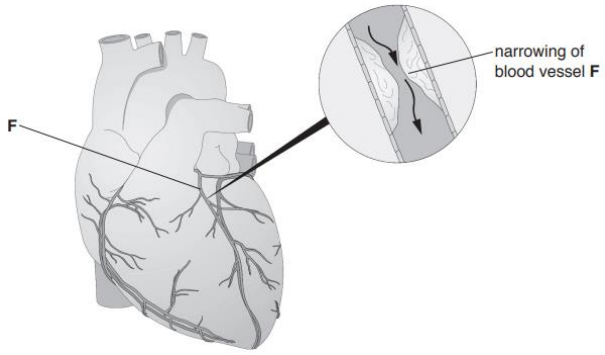
feature	active transport	diffusion
movement of particles always occurs across a cell membrane		
movement of molecules during gas exchange		
rate of movement of particles is higher when the concentration gradient is larger		
requires energy from respiration		

[4]

(b) Explain why active transport is important in root hair cells. [3]

Worksheet 5

1. The diagram shows the human heart. The blood vessel labelled F may become narrowed as shown.



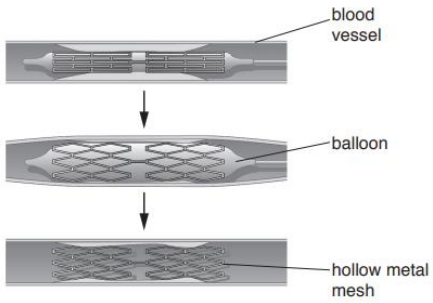
(a) (i) Name blood vessel F. [1]

(ii) Name the disease caused by the narrowing of this blood vessel. [1]

(iii) State three factors that may lead to the narrowing of this blood vessel. [3]

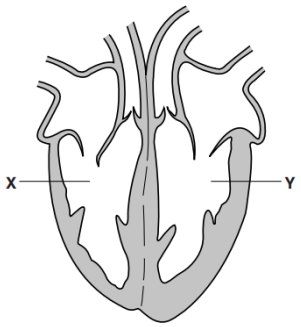
(iv) Suggest and explain how a person might be affected by the disease caused by the narrowing of blood vessel F. [5]

(b) It is possible to treat the disease caused by the narrowing of blood vessel F, by carrying out an operation. In the operation: • a balloon surrounded by a metal mesh is inserted into the blood vessel and inflated, • the balloon is then deflated and removed, leaving the metal mesh in place.



Suggest the purpose of each of the following: inflating the balloon, leaving the hollow metal mesh in the blood vessel. **[3]**

2 Fig. 2.1 shows a vertical section through a human heart viewed from the front. Two chambers, X and Y, are labelled.



(a) Use Fig. 2.1, and your knowledge of the circulatory system, to complete Table 2.1.

chamber	name of chamber	name of blood vessel carrying blood from chamber
X		
Y		

[4]

(b) Fig. 2.2(a) shows how the mean blood pressure changes as blood flows through different types of blood vessel after leaving the heart.

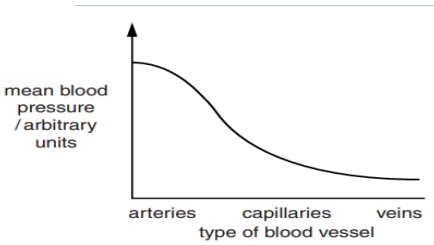


Fig. 2.2(a)

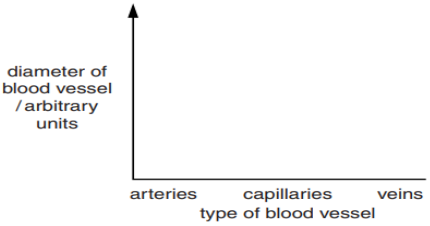


Fig. 2.2(b)

(i) Draw a line on Fig. 2.2(b) to show how the diameters of the vessels that blood flows through vary. [2]

(ii) Use the line you have drawn on Fig. 2.2 **(b),** and your biological knowledge, to explain why the mean blood pressure is higher in an artery than in a vein. **[4]**

(c) Fig. **2.3** shows blood returning to the heart at low pressure through a vein in a leg.

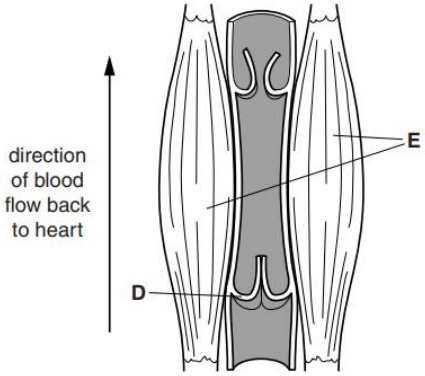


Fig. 2.3

Name part D in Fig. 2.3. Explain how this part enables blood to return to the heart.

(i) name of part D ..... function---------- **[2]**

(ii) Suggest how the parts labelled E in Fig. 2.3 help blood to return to the heart. **[2]**

3 Fig.2.1 shows red blood cells from a frog and Fig. 2.2 shows red blood cells from a human, as seen under the microscope.

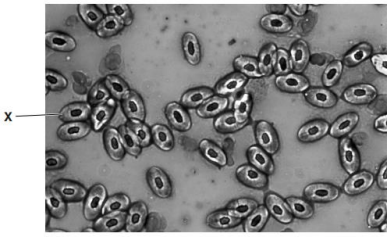


Fig. 2.1

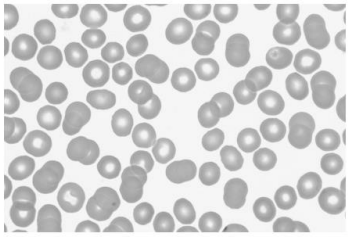


Fig. 2.2

(a) (i) Complete Table 3.1 by describing differences that can be seen between the named features of the blood cells in these two samples.

Table 3.1

feature	frog blood cells [Fig. 2.1]	human blood cells [Fig. 2.2]
shape		
nucleus		

(ii) The cell labelled X in Fig. 2.1 measures 10 mm in length. Calculate the actual length of cell X.

Show your working.

actual length = ...[3]

(iii) A human red blood cell is 0.007 mm in diameter. Calculate the number of times a human red blood cell is larger than the frog red blood cell. Show your working. .....[1]

(b) Explain how, using features visible in Fig. 2.1 and Fig. 2.2, blood is adapted for transporting oxygen around the body. [2]

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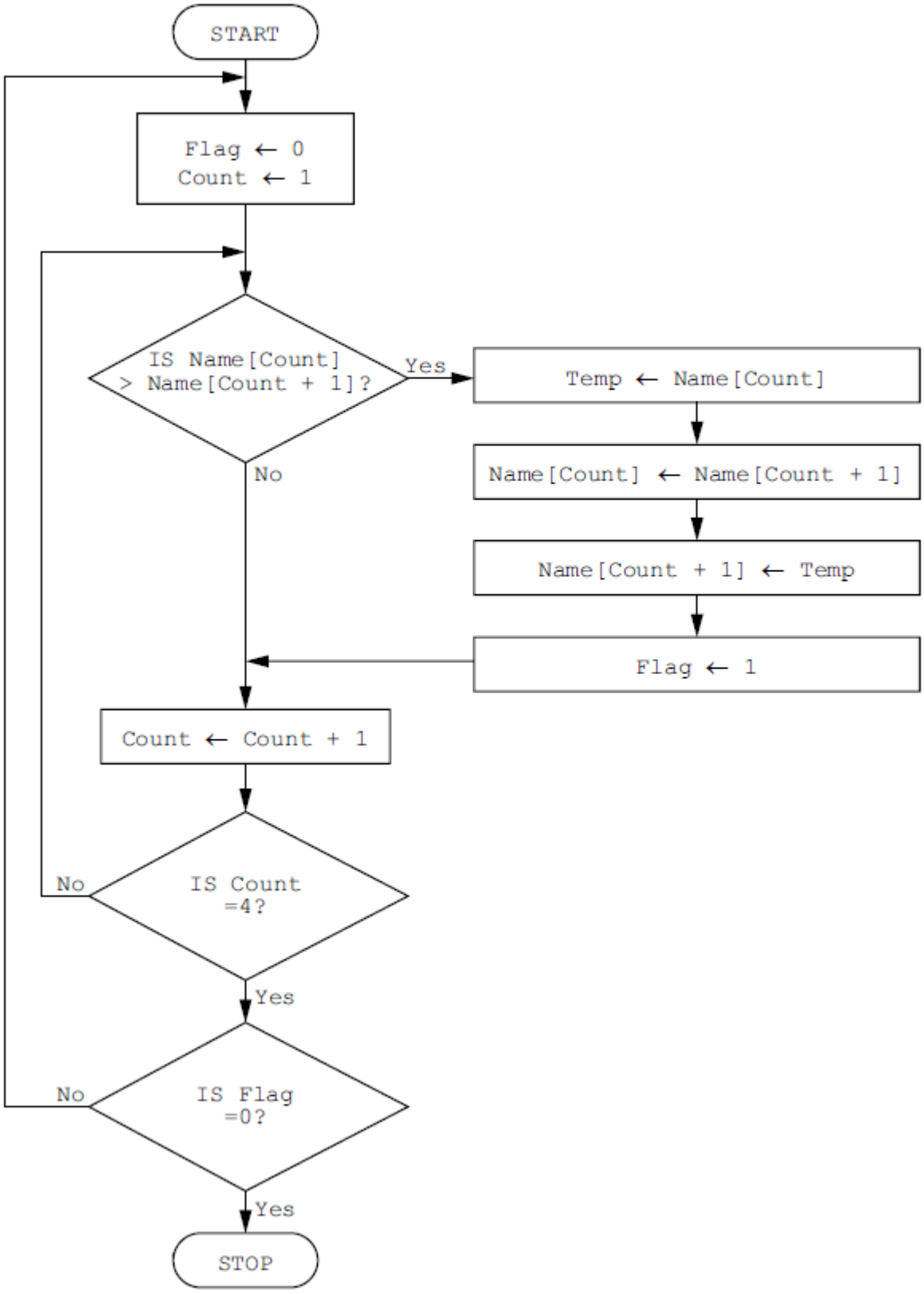
Name …… **Adm #:** ……

Class 9 C **Summer Vacation Worksheet # 1** **Time: 40 min**

1

This flowchart represents an algorithm.



(a) The array `Name[1:4]` used in the flowchart contains the following data:

Name[1]	Name[2]	Name[3]	Name[4]
Jamal	Amir	Eve	Tara

Complete the trace table using the data given in the array.

Flag	Count	Name[1]	Name[2]	Name[3]	Name[4]	Temp
		Jamal	Amir	Eve	Tara	

[5]

(b) Describe what the algorithm represented by the flowchart is doing.

.....

.....

.....

..... [2]

2 A range check is used to check that a value input is above 10 and below 20.

Tick (✓) **one** box to show which value would be accepted.

A 10 ____

B 15 ____

C 20 ____

D 30 ____

[1]

3 A program checks if the weight of a baby is at least 2 kilograms.

Give, with reasons, **two** different values of test data that could be used for the baby's weight.Each reason must be different.

Value 1 .....

Reason .....

.....

Value 2 .....

Reason .....

.....

[4]

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Name …… Adm #: ……

Class 9 C **Summer Vacation Worksheet # 2** **Time: 40 min**

---

1 **(a)** Draw a flowchart for an algorithm to:

- allow numbers to be input
- ignore any numbers that are negative
- count how many numbers are positive
- output the count of positive numbers when zero is input and end the algorithm.

[6]

(b) Explain the changes you will make to your algorithm to **also** count the negative numbers.

.....

.....

.....

..... [2]

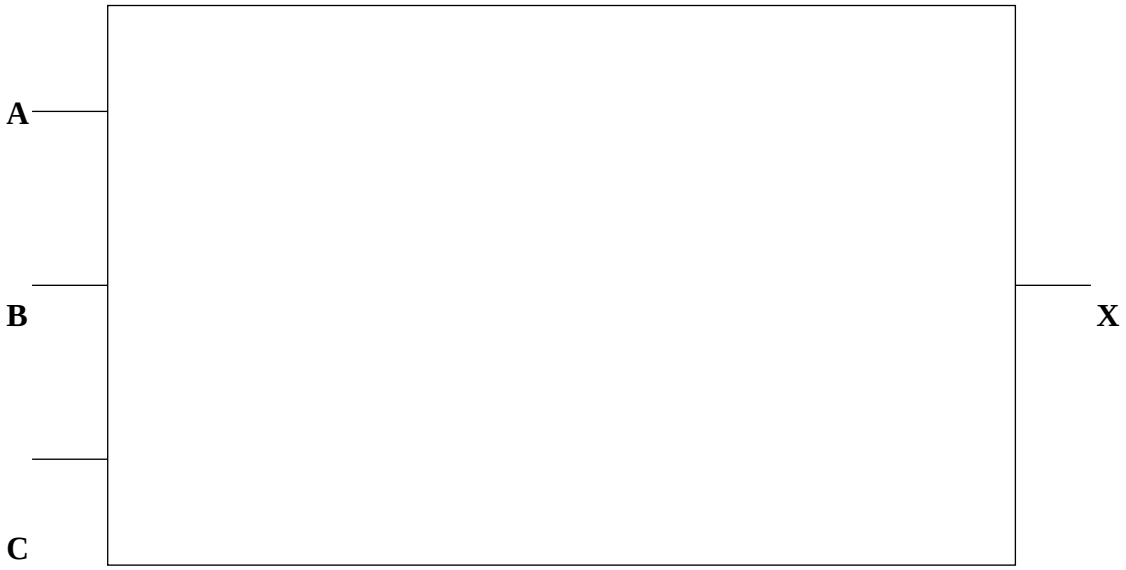
2 Consider the truth table:

A	B	C	X
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

(a) Draw a logic circuit to represent the given truth table.

Each logic gate should have maximum of **two** inputs.

Do **not** simplify the logic circuit.



[6]

(a) Write a logic expression for the given truth table.Do **not** simplify the logic expression.

.....

.....

.....

.....

.....

.....

.....

..... [3]

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Name …… Adm #: ……

Class 9 C **Summer Vacation Worksheet # 3** **Time: 40 min**

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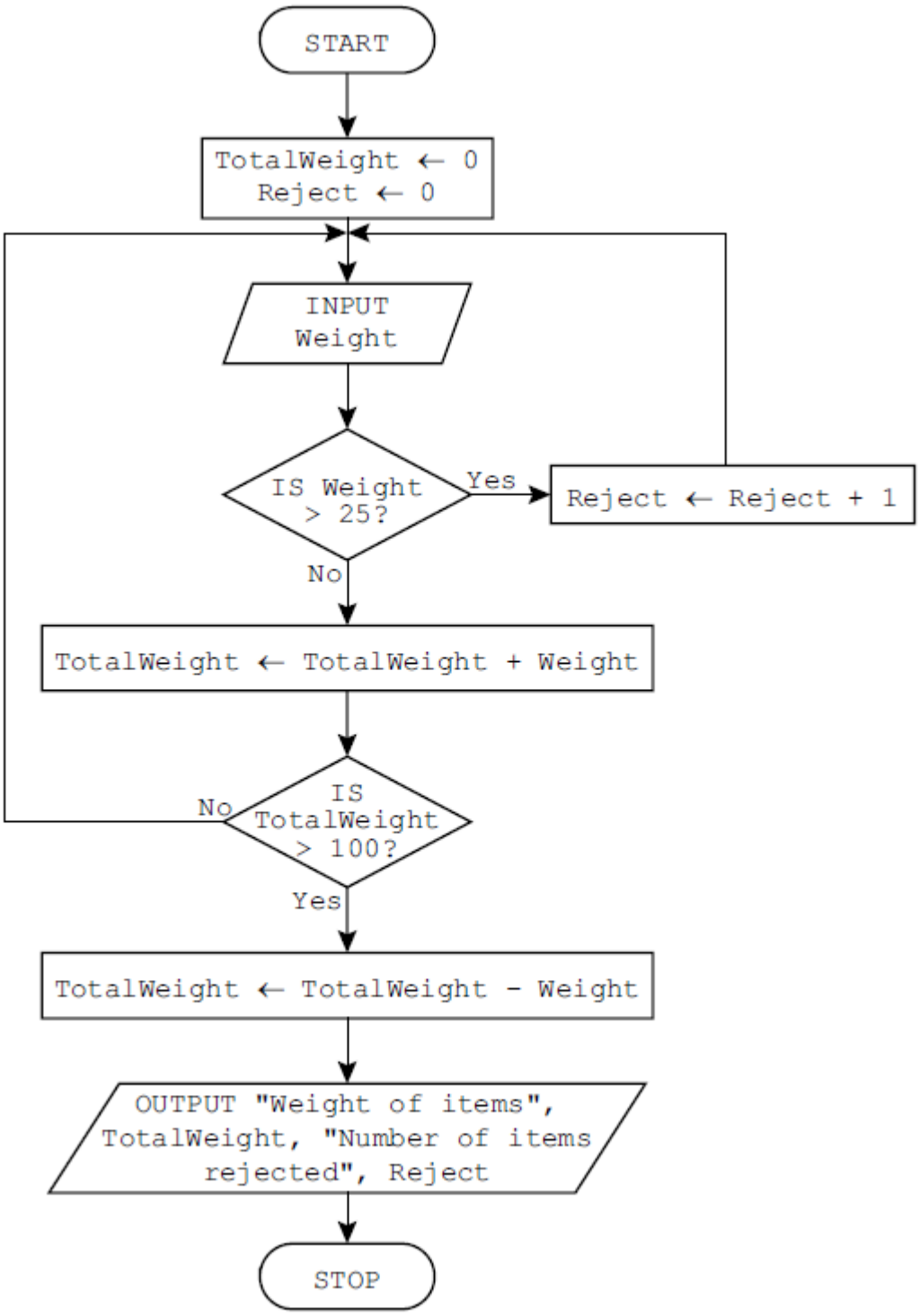
1 This flowchart inputs the weight of items, in kilograms, to be loaded on a trailer. Any item over 25 kilograms is rejected. The trailer can take up to 100 kilograms



Complete the trace table for the input data:

13, 17, 26, 25, 5, 10, 15, 35, 20, 15

Weight	Reject	Total Weight	**OUTPUT**

[5]

2 Verification checks can be made on input data.

Tick (□) **one** box to show which check is a verification check on input data.

A checksum □

B double entry check □

C echo check □

D parity check □

[1]

3 A function LENGTH(X)finds the length of a string Xand a function SUBSTRING(X,Y,Z)finds

a substring of X starting at position Y and Z characters long. The first character in the string is position 1.

(a) Show the value of the variable after each pseudocode statement has been executed.

01 P □ "Computer Science" .....

02 Q □ LENGTH(P).....

03 R □ SUBSTRING(P,10,7) .....

04 S □ LENGTH(R).....

05 T □ SUBSTRING(R,1,3) .....

[5]

(b) Write a pseudocode statement to extract the word Computer from P and store it in the variable F.

.....

.....

.....

..... [2]

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Name …… Adm #: …….. Time: 40 min

Subject: Computer Science **Summer Vacation Worksheet 4** **Class 9C**

Q1: An 8-bit binary register contains the value:

0	**0**	**1**	**1**	**0**	**1**	**1**	**0**

a Write down the denary value of this register. [1]

b The contents of this register undergo a logical shift ***one place*** to the right.

i Show the result of this right shift.

ii Write down the denary value following this right shift. [2]

c The contents of this register, at the start of the question, now undergo a logical shift ***two places*** to the left.

i Show the contents of the register after this left shift operation. [1]

ii State, with reasons, the effect of this shift on the denary value in ***part a***. [2]

Q2: a Convert the following denary numbers into 8-bit binary numbers: [4]

i 123

ii 55

b Carry out the following additions using your binary values from ***part a***: [4]

i 123 + 55

ii 123 + 180

c i Write down the two's complement value of: [2]

0	**1**	**1**	**1**	**0**	**1**	**0**	**0**

ii Write down the binary value of −112 using two's complement notation. [1]

iii Write down the denary value of the following binary number, which is using two's complement notation: [1]

1	**0**	**1**	**1**	**1**	**0**	**0**	**1**

d Use two's complement notation to find the 8-bit binary value of −104. [2]

Q3 Six calculations are shown on the left and eleven denary values are shown on the right. By drawing arrows, connect each calculation to its correct denary value.

An 8-bit register uses two's complement notation. What is the denary value of: **0 0 1 0 1 1 0 1** ?	10
	16
Convert the following into GiB: **59 055 800 320 bytes**	20
	28
If 2x = 1 048 576 bytes What is the value of x?	45
	46
Give the denary equivalent of the following hexadecimal number: **3F**	55
	57
What is the denary result of the following binary addition: **0 0 0 1 0 0 1 1** **+ 0 0 0 1 1 0 1 1**	60
	63
Find the hexadecimal value of the following denary number: **40**	80

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Name …….. Adm #: …….. Time: 40 min

Subject: Computer Science **Summer Vacation Worksheet 5** **Class 9C**

Q1: A bitmap image has the following resolution: 1140 × 1080 pixels.
The image uses a color depth of 24 bits.

a Explain the term **pixel**. [1]

b Explain the term **color depth**. [1]

c Calculate how many of these images could be stored on a 32-GiB memory stick. [3]

d Describe how it would be possible to increase the number of these images which could be stored on this memory stick. [3]

Q2 a Nancy has captured images of her holiday with her camera. The captured images are stored as digital photo files on her camera. Explain how the captured images are converted to digital photo files. [4]

b Nancy wants to email photos to Nadia. Many of the photos are very large files, so Nancy needs to reduce their file size as much as possible. Identify which type of file compression would be most suitable for Nancy to use. Explain your choice. [4]

Q3 A stopwatch uses six digits to store hours, minutes, and seconds. The stopwatch stopped at:

02 : 31 : 58

Hours Minutes Seconds

An 8-bit register is used to store each pair of digits.
a Write the 8-bit binary numbers that are currently stored for the **Hours, Minutes** and **Seconds**. [3]

Hours								
Minutes								
Seconds								

b The stopwatch is started again and then stopped. When the watch is stopped, the 8-bit binary registers show:

Hours	0	0	0	0		1	0	1
Minutes	0	0	0	1	1	0	1	0
Seconds	0	0	1	1	0	1	1	1

Write the denary values that will now be shown on the stopwatch. [3]

: **:**

Hours Minutes Seconds

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Name …… Adm #: …… Time: 40 min

Subject: Computer Science **Summer Vacation Worksheet 6** **Class 9C**

Q1: A software developer is using a microphone to collect various sounds for his new game. He is also using a sound editing app. When collecting sounds, the software developer can decide on the sampling resolution he wishes to use.

a) i What is meant by ***sampling resolution***? [1]

_____

_____

_____

ii Describe how sampling resolution will affect how accurate the stored digitised sound will be. [3]

_____

_____

_____

The software developer will include images in his new game.

b) i Explain the term ***image resolution***. [1]

_____

_____

_____

ii The software developer is using 16-color bitmap images. How many bits would be used to encode data for **one** pixel of his image? [1]

_____

_____

_____

iii One of his images is 16 384 pixels wide and 512 pixels high. He decides to save it as a 256-color bitmap image. Calculate the size of the image file in gibibytes.

[3]

_____

_____

_____

_____

_____

_____

_____

_____

_____

iv Describe any file compression techniques the developer may use. [3]

_____

_____

_____

Q2: The editor of a movie is finalising the music score. He will send the final version of his score to the movie producer by email attachment.

a) Describe how ***sampling*** is used to record the music sound clips. [3]

_____

_____

_____

b) The music sound clips need to undergo some form of data compression before the music editor can send them via email. Which type of compression, ***lossy*** or ***lossless***, should he use? Give a justification for your answer. [3]

_____

_____

_____

c) One method of data compression is known as ***run-length encoding (RLE)***.

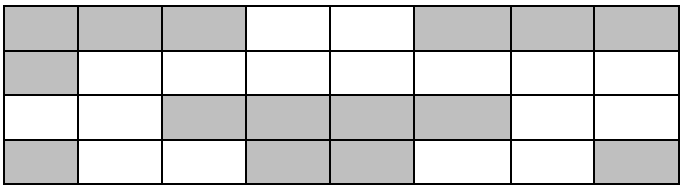
i What is meant by RLE? [3]

_____

_____

_____

ii The following image is being developed:



Show how RLE would be used to produce a compressed file for the above image. Write down the data you would expect to see in the RLE compressed format (you may assume that the grey squares have a code value of 0 and the white squares have a code value of 1). [4]

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9TH C, HOLIDAYS HOMEWORK 2025

Worksheet No 1 Date

Q.1. Define Molar Mass. (molecular mass) with example.

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Q.2. Calculate the molar masses of the following chemicals:

1) Cl_2
2) KOH
3) $BeCl_2$
4) $FeCl_3$
5) BF_3
6) CCl_2F_2
7) $Mg(OH)_2$
8) $Ca_3(PO_4)_2$
9) SO_2
10) H_3PO_4
11) $(NH_4)_2SO_4$
12) CH_3COOH
13) $Pb(NO_3)_2$
14) $C_6H_{12}O_6$
15) H_2SO_4
16) NO_2
17) CO_2
18) CH_3NH_2

Worksheet No 2 Date

Q.1. Fill in the blanks for the elements in this chart.

Element	Number of Protons	Number of Neutrons	Number of Electrons	Atomic Mass	Atomic Number
lithium					
carbon					
chlorine					
silver					
lead					
calcium					
tantalum					
radium					
uranium					
americium					
nitrogen					
oxygen					
sulphur					
magnesium					
aluminium					
cobalt					

Worksheet No 3 Date

Q.1. i) Define the term Isotope with an example.

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……....

ii) The table shows the number of subatomic particles in an atom of Iron.

Types of particle	Number of particles	Charge on the particle
Electron	26	
Neutron	30	
Proton	26	

iii) State the number of nucleons in this isotope of iron.

……..

Q.2. When concentrated sea water is electrolysed , chlorine is formed at one of the electrode.

i) To which period in the Periodic Table does chlorine belong?

……..

ii) Draw the electronic structure of chlorine molecule.

iii) Draw the electronic structure of the product formed by the reaction of chlorine with sodium.

Q.3. A student placed a crystal of copper (II) sulphatein a beaker of water. After one hour the crystal had completely disappeared and a dense blue colour was observed in the water at the bottom of the beaker. After 48 hours the blue colour had spread throughout the water.

i) Use the Kinetic Particle Theory to explainthese observations.

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ii) Describe the arrangement andmotion of the particles in copper (II) sulphate crystal.

Arrangement ……

Motion ……..

iii) Copper ions can be seperated from other metals by chromatography.Draw a labelled diagram of the apparatus for paper chromatography.

iv) Draw the dot and cross diagram of magnesium oxide.

Worksheet No 4 Date

Q.1.a) Complete the table which gives information about sub-atomic particles.

Name	Symbol	Relative mass	Relative charge
Electron			
proton		1	
	N		0

b) Use the information in the table to explain the following.

i) Atoms contain charged particles but they are electrically neutral because they have no overall charge.

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ii) Atoms forms positive ions.

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iii) Atoms of the same element can have different masses.

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iv) Define Groups and Periods.

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Q.2. Bromine is the element in the Periodic Table,

a) Mention the group and period of Bromine.

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…….

b) Write the formula for molecule of Bromine.

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c) Draw the diagram to show the arrangement of molecules in liquid Bromine.

d) A teacher placed a small amount of liquid Bromine at the bottom of a sealed gas jar of air. Afterv two minutes brown fumes were seen just above the liquid surface. After one hour the brown colour had spread completely throughout the gas jar. Use the kinetic particle theory to explain these observations.

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e) Write the Formula and draw dot and cross diagram of magnesium bromide.

Formula : ……

Diagram :

Worksheet No 5 Date

Q. 1. The following is the list of the electron distributions of atoms of unknown elements.

Element	Electron Distribution
A	**2,5**
B	**2,8,4**
C	**2,8,8,2**
D	**2,8,18,8**
E	**2,8,18,8,1**
F	**2,8,18,18,7**

a) Choose an element from the list for each of the following descriptions.

i) It is a noble gas. _____

ii) It is a soft metal with a low density. _____

iii) It can form a covalent compound with element A. _____

iv) It has a giant covalent structure similar to diamond. _____

v) It can form a negative ion of the type $\mathbf{X^{-3}}$. _____

b) Element C and F can form an ionic compound

i) Draw a dot and cross diagram that shows the formula of this compound, the charges on the ions and the arrangement of the valence electrons around the negative ion.

ii) Predict two properties of this compound.

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Q.2. Explain why ionic compounds do not conduct electricity in their crystalline form.

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Q.3. Why do metals and nonmetals usually form ionic compounds, whereas two bonded nonmetals are never ionic? Explain.

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Q.4. Why do ionic compounds tend to be hard?

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Worksheet No 6 Date

Q.1. Carbon and Silicon are elements in Group IV. Both elements have macromolecular structures.

a) Diamond and Graphite are two forms of the element carbon.

i) Explain why diamond is a very hard substance.

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ii) Give one use of diamond.

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iii) Explain why graphite is a soft material.

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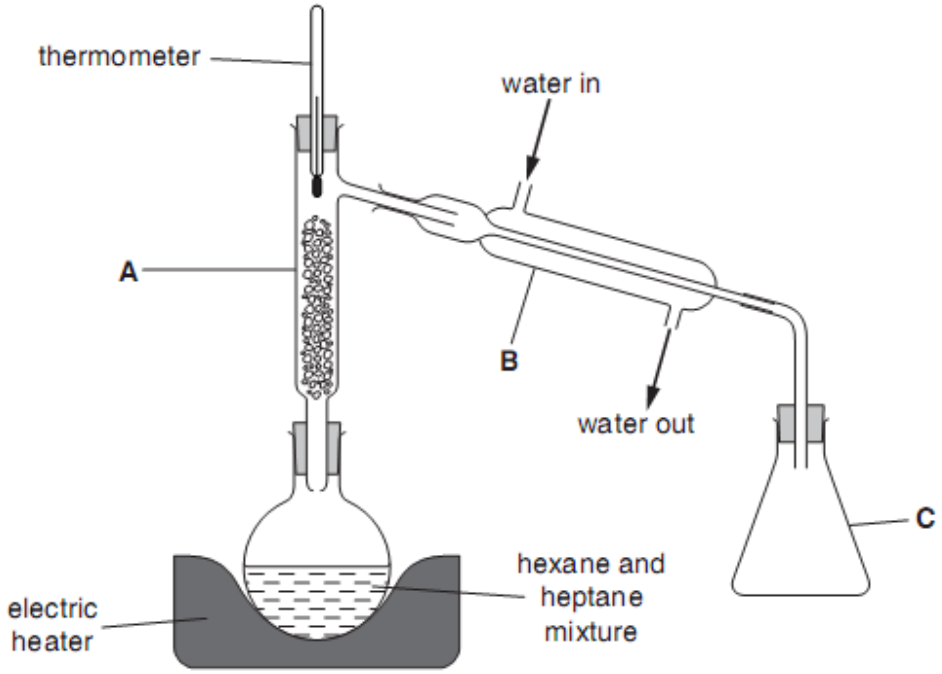
……
……

iv) Give one use of Graphite.

……

2 A student separated hexane, C_6H_{14}, (b.p. 69 °C) and heptane, C_7H_{16}, (b.p. 98 °C) using the apparatus shown below.



a) Identify two errors in the student apparatus.

……
……

b) i) Name apparatus “A”.

……

ii) What is the purpose of apparatus “A”?

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……
.....

iii) Name apparatus “B”.

…….

iv) What is the purpose of apparatus “B”?

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…….

Q.3. Potassium nitrate crystalscan be seperated from sand using the four processes shown. Which of the following shows the processes in correct order?

First ⟶ ***Last***

A.	filter	dissolve	evaporate	crystallise
B.	dissolve	evaporate	crystallise	filter
C.	dissolve	evaporate	filter	crystallise
D.	dissolve	filter	evaporate	crystallise

Q.4. Name the method of purification.

1: separating an insoluble liquid from a solution.

_____

2: separating a solid by cooling its solution or molten liquid

_____

3: separating an insoluble solid from liquid

_____

4: separating a dissolved solid in a solution

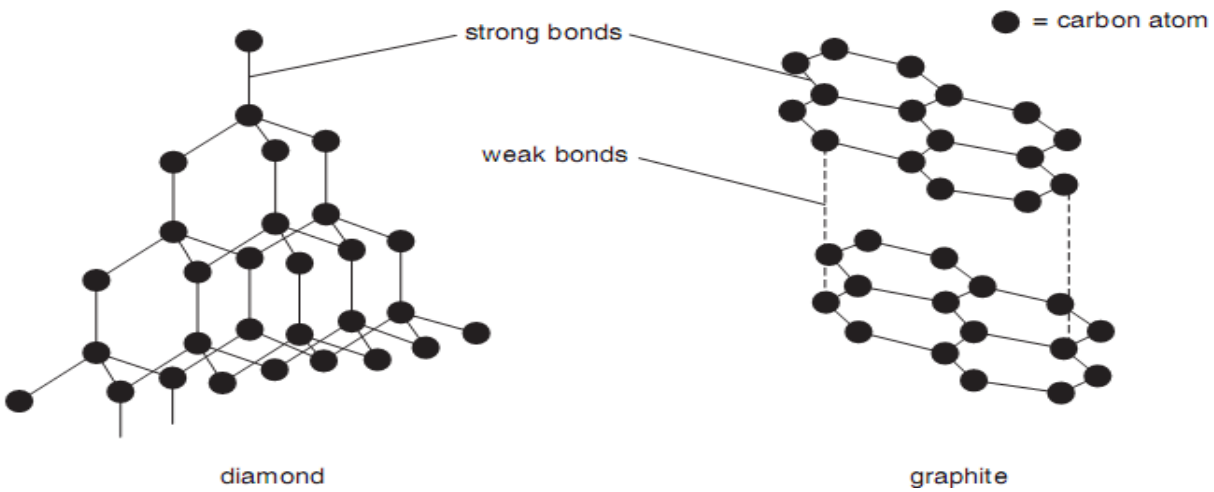
_____

5: separating a mixture of liquids with similar nature

_____

Worksheet No 7 Date

Q.1. The structure of diamond and graphite are shown,



a) Name the type of strong bond shown on diagram.

……...

b) Diamond has a melting point of about 3700^0 C and Graphite has a melting point of 3300^0 C.

i) Explain why both diamond and graphite have very high melting points.

……

……

ii) Suggest why the melting point of Graphite is lower than that of Diamond.

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……...

Q2. The table shows some information about three gases.

a) Complete the table by filling in the boxes.

Name of Gas	Formula	Relative molecular mass
Chlorine	**Cl_2**	**71**
Ammonia		**17**
	HCl	

Astudent heated some solid ammonium chloride, NH_4Cl, in a test tube. Ammonia and one other gas were formed. He tested the gas coming out of the tube with litmus paper.

The red litmus quickly turned blue. A few seconds later, both pieces of litmus paper turned red.

b) Name the process which causes the gases to move along the tube?

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c) Which gas turned the red litmus paper blue?

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d) Which gas turned the litmus paper red?

……..

e) Explain why the two gases travelled along the test tube at different speeds? Use the information from the table.

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Q.3. Draw the dot and cross diagram of Methane (CH_4) and Magnesium chloride ($MgCl_2$)

Worksheet No 8 Date

Q1. Sodium chloride is an ionic compound.

a) Draw the electronic structure of both a sodium ion and a chloride ion.

b) Sodium chloride has a melting point of about 800^0 C.

i) Explain why sodium chloride has a high melting point?

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ii) Magnesium oxide has a similar structure to sodium chloride. Suggest why the melting point of magnesium oxide is higher than that of sodium chloride?

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……..

c) Explain why solid sodium chloride will not conduct electricity but molten sodium chloride will?

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……..

Q2. Bromine is a halogen. It has two naturally occurring isotopes.

a) Define the term isotopes on the basis of sub atomic particles.

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…….

b) One isotope of Bromine has the symbol $_{35}Br^{81}$. State the number of protons, neutrons and electrons in this isotope of bromine.

Protons _____

Neutrons _____

Electrons _____

c) Bromine is a liquid at room temperature.

i) Draw a diagram to show the arrangement of the molecules in liquid bromine. Show bromine molecule as
○

ii) A small amount of liquid bromine was placed in the bottom of a sealed flask. After 30 minutes the brown color of bromine had spread through out the flask. Use the kinetic particle theory to explain this observation.

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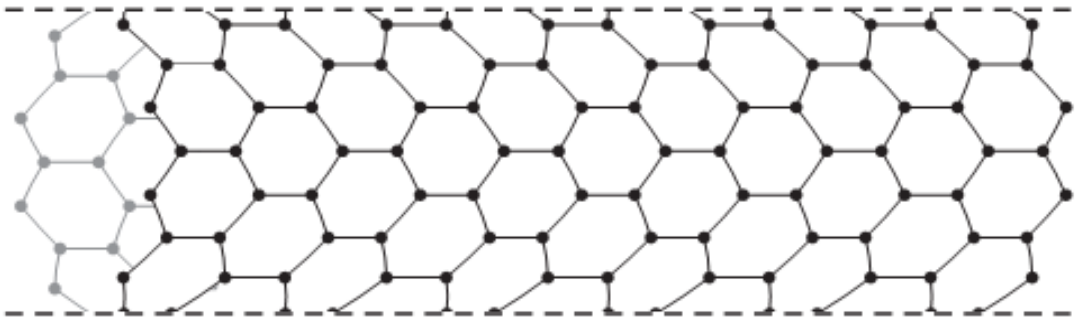
……...

Q3. In recent years scients have made tube shaped structure of carbon called neno tubes.



a) State TWO differences between structure of a carbon nano tube and structure of diamond.

……
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……
…….

b) Carbon nano tubes are fifty times stronger than steel. Use ideas about structure and bonding to suggest why these nano tubes are so strong?

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c) Carbon nano tubes are good electrical conductors.

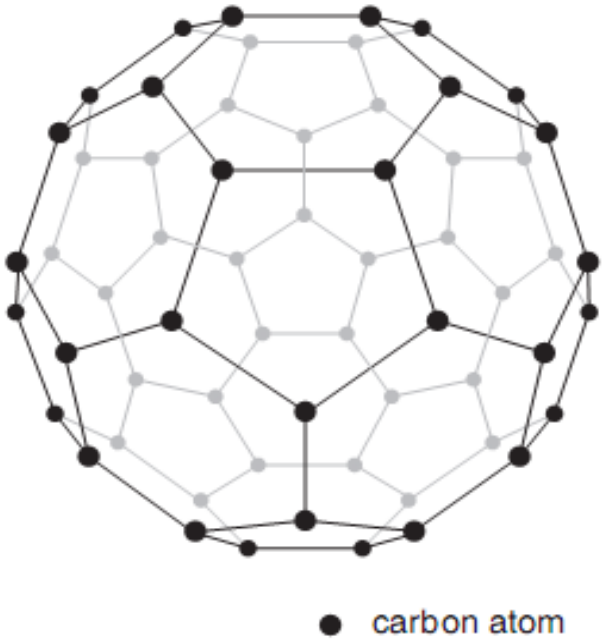
i) State the name of another form of carbon which can conduct electricity?

……..

ii) Carbon nano tubes conduct electricity nearly as well as copper. Explain why copper is a good conductor of electricity.

……
……

d) Another form of carbon is buckminsterfullerence



Argon can be trapped inside the cage like structure of buckminsterfullerence.

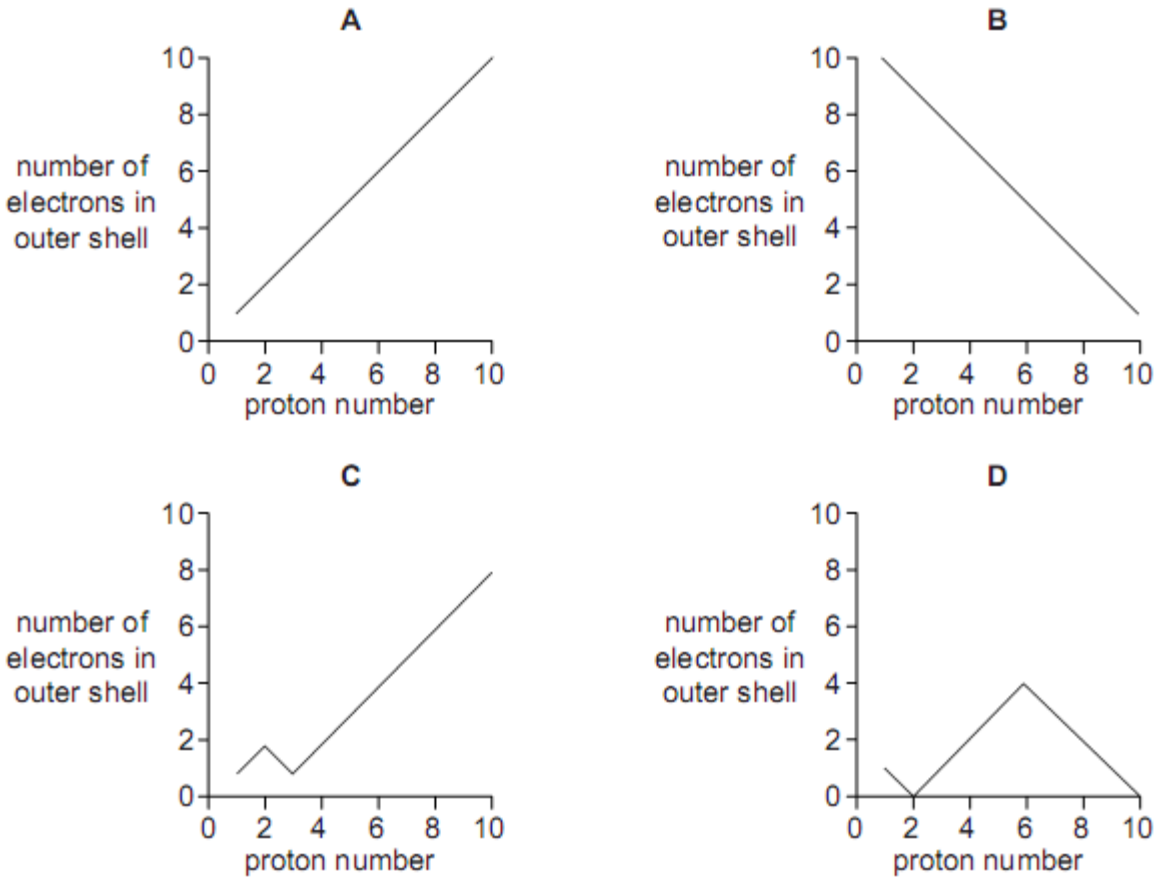
i) Explain why Argon is unreactive?

……
……
……..

ii) One isotope of Argon is $_{18}Ar^{38}$. Calculate number of neutrons in this isotope of Argon.

……..

e) Which graph shows the number of electrons in the outer shell of an atom, plotted against the proton (atomic) number for first ten elements in the periodic table?



f) What is the name and relative molecular mass of $CuSO_4 . 5H_2O$?

St. Anthony's High School Faisal Town Lahore
English Worksheet 2025
Class: 9C

WORKSHEET 1

INSTRUCTIONS:

Answer the given questions according to your Cambridge board pattern.

Read **Text** and answer **Question 1** and **Question 2** on the assignment sheet.

The Journey That Changed Everything

Ayaan stood silently at the edge of the cliff, gazing at the vast stretch of forest below. This was not where he thought he would be a month ago. Back then, life had been a blur of school, video games, and endless scrolling through his phone. But when his grandfather fell ill, Ayaan's parents decided to send him to their ancestral village for the summer. At first, he resisted the idea, dreading the lack of Wi-Fi and his friends. Yet something unexpected happened.

His days in the village were slow but meaningful. He woke up to birdsong instead of alarms, helped his grandmother in the kitchen, and learned the names of trees and herbs from his grandfather. The stories of the forest fascinated him, especially the one about a hidden waterfall that only a few had ever seen. Curiosity got the better of him, and one morning, with a map drawn by his grandfather, Ayaan set off to find it.

It took hours, but when he finally reached the waterfall, something within him shifted. The water sparkled in the sunlight, and for the first time, he felt a deep sense of peace. That evening, he wrote in his journal for the first time in years, capturing every detail of his adventure. Ayaan returned home at the end of the summer, but he wasn't the same boy who had arrived. He was more observant, more thoughtful, and less attached to his phone. The journey had changed everything.

Question 1

a. Why was Ayaan sent to the village?
b. What did Ayaan initially think about going to the village?
c. List two activities Ayaan did in the village.
d. What did his grandfather draw for him?
e. How did Ayaan feel when he reached the waterfall?
f. What habit did Ayaan restart after his adventure?

Question 2

g. What does the change in Ayaan's behaviour at the end of the passage suggest about his experience?
h. How is the contrast between Ayaan's life before and during the village stay important in understanding his transformation?

- **Have you ever imagined finding something small that leads to something magical? Write a story about a time when a simple key unlocked a world full of surprises. Write a story on "The Lost Key to the Secret Garden"**

St. Anthony's High School Faisal Town Lahore
English Worksheet 2025
Class: 9C

WORKSHEET 2

INSTRUCTIONS:

Answer the given questions according to your Cambridge board pattern.

Read **Text** and answer **Question 1** and **Question 2** on the assignment sheet.

The Old Clockmaker's Gift

In a quiet corner of the town stood a tiny shop, almost hidden between towering buildings. It belonged to Mr. Whitaker, the town's oldest clockmaker, whose hands moved with a precision no machine could match. He had spent over sixty years repairing clocks, each tick and chime a part of his soul. People said he could bring time back to life.

One rainy evening, a boy named Elliot entered the shop, drenched and shivering. He held a broken pocket watch, a gift from his late grandfather. Mr. Whitaker took the watch gently, examined it, and smiled. "This one has a story," he said. Over the next week, Elliot visited every day, watching Mr. Whitaker work. He listened to stories of time, patience, and craftsmanship. By the time the watch was fixed, Elliot had not only learned how to mend gears but also how to slow down and notice life's small moments.

Years later, after Mr. Whitaker passed away, Elliot inherited the shop. The sign remained unchanged: "Time Repaired Here." And so did the spirit of the clockmaker.

Question 1

a. Who was Mr. Whitaker?
b. What did Elliot bring to the clockmaker's shop?
c. How long had Mr. Whitaker been repairing clocks?
d. What was written on the sign outside the shop?

Question 2

e. What does the phrase "each tick and chime a part of his soul" suggest about Mr. Whitaker's relationship with his work?
f. Why do you think Elliot chose to keep the sign unchanged after Mr. Whitaker's death?

Write a story about a day when nothing seemed to go as planned. From the moment you woke up to the time you went to bed, unexpected events turned your ordinary day into a complete disaster — or maybe, a hidden blessing. Write a story on 'The Day Everything Went Wrong'

St. Anthony's High School Faisal Town Lahore
English worksheet 2025
Class 9C

WORKSHEET 3

INSTRUCTIONS:

Answer the given questions according to your Cambridge board pattern.

Directed Writing

You are advised to write between 200 and 300 words.

Question 1

You are the head prefect of your school. Recently, your school organized a 'Reading and Literacy Week' to promote the habit of reading among students. The event included book fairs, storytelling sessions, reading competitions, and guest lectures by renowned authors. The event was attended by students, teachers, and parents. Write a formal report for your school principal, summarizing the key highlights of the event, the activities conducted, the response from the attendees, and suggestions for future improvements.

Write your report. You must include the following:

Your report should follow a formal structure, including:

- Title
- Introduction
- Main Body (Event Details, Key Highlights, Response, and Suggestions)
- Mention the response from students, teachers, and parents.

Conclusion.

Composition

Begin your answer on a new page of your answer booklet. Write on one of the following topics. At the beginning of your composition put the number of the question you have chosen. You are advised to write between 350 and 450 words.

You will be awarded marks for accurate use of language and relevant content.

1. Description

The wild life in the jungle– Describe how do animals adapt to their environment for survival?

St. Anthony's High School Faisal Town Lahore
English worksheet 2025
Class: 9C
WORKSHEET 4

INSTRUCTIONS:

Answer the given questions according to your Cambridge board pattern.

The increasing levels of pollution and environmental degradation have raised concerns about the effectiveness of current environmental policies. As a responsible citizen, you are deeply concerned about the lack of strict regulations and enforcement measures to combat climate change, deforestation, and air and water pollution.

Instructions:

Write a formal letter to the editor of a national newspaper expressing your concerns about environmental issues and the urgent need for stricter environmental laws. Your letter should:

1.Clearly state the issue and its impact on society.
2.Provide evidence or examples to support your argument.
3.Suggest possible measures that the government and individuals can take to address the problem.
4.Maintain a formal tone and follow the correct structure of a formal letter.
5.Ensure clarity, coherence, and grammatical accuracy in your writing.

Directed Writing

You are advised to write between 200 and 300 words.

Question 1

You recently attended a time management workshop at your school. Write an email to your friend telling them about the workshop, what you learned, and how it will help you in your studies.

Write your Email. You must include the following:

- Write a clear and relevant subject, e.g., Learning Effective Time Management!

Start with a proper greeting such as Dear [Friend's Name],

- Begin with a friendly introduction, e.g., I hope you are doing well.
- Mention the workshop and its purpose.
- Explain what you learned, such as key strategies for time management.
- Share how these strategies are helping you and suggest your friend try them too.
- End politely with Take care! or Looking forward to meeting you!
- Use a closing phrase like Best regards, or Yours sincerely, followed by your name.
- Keep the tone friendly and engaging since it's an email to a friend.

Use simple, clear, and grammatically correct sentences.

St. Anthony's High School Faisal Town Lahore
English Worksheet 2025
Class: 9C

WORKSHEET 5

INSTRUCTIONS:

Answer the given questions according to your Cambridge board pattern.

The Rise of Artificial Intelligence in Everyday Life

In recent years, artificial intelligence (AI) has become an integral part of daily life. From voice assistants like Siri and Alexa to recommendation algorithms on streaming platforms, AI is shaping how people interact with technology. Businesses use AI-powered chatbots to handle customer inquiries, and medical professionals rely on it to diagnose diseases with greater accuracy.

One of the most significant impacts of AI is in automation. Many industries have adopted AI-driven machines to perform repetitive tasks, increasing efficiency and reducing human labor. However, this shift raises concerns about job displacement. While AI creates new opportunities in fields such as software development and robotics, many traditional roles are at risk of being replaced.

Despite these concerns, AI offers numerous benefits. In education, AI-driven platforms personalize learning experiences, helping students improve at their own pace. In healthcare, AI assists in early disease detection, saving lives. Even in daily activities, AI simplifies tasks such as navigating traffic and translating languages.

However, ethical issues remain a challenge. AI systems can sometimes reflect biases present in their training data, leading to unfair decisions. Additionally, concerns about data privacy continue to grow, as AI relies on vast amounts of personal information. Policymakers and researchers are working to develop ethical guidelines to ensure that AI benefits society as a whole.

As AI continues to evolve, its role in society will expand further. While it presents challenges, its potential to enhance efficiency, improve lives, and create new possibilities makes it one of the most important advancements of the modern age.

Task: Summarize the given passage into your own words. Do it on your assignment sheet.

Question 2: Make a column of 10 basic words and then use a high vocabulary word for that basic English word.

St. Anthony's High School Faisal Town Lahore
English Worksheet 2025
Class: 9C

WORKSHEET 6

INSTRUCTIONS:

Answer the given questions according to your Cambridge board pattern.

1. To throw someone under the bus
2.To ride roughshod over
3.To eat crow
4.To clutch at straws
5.To bell the cat
6.To cross the Rubicon
7.To meet one's Waterloo
8.To be hoist with one's own petard
9.To run the gauntlet
10.To tilt at windmills

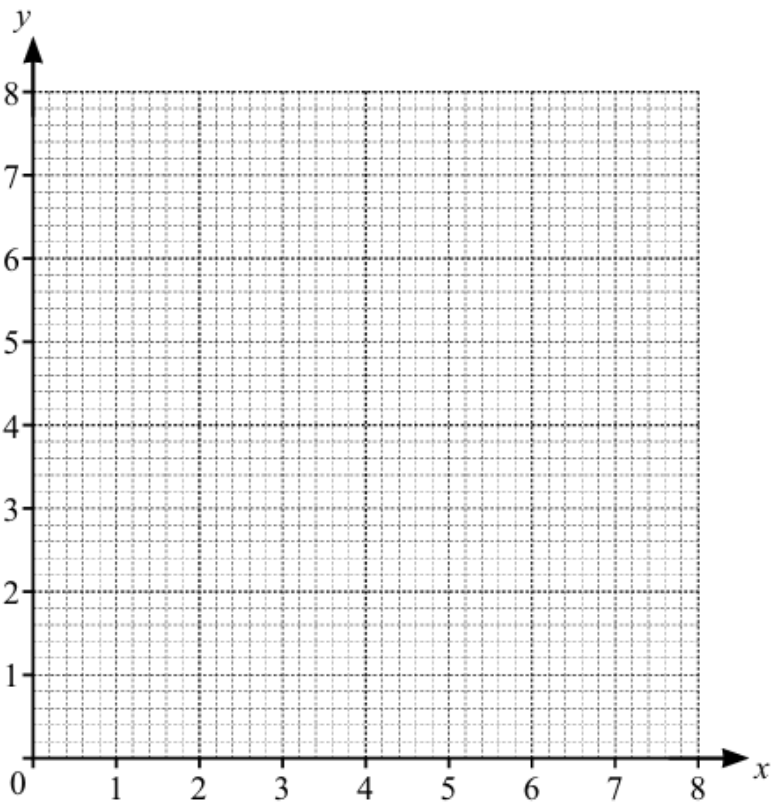
NOTE:

- Give meanings of each idiom.
- An example for each idiom.
- Make a sentence of each idiom.

Worksheet # 1 Class 9C

Name: …… Adm. # ……

1.



$$x \geqslant 2$$
$$y \geqslant x$$
$$2x + y \leqslant 8$$

By drawing suitable lines and shading unwanted regions, find the region R. [5]

2. The shaded region on the diagram is represented by three inequalities.

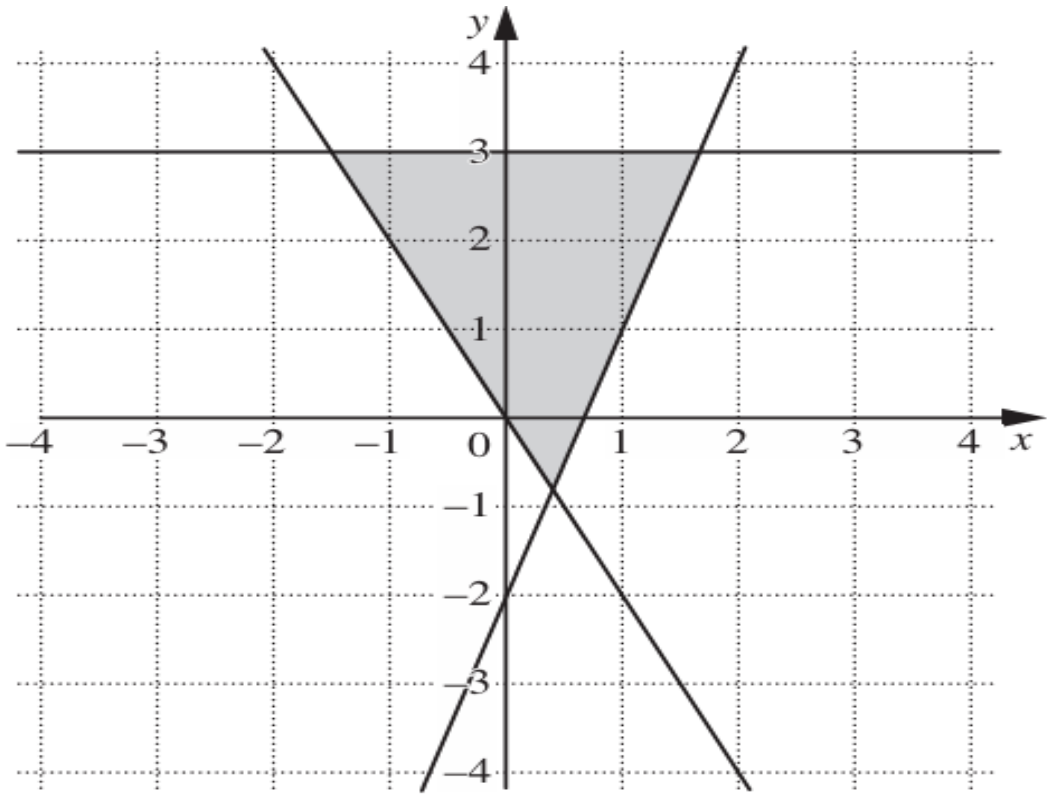
One of these is $y \geqslant 3x - 2$.

Write down the other two inequalities.

Answer .....

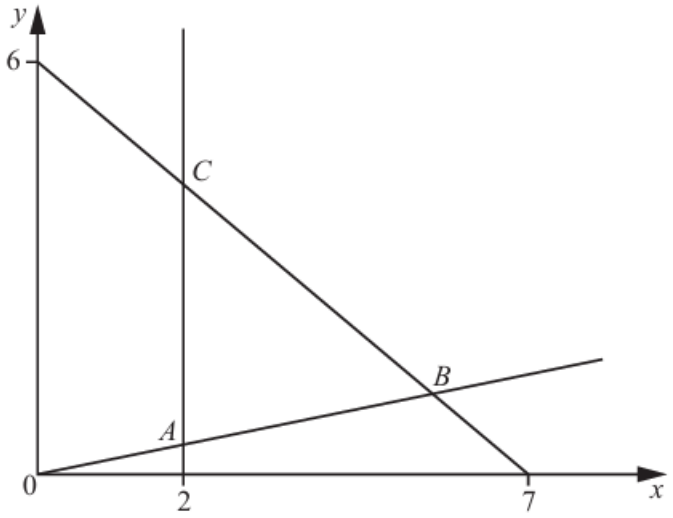
..... [2]

(Figure on Next page)



3. In the diagram, the equation of the line

- through B and C is $6x + 7y = 42$
- through A and B is $y = \frac{x}{5}$.



(a) The region **inside** triangle ABC is defined by three inequalities.
One of these is $y > \frac{x}{5}$.

Write down the other two inequalities. *Answer* .....

..... [2]

(b) The line $y = kx$ passes through triangle ABC.

Find all the possible **integer** values of k.

Answer ..... [2]

4. Solve each of the following pairs of inequalities.

(a) $3 - a \leqslant a - 4 \leqslant 9 - 2a$

(b) $1 - b < b - 1 < 11 - 2b$

(c) $3 - c < 2c - 1 < 5 + c$

(d) $3d - 5 < d + 1 \leqslant 2d + 1$

5. Solve each of the following pairs of inequalities.

(a) $\frac{a}{4} + 3 \leqslant 4 \leqslant \frac{a}{2} + 6$

(b) $\frac{b}{3} \geqslant \frac{b}{2} + 1 \geqslant b - 1$

(c) $2(1 - c) > c - 1 \geqslant \frac{c - 2}{7}$

(d) $d - 5 < \frac{2d}{5} \leqslant \frac{d}{2} + \frac{1}{5}$

Worksheet # 2 Class 9C

Name: …… Adm. # ……

1. Find the integer values of x which satisfy each of the following inequalities.

   (a) $3x - 5 < 26 \leqslant 4x - 6$ **(b)** $3x + 2 < 19 < 5x - 4$

   (c) $-4 \leqslant 7 - 3x \leqslant 2$ **(d)** $-10 < 7 - 2x \leqslant -1$

2. Given that $0 \leqslant x \leqslant 7$ and $1 \leqslant y \leqslant 5$, find

   (a) the greatest possible value of $x + y$,

   (b) the least possible value of $x - y$,

   (c) the largest possible value of xy,

   (d) the smallest possible value of $\frac{x}{y}$,

   (e) the least and greatest possible values of x^2.

3. Given that $-4 \leqslant a \leqslant -1$ and $-6 \leqslant b \leqslant -2$, find

   (a) the least possible value of $a + b$,

   (b) the greatest possible value of $a - b$,

   (c) the smallest possible value of ab,

   (d) the largest possible value of $\frac{a}{b}$,

   (e) the least and greatest possible values of a^2,

   (f) the largest value of $b^2 - a$.

4. Find the integer values of x which satisfy each of the following inequalities.

(a) $3x - 5 < 26 \leqslant 4x - 6$ (b) $3x + 2 < 19 < 5x - 4$

(c) $-4 \leqslant 7 - 3x \leqslant 2$ (d) $-10 < 7 - 2x \leqslant -1$

5. Given that $0 \leqslant x \leqslant 7$ and $1 \leqslant y \leqslant 5$, find

(a) the greatest possible value of $x + y$,

(b) the least possible value of $x - y$,

(c) the largest possible value of xy,

(d) the smallest possible value of $\frac{x}{y}$,

(e) the least and greatest possible values of x^2.

6. Given that $-4 \leqslant a \leqslant -1$ and $-6 \leqslant b \leqslant -2$, find

(a) the least possible value of $a + b$,

(b) the greatest possible value of $a - b$,

(c) the smallest possible value of ab,

(d) the largest possible value of $\frac{a}{b}$,

(e) the least and greatest possible values of a^2,

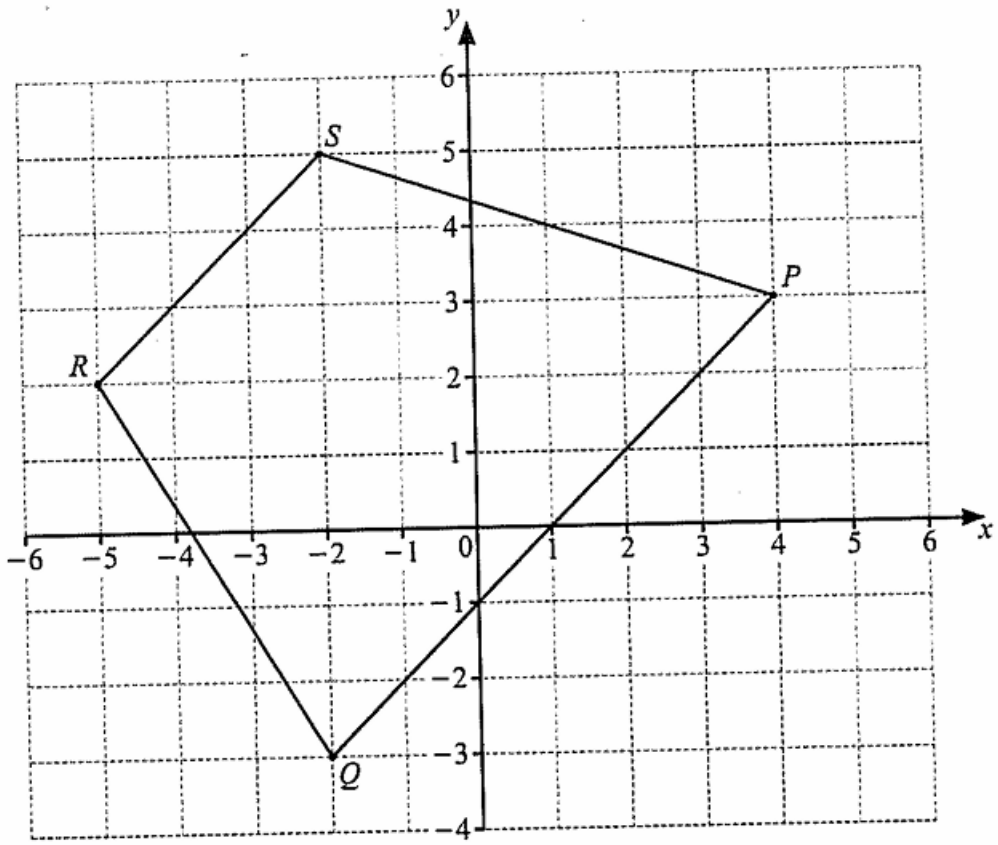
(f) the largest value of $b^2 - a$.

Worksheet # 3 Class 9C

Name: …… Adm. # ……

1. Line L is perpendicular to the line $y = -\frac{1}{2}x + 3$.
Line L passes through the point (8, 9).
Find the equation of line L.

2. P is the point $(h, 7)$.
P lies on the line $3y + 2x = 5$.
(a) Find the value of h.
(b) Line L is perpendicular to the line $3y + 2x = 5$ and passes through P.
Find the equation of line L.

3. 

(a) Write down the name of this special quadrilateral.

(b) Find the coordinates of the midpoint of QR.

(c) The length PS is equal to $\sqrt{m}$ cm.
Find the value of m.

4. P is the point $(-3, 4)$, Q is the point $(5, 1)$.

(a) M is the midpoint of PQ.
Find the coordinates of M.

(b) Find the gradient of PQ.

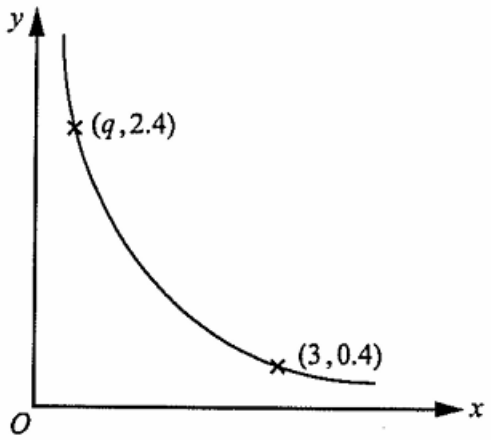
(c) R is the point $(-6, 0)$, O is the point $(0, 0)$.
Which of the points, R or P, is closer to O?
Show your working.

5. **(a)** A is the point $(-1, 3)$ and B is the point $(5, 5)$.

(i) Calculate the length AB.

(ii) Find the equation of the line **perpendicular** to AB that passes through the midpoint of AB.

6.



The graph shows a sketch of the curve $y = \frac{p}{x}$.
Two points on the curve are $(3, 0.4)$ and $(q, 2.4)$.

Calculate the gradient of the straight line joining the points $(3, 0.4)$ and $(q, 2.4)$.

St. Anthony's High School Faisal Town Lahore

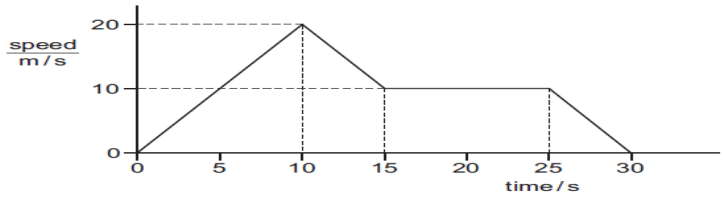
Class 9- C

Name……..

1 Which option contains **only** apparatus that could be used to determine the volume of a small block of unknown material?

A measuring cylinder, metre rule
B measuring cylinder, stopwatch
C metre rule, balance
D metre rule, stopwatch

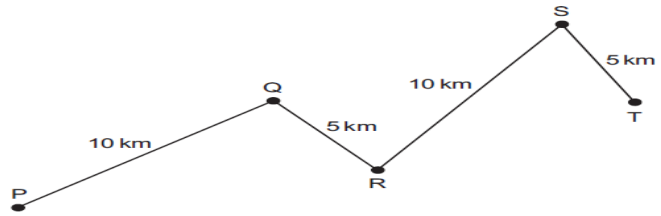
2 The graph represents the motion of a car.



What is the distance travelled by the car while it is moving at a constant speed?

A 100 m **B** 150 m **C** 250 m **D** 300 m

3 A car travels along the route PQRST in 30 minutes.



What is the average speed of the car?

A 10 km/hour **B** 20 km/hour **C** 30 km/hour **D** 60 km/hour

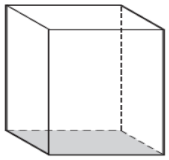
4 The mass of an object is measured on Earth. The mass is 5.0 kg.

The object is taken to the Moon. The mass of the object is measured on the Moon.

What is the mass of the object on the Moon?

A 0 kg
B more than 0 kg, but less than 5.0 kg
C 5.0 kg
D more than 5.0 kg

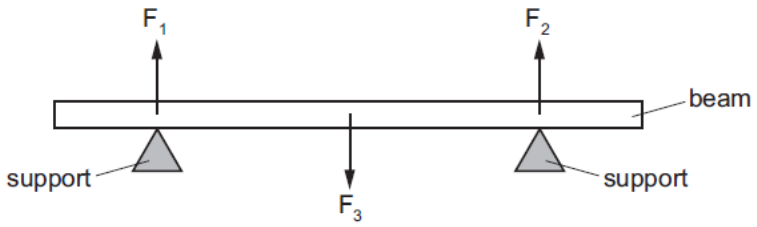
5 A student wishes to determine the density of the solid block shown.



Which quantities must be known?

A the area of the shaded face and the volume of the block
B the area of the shaded face and the weight of the block
C the mass of the block and the height of the block
D the mass of the block and the volume of the block

6 A heavy beam rests on two supports. The diagram shows the only three forces F_1, F_2 and F_3 acting on the beam.



The beam is in equilibrium.

Which statement is correct?

A All the forces are equal in size.

B The resultant force on the beam is in the opposite direction to the resultant turning effect.

C The resultant force on the beam is zero and the resultant turning effect on the beam is zero.

D The total upward force is twice the total downward force.

7 Which list contains only properties of an object that can be changed by a force?

A direction of motion, mass, shape

B direction of motion, mass, speed

C direction of motion, shape, speed

D mass, shape, speed

8 What needs to be known to calculate the work done by a force acting on an object?

	the size of the force	the distance the force moves the object	the time for which the force acts
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✓
D	✓	✗	✗

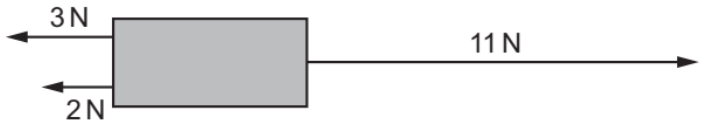
key

✓ = needed

✗ = not needed

9

The diagram shows three forces acting on a block. The resultant force is 6 N to the right.



Which additional force produces a resultant force of 3 N to the left?

A 3 N to the left

B 9 N to the left

C 6 N to the right

D 13 N to the right

10

A teacher measures the length of her classroom.

What is the most appropriate instrument to use?

A a 30 cm ruler

B a caliper

C a micrometer

D a tape

11

Which value is one-thousandth of a metre?

A 0.0001 cm **B** 0.001 cm **C** 0.01 cm **D** 0.1 cm

12 A cylinder of constant volume contains a fixed mass of gas. The gas is cooled.

What happens to the pressure of the gas and what happens to the kinetic energy of the gas molecules?

	pressure of gas	kinetic energy of molecules
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

13 A swimmer feels cold after leaving warm water on a warm, windy day.

Why does she feel cold even though the air is warm?

A The less energetic water molecules on her skin escape quickly.

B The more energetic water molecules on her skin do not escape quickly.

C The water on her skin does not evaporate quickly enough to keep her warm.

D The water on her skin evaporates quickly and cools her skin.

14 A circular metal disc is heated.

Which quantity decreases?

A its density

B its diameter

C its thickness

D its volume

15 The same quantity of thermal (heat) energy is given to two objects X and Y. The temperature rise of object X is less than the temperature rise of object Y.

What accounts for this difference?

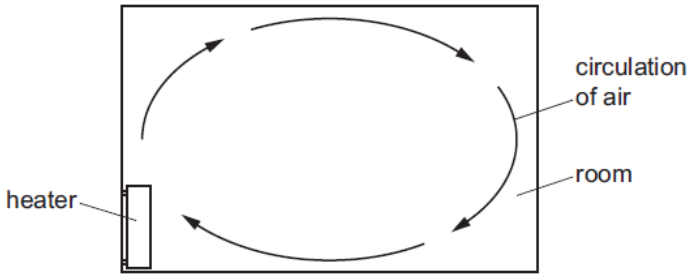
A X has a larger thermal capacity than Y.

B X is a better thermal conductor than Y.

C Y has a larger thermal capacity than X.

D Y is a better thermal conductor than X.

16 The air in a room is heated by a heater. The diagram shows the circulation of the air in the room.



Which statement about the air that is heated is correct?

A The air contracts and becomes less dense.

B The air contracts and becomes more dense.

C The air expands and becomes less dense.

D The air expands and becomes more dense.

17 Four rods are made from different metals P, Q, R and S. The rods have equal lengths and equal diameters. The rods are heated at one end, in the same way.

The table shows the time taken for the temperature at the other end of each rod to rise by 1.0 °C.

Which metal is the best conductor of thermal energy (heat)?

metal	time taken / s
P	35
Q	30
R	45
S	40

A metal P **B** metal Q **C** metal R **D** metal S

18

A student uses a measuring cylinder to measure the volume of a quantity of water.

Which action would make her result **less** accurate?

A making sure her eye is level with the water surface

B making sure the cylinder is vertical

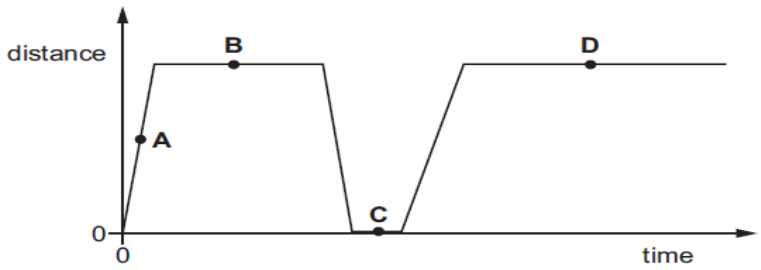
C reading the bottom of the meniscus

D using the largest measuring cylinder possible

19

The diagram shows the distance-time graph for a car.

At which labelled point is the car moving with constant speed?



20

What is the weight of an object?

A the force of gravity on the object

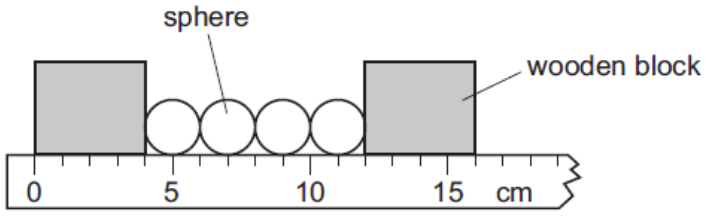
B the gravitational potential energy of the object

C the internal energy of the object

D the mass of the object

21

The diagram shows four identical spheres placed between two wooden blocks on a ruler.



What is the diameter of one sphere?

A 1.0 cm **B** 2.0 cm **C** 3.0 cm **D** 4.0 cm

22

What does the area under a speed-time graph represent?

A acceleration

B average speed

C deceleration

D distance travelled

23

A car travels 100 km. The journey takes two hours. The highest speed of the car is 80 km/h, and the lowest speed is 40 km/h.

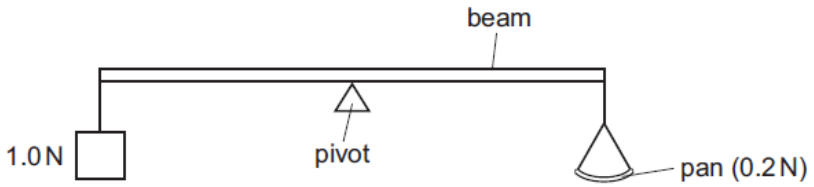
What is the average speed for the journey?

A 40 km/h **B** 50 km/h **C** 60 km/h **D** 120 km/h

24

The diagram shows a uniform beam being used as a balance. The beam is pivoted at its centre.

A 1.0 N weight is attached to one end of the beam. An empty pan weighing 0.2 N is attached to the other end of the beam.

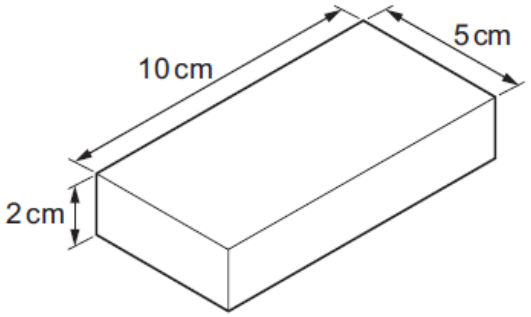


How many 0.1 N weights must be placed on the pan in order to balance the beam?

A 5 **B** 8 **C** 10 **D** 12

25

A metal block has the dimensions shown. Its mass is 1000 g.



What is the density of the metal?

A $\left(\frac{5\times10}{1000\times2}\right)$ g/cm^3

B $\left(\frac{2\times5\times10}{1000}\right)$ g/cm^3

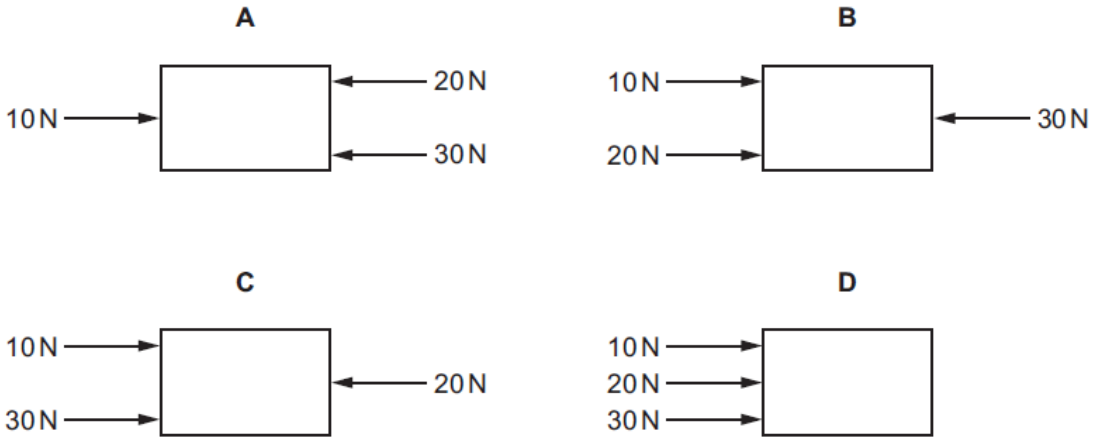
C $\left(\frac{1000\times2}{5\times10}\right)$ g/cm^3

D $\left(\frac{1000}{2\times5\times10}\right)$ g/cm^3

26

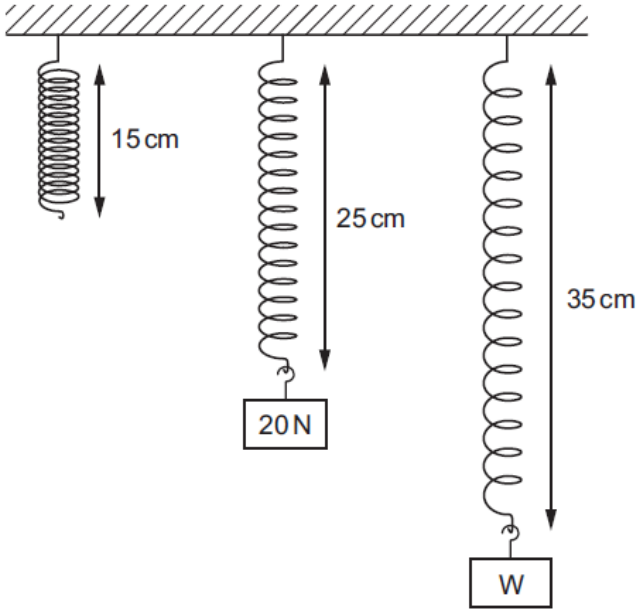
The diagrams show four identical objects. Each object is acted on by only the three forces shown.

Which object accelerates to the right, with the **smallest** acceleration?



27

Different weights are hung from a spring. The diagram shows the original length of the spring, and the lengths when different weights are added.



The extension of the spring is directly proportional to the weight hung from it.

What is the weight of W?

A 30 N **B** 35 N **C** 40 N **D** 45 N

28

Which source of energy involves the splitting of heavy atoms?

A chemical energy

B geothermal energy

C hydroelectric energy

D nuclear energy

29

A cyclist travels down a hill from rest at point X, without pedalling.

The cyclist applies his brakes and the cycle stops at point Y.

Which energy changes have taken place between X and Y?

A gravitational potential → kinetic → thermal (heat)

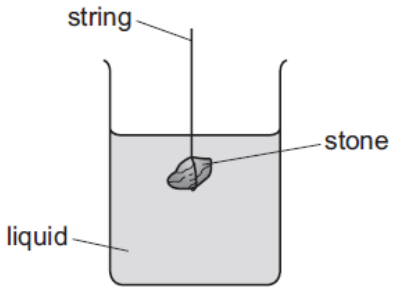
B gravitational potential → thermal (heat) → kinetic

C kinetic → gravitational potential → thermal (heat)

D kinetic → thermal (heat) → gravitational potential

30

The diagram shows a stone suspended under the surface of a liquid from a string. The stone experiences a pressure caused by the liquid.



What would increase the pressure on the stone?

A decreasing the surface area of the stone

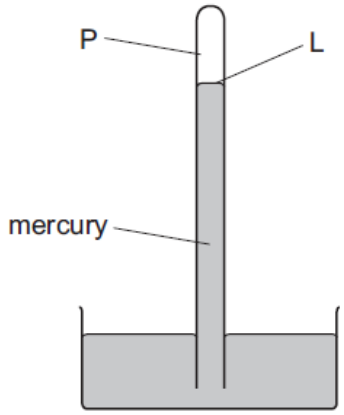
B increasing the mass of the stone

C lowering the stone deeper into the liquid

D using a liquid with a lower density

31

The diagram shows a simple mercury barometer, used to measure atmospheric pressure.



Atmospheric pressure decreases.

Which row states what happens to the pressure at point P and what happens to the level L?

	pressure at P	level L
A	decreases	falls
B	decreases	rises
C	stays the same	falls
D	stays the same	rises

32

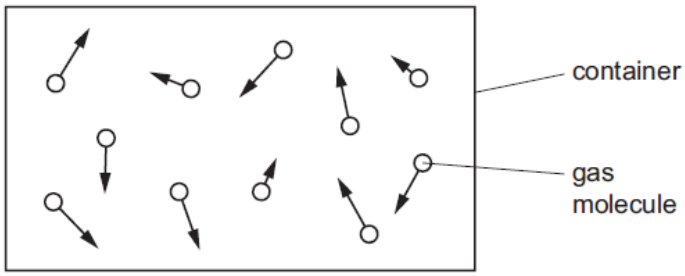
Puddles of rain water remain after a storm. The water in the puddles gradually evaporates.

How does the evaporation affect the temperature of the water remaining in the puddle, and how does it affect the average speed of the remaining water molecules in the puddle?

	temperature of water in puddle	average speed of water molecules in puddle
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

33

The diagram represents moving gas molecules in a sealed container of fixed volume.



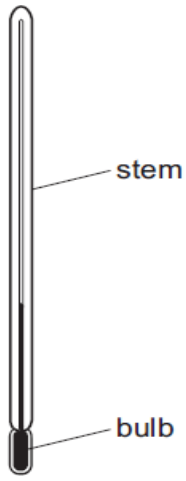
The temperature of the gas is now increased.

What happens to the pressure of the gas, and what happens to the speed of the gas molecules?

	pressure of gas	speed of molecules
A	increases	increases
B	increases	unchanged
C	unchanged	increases
D	unchanged	unchanged

34

The thermometer in the diagram has no scale.



Where must the bulb be placed so that 0 °C can be marked on the stem?

A in a freezer

B in pure boiling water

C in pure cold water

D in pure melting ice

35

Two metal blocks X and Y are at room temperature. Each block is heated so that its temperature rises by 10 °C.

The blocks are now allowed to cool back to room temperature.

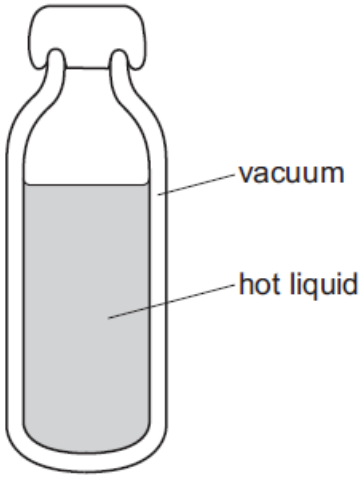
Block Y has a greater thermal capacity than block X.

Which block needs more thermal (heat) energy to heat it up by 10 °C and which block loses more thermal (heat) energy as it cools back to room temperature?

	more energy	
	heating	cooling
A	X	X
B	X	Y
C	Y	X
D	Y	Y

36

The diagram shows a vacuum flask used to keep liquid hot.



How does thermal energy pass through the vacuum?

A conduction only

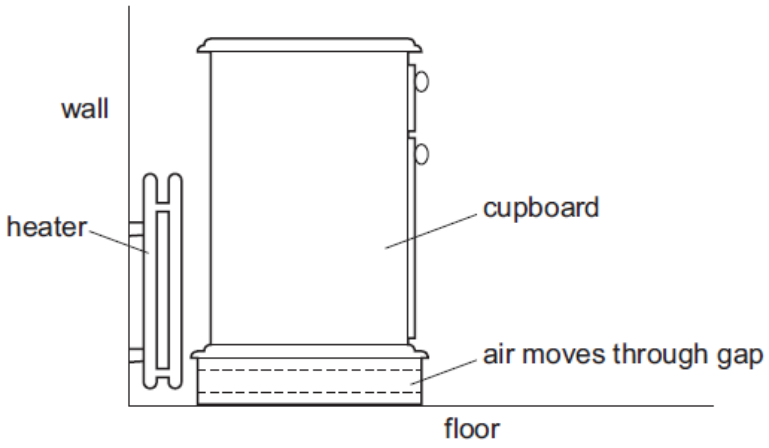
B convection only

C radiation

D conduction and convection

37

A cupboard is placed in front of a heater. Air can move through a gap under the cupboard.

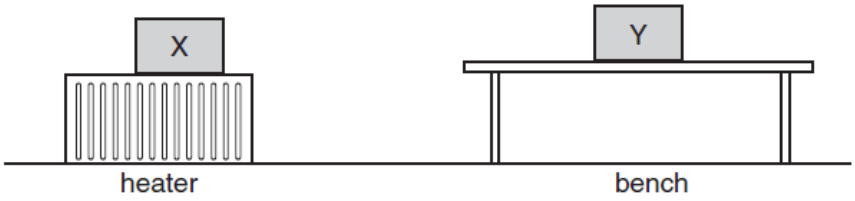


Which row describes the temperature, and the direction of movement, of the air in the gap?

	air temperature	air direction
A	cool	away from the heater
B	cool	towards the heater
C	warm	away from the heater
D	warm	towards the heater

38

Two metal boxes containing air are standing in a room. Box X is on top of a heater. Box Y is on a bench. The boxes are left for a long time.



Which line in the table best describes the average speed of the molecules in the containers?

	box X	box Y
A	fast	zero
B	fast	slow
C	slow	fast
D	zero	fast

39

The top of the mercury thread in a mercury-in-glass thermometer reaches point X at 0 °C and point Z at 100 °C.

Where might it be at a temperature below the ice-point?

A point W

B point X

C point Y

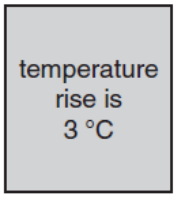
D point Z

40

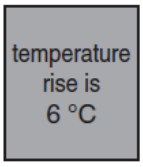
The same quantity of heat energy is applied to four different blocks. The temperature rise produced is shown on each block.

Which block has the highest thermal capacity?

A



B



C

D

Fig. 1.1 shows how the speed of an object varies during a period of 30 s.

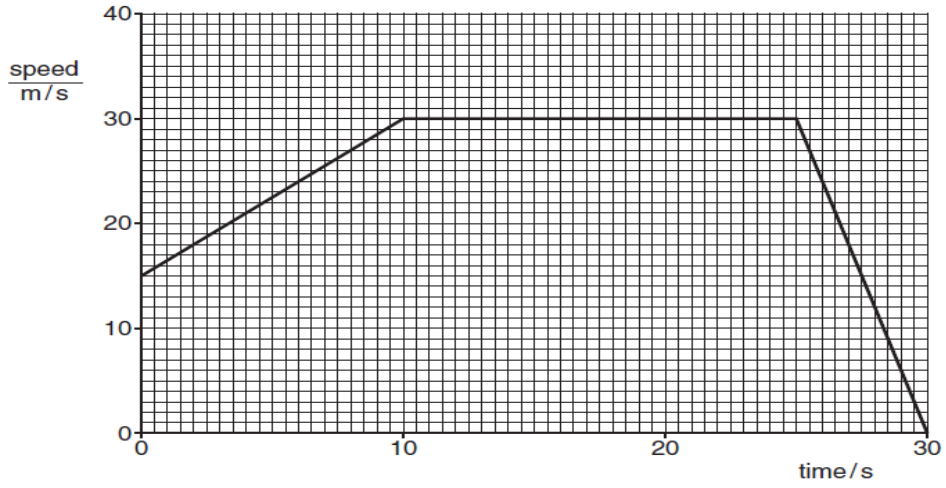


Fig. 1.1

(a) State the speed of the object

(i) at the start, time = 0 s,

speed = ... m/s

(ii) at the end, time = 30 s.

speed = ... m/s
[2]

(b) Describe what, if anything, is happening to the speed during the period 10 s to 25 s.

..... [1]

(c) Determine the distance travelled in the last 5 s.

distance = ... m [3]

(d) The total distance travelled during the 30 s is 750 m.

Calculate the average speed of the object during the 30 s.

average speed = ... m/s [3]

[Total: 9]

2 The car in Fig. 2.1 is on a level road.

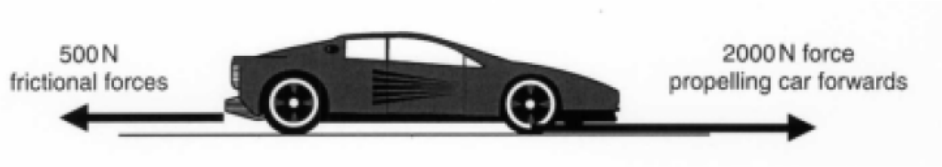


Fig. 2.1

(a) Calculate the magnitude of the resultant force on the car.

resultant force = ... N [1]

(b) Tick the box below that describes the motion of the car.

- ☐ travels forward at constant speed
- ☐ travels forward with increasing speed
- ☐ travels forward with decreasing speed
- ☐ travels backward at constant speed
- ☐ travels backward with increasing speed
- ☐ travels backward with decreasing speed
- ☐ remains at rest

[1]

(c) Later, the car is moving forwards and the frictional forces suddenly increase to 2500 N. The forwards force remains constant at 2000 N.

Describe and explain what happens to the car.

.....

..... [2]

(d) Suggest what might have caused the frictional forces in **(c)** to increase.

..... [1]

[Total: 5]

3

A train travels along a straight horizontal track. At time $t = 0$, the train passes through station P at constant speed without stopping.

The driver applies the brakes 70 s before reaching station Q. The train decelerates.

Fig. 1.1 is the speed–time graph for the train from $t = 0$ until it stops at station Q.

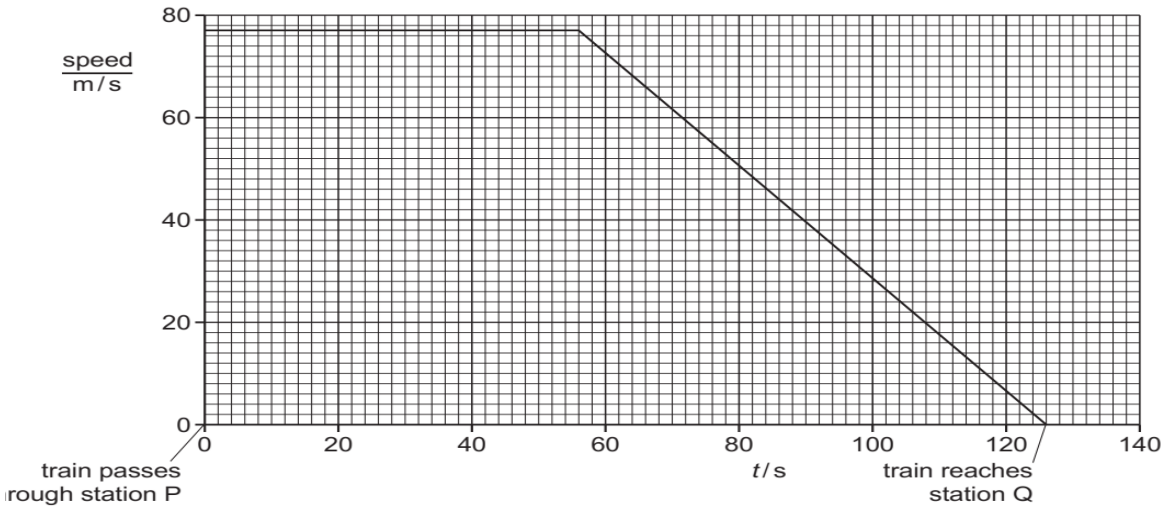


Fig. 1.1

(a) Using Fig. 1.1, determine the distance between station P and station Q.

distance = ... [3]

(b) The mass of the train is 3.8×10^5 kg.

(i) Determine the deceleration of the train in the 70 s before it stops at station Q.

deceleration = ... [2]

(ii) Calculate the resultant force on the train as it decelerates.

resultant force = ... [2]

[Total: 7]

4 **(a)** State what is meant by the *moment* of a force.

.....

..... [1]

(b) A warehouse worker is about to close a large door, as shown in Fig. 4.1.

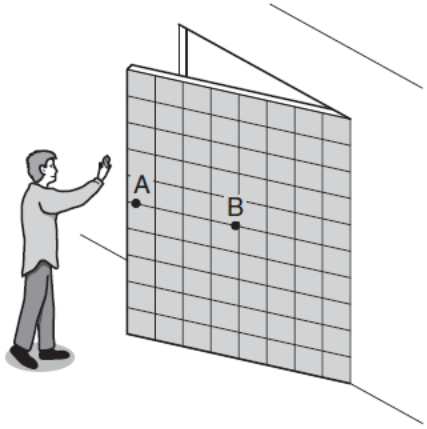


Fig. 4.1

(i) State, with a reason, which of the two positions, A or B, will enable him to close the door with least force.

.....

.....

..... [1]

(ii) On another occasion, with the door in the position shown in Fig. 4.1, two workers each push on the door with the same force at the same time. One worker pushes at A, from the side seen in Fig. 4.1. The other worker pushes at B, from the other side of the door.

Which way does the door move, if at all? Tick one box.

☐ the door closes

☐ the door opens

☐ the door remains in the same position

[1]

[Total: 3]

5

The foundations that support a building are long concrete cylinders that are pointed at one end. A pile-driver is a machine that forces the pointed concrete cylinders into the ground.

Fig. 2.1 shows a pile-driver.

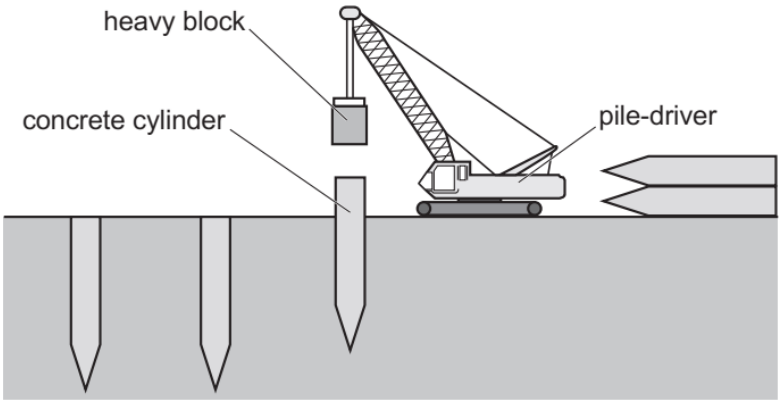


Fig. 2.1

A heavy block of mass 2.9×10^4 kg is lifted into the air then dropped onto the top of a concrete cylinder. This forces the cylinder into the ground.

(a) Fig. 2.2 shows the heavy block.

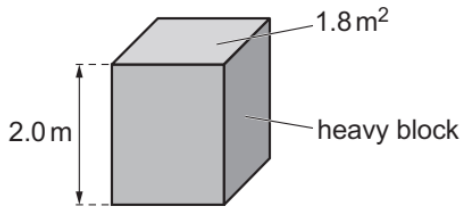


Fig. 2.2

The block is 2.0 m tall and has a cross-sectional area of 1.8 m^2.

Calculate the density of the material used to make the block.

density = ... [2]

(b) The pile-driver lifts the block from the top of a concrete cylinder, through a height of 0.80 m.

The gravitational field strength g is 10 N / kg.

(i) Calculate the gravitational potential energy gained by the block.

gravitational potential energy = ... [2]

(ii) The block is then dropped from rest onto the top of the concrete cylinder.

Calculate the speed of the block just before it hits the concrete cylinder.

speed = ... [3]

[Total: 7]

6 The owner of a small factory suggests installing a wind turbine to generate some of the electricity needed by the factory.

(a) Give one environmental reason for using a wind turbine.

..... [1]

(b) Discuss **three** of the factors that the owner will need to consider when deciding whether to install a wind turbine.

.....

.....

.....

.....

.....

..... [4]

[Total: 5]

7 Fig. 7.1 shows a stationary pole vaulter holding a straight pole. Fig. 7.2 shows him during the vault with the pole bent.

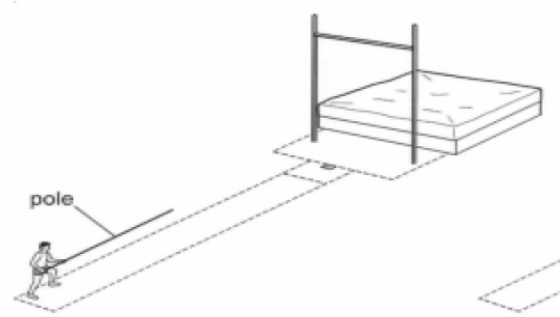


Fig. 7.1

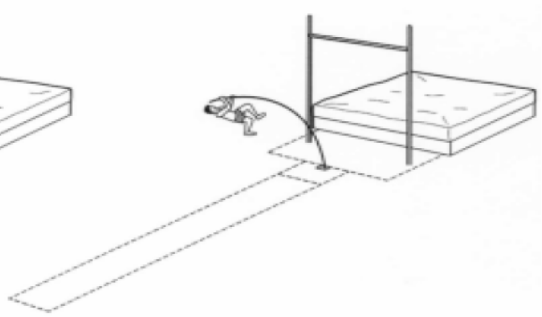


Fig. 7.2

(a) Identify the energy changes that have taken place, for the pole vaulter and for the pole, between the situations shown in Figs. 7.1 and 7.2. State the evidence for these changes.

.....

.....

.....

.....

.....

..... [4]

(b) The pole vaulter releases the pole and clears the bar.

Explain how the principle of conservation of energy applies as he falls from his maximum height.

.....

.....

..... [2]

[Total: 6]

8

Fig. 1.1 shows apparatus used to find a relationship between the force applied to a trolley and the acceleration caused by the force.

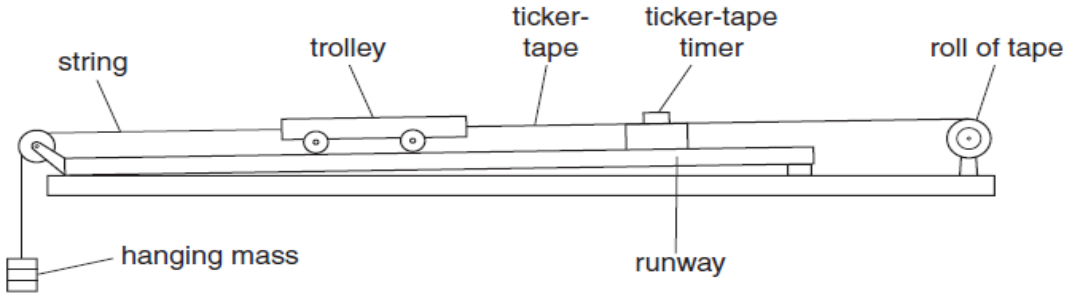


Fig. 1.1

For each mass, hung as shown, the acceleration of the trolley is determined from the tape. Some of the results are given in the table below.

weight of the hanging mass / N	**acceleration of the trolley / m/s^2**
0.20	0.25
0.40	0.50
0.70	
0.80	1.0

(a) (i) Explain why the trolley accelerates.

.....

..... [2]

(ii) Suggest why the runway has a slight slope as shown.

.....

..... [1]

(b) Calculate the mass of the trolley, assuming that the accelerating force is equal to the weight of the hanging mass.

mass = ... [2]

(c) Calculate the value missing from the table. Show your working.

value = ... [2]

(d) In one experiment, the hanging mass has a weight of 0.4 N and the trolley starts from rest.

Use data from the table to calculate

(i) the speed of the trolley after 1.2 s,

speed = ... [2]

(ii) the distance travelled by the trolley in 1.2 s.

distance = ... [2]

[Total: 11]

9

(a) Fig. 3.1 shows the horizontal forces acting on a swimmer.

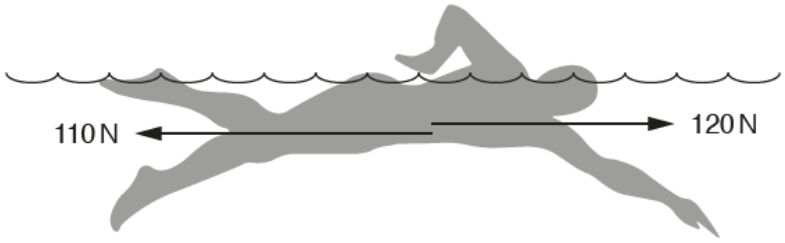


Fig. 3.1

(i) Calculate the size and direction of the resultant horizontal force on the swimmer.

size of resultant horizontal force = ... N

direction of resultant horizontal force = ...

[1]

(ii) State the name of the 110 N force on the swimmer.

..... [1]

(iii) Fig. 3.2 shows the horizontal forces acting on the swimmer as he moves forwards a short time later.

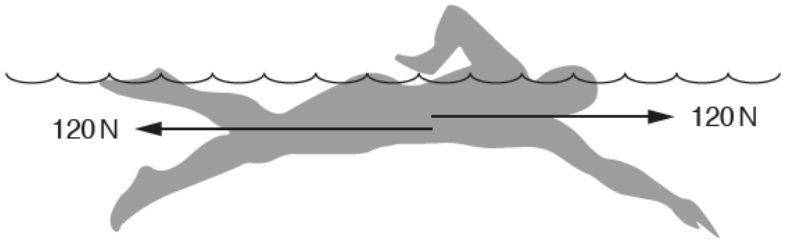


Fig. 3.2

Describe and explain the motion of the swimmer.

.....

..... [2]

(b) Another swimmer weighs 700 N. He stands on a diving board, as shown in Fig. 3.3.

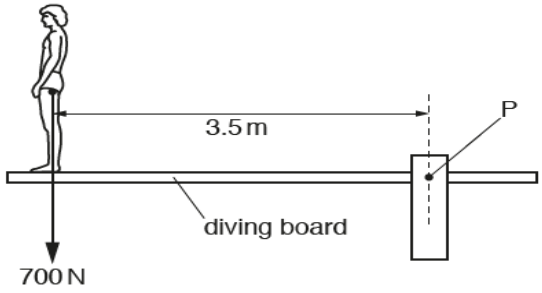


Fig. 3.3

Calculate the moment of the swimmer's weight about point P.

moment = ... Nm [3]

[Total: 7]

10

Fig. 3.1 shows part of the extension-load graph for a spring.

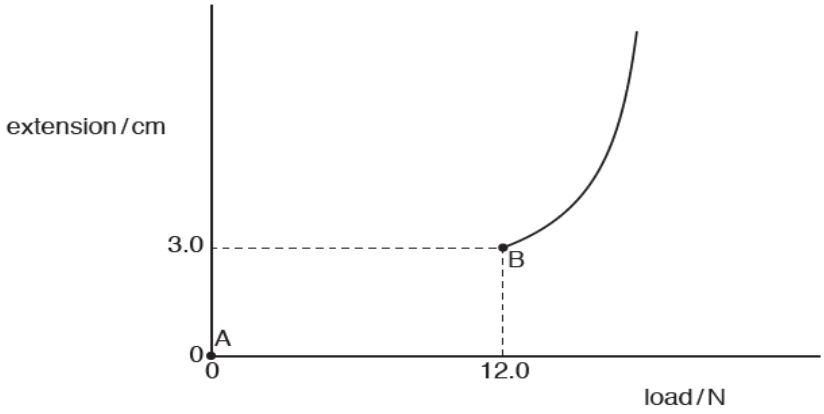


Fig. 3.1

The spring obeys Hooke's law between points A and B.

(a) **(i)** On Fig. 3.1, complete the graph between A and B. [1]

(ii) State the name of point B.

.....[1]

(b) The average value of the load between A and B is 6.0 N.

Calculate the work done in extending the spring from A to B.

work done = ...[2]

(c) The spring has an unstretched length of 4.0 cm.

An object is hung on the spring and the spring length increases from 4.0 cm to 6.0 cm.

(i) Calculate the mass of the object.

mass = ...[3]

(ii) The object is immersed in a liquid but remains suspended from the spring.

The liquid exerts an upward force on the object and the length of the spring decreases to 5.0 cm.

Calculate the upward force exerted on the object by the liquid.

upward force = ...[2]

[Total: 9]

11

Fig. 1.1 is the speed-time graph for a stone as it falls to the ground.

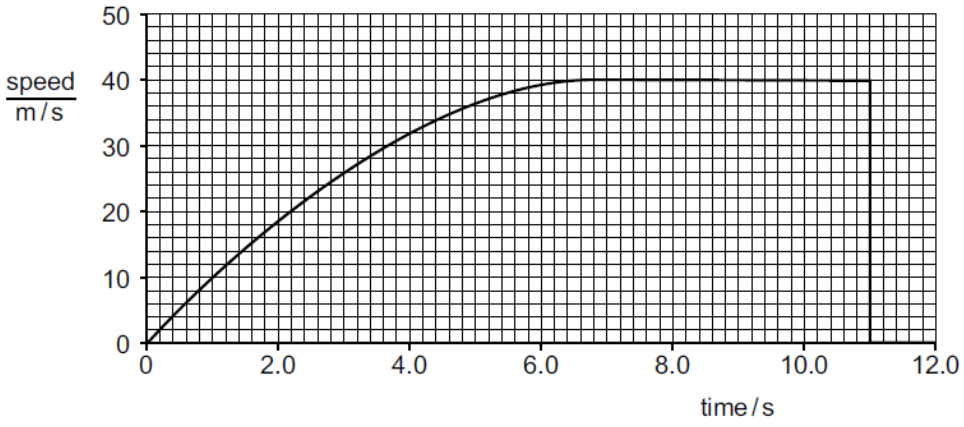


Fig. 1.1

(a) **(i)** On Fig. 1.1, mark:

- a letter **X** to indicate a point where the rock is moving with a constant speed
- a letter **Y** to indicate a point where the rock is decelerating.

[2]

(ii) At time $t = 0$, the acceleration of the stone is equal to the acceleration of free fall.

Give the name of the force accelerating the stone at time $t = 0$.

..... [1]

(b) The weight of the stone is 4.0 N.

As the stone falls, the force F of air resistance acting on the rock changes.

(i) State the value of F at time $t = 0$.

F = ... N [1]

(ii) State the value of F at time $t = 10.0$ s.

F = ... N [1]

(iii) Suggest why F changes between $t = 0$ s and $t = 10.0$ s

.....

.....

..... [1]

(c) (i) Using Fig. 1.1, determine the acceleration of the rock at time $t = 4.0$ s. State the unit of your answer.

You will need to draw a tangent to the graph in Fig. 1.1 and show your working.

acceleration = ... unit = ... [3]

(ii) The mass of the stone is 408 g.

Determine the force F of air resistance acting on the rock at time $t = 4.0$ s.

Show your working.

F = ... N [2]

[Total: 11]

اُردو ورق شیٹ1 | سینٹ انتھونی ہائی سکول | جماعت نہم سی

کوڈ3248 | فیصل ٹاؤن لاہور | July 2025

پرچہ2 حصہ اُردو میں ترجمہ

آپ صفحہ نمبر۱۵۷تا ۱۷۵کے تمام انگریزی پیراگراف کا اُردو میں بامحاورہ ترجمہ کریں۔

نوٹ انگریزی سے اُردو ترجمہ کرنے کے لیے اسائنمٹ شیٹس کا استعمال کریں۔

اُردو ورق شیٹ2 | سینٹ انتھونی ہائی سکول | جماعت نہم سی

کوڈ 3248 | فیصل ٹاؤن لاہور | July 2025

پرچہ 2

حصہ مضمون نگاری

آپ صفحہ نمبر۹۹ تا ۱۱۵ کے عنوانات کا بغور جائزہ لینے کے بعد تمام مضامین کو دی گئی ہدایات کے پیش نظر خوشخط لکھیں۔

مضامین کے عنوانات

☆ٹی وی پروگراموں میں بہتری لانے کی اشد ضرورت ہے۔

☆گھروں میں پالتوں جانوروں کے رکھنے کے بڑے فائدے ہیں۔

☆بے روزگاری سے معاشرتی برائیوں اور جرائم کو فروغ ملتا ہے۔

☆نوجوان نسل موبائل فون کا استعمال صحیح نہیں کر رہی۔

☆شجر کاری سے صحت افزا ماحول اور بے شمار فائدے حاصل ہوتے ہیں۔

☆چڑیا گھر کو ختم کرنے کی بجائے بہتر بنانے کی ضرورت ہے۔

اُردو ورق شیٹ3 | سینٹ انتھونی ہائی سکول | جماعت نہم سی

کوڈ3248 | فیصل ٹاؤن لاہور | July 2025

پرچہ2

سوال۔ حصہ جملے سے جملہ بنانا

آپ صفحہ۳ تا ۲۰ تک کے تمام جملوں کو دی گئی ہدایات کی مدد سے بنائیں۔

جملہ بناتے وقت احتیاط کریں کہ جملے کا مفہوم نہ بدلے۔

حصہ خالی جگہ پُر کریں

سوال آپ صفحہ نمبر۳۶ تا ۵۰ کی عبارات کو غور سے پڑھنے کے بعد خالی جگہوں کو پر کریں۔

اُردو ورق شیٹ4 | سینٹ انتھونی ہائی سکول | جماعت نہم سی

کوڈ 3248 | فیصل ٹاؤن لاہور | June2025

تفہیم عبارت

(پرچہ نمبر1)

سوال۔ تفہیم عبارات جو کہ صفحہ نمبر41,43,47,49,51 پر درج ہیں آپ ان عبارات کو بغور پڑھنے کے بعد عبارات کے آخر میں دیے گئے سوالات کے جوابات خوشخط لکھیں۔

نوٹ۔ مندرجہ بالا سوالات کو حل کرنے کے لیے علیحدہ نوٹ بک کا استعمال کریں۔

حصہ مضامین

سوال۔ مضمون پابندی وقت تعلیم نسواں پڑھنے کے بعد دیے گئے سوالوں کے جوابات خوشخط لکھیں۔

نوٹ۔ مندرجہ بالا سوالات کو حل کرنے کے لیے علیحدہ نوٹ بک کا استعمال کریں۔

پرچہ 1

سوال۔ مشق نمبر تین میں آپ نے لازمی ووٹنگ کا نظام، ایک اچھا طالب علم ، ٹیلی ویژن،اوراخبارات کی اہمیت پڑھا جو کہ آپ کی کتاب کے صفحہ،۔235،،۔233۔229 ,231پر ہے آپ اس ان کے تعلق سے 100 الفاظ پر مشتمل ایک خلاصہ جات لکھیں۔

حصہ .Multiple Matching پرچہ ا

سوال۔

بے ترتیب جملوں،لفظوں کا درست عبارت سے ملانا۔

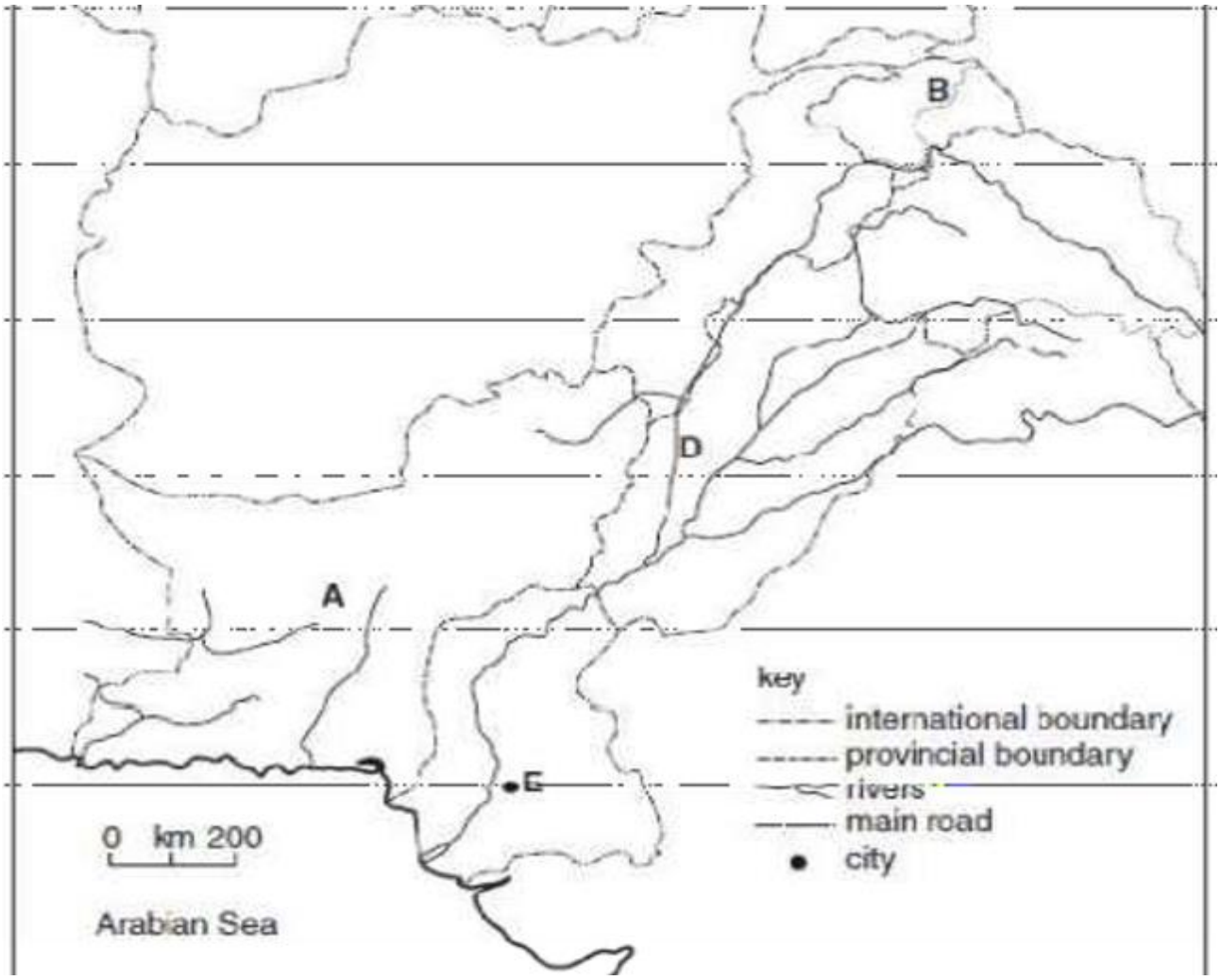
آپ صفحہ نمبر 66 تا 77 تمام عبارات کو بغور پڑھنے کے بعد اپنے جواب کے لیے عبارت اے۔بی ۔سی ۔ڈی کو بغور پڑھنے کے بعد اپنے جواب کی نشاندہی کریں۔

حصہ نوٹس بنانا۔ نمونے کی مشقیں

St Anthony's High School Faisal Town Lahore
Assessments No:1(Summer Vacations 25)
CLASS:9C

Subject: Geography Unit:1. **Timings: 30mins**

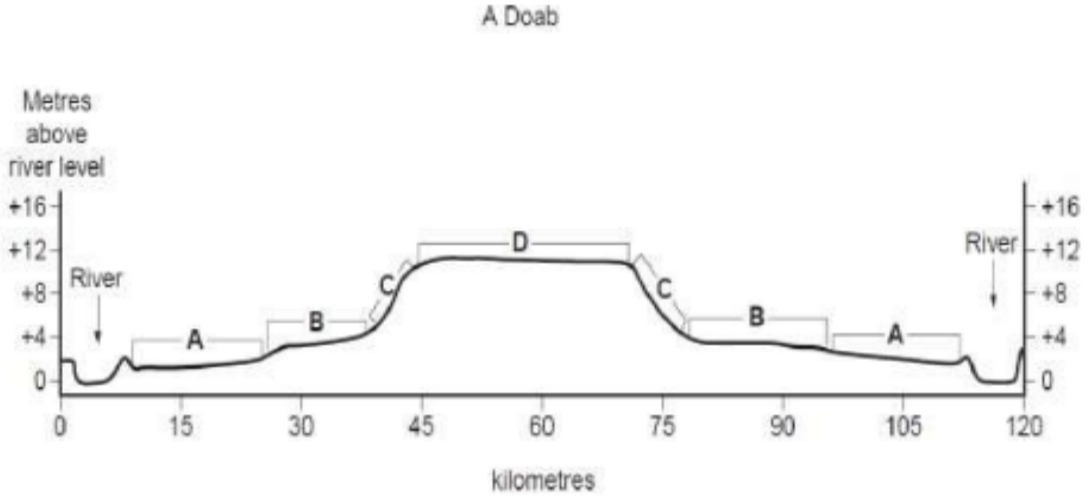
Q:a. Study Fig. 1.1



On your answer paper name.

province A, the main road B, country C, river D, city E.
[5]

b. For each of the following, give the name of the physical feature and describe its main physical characters.



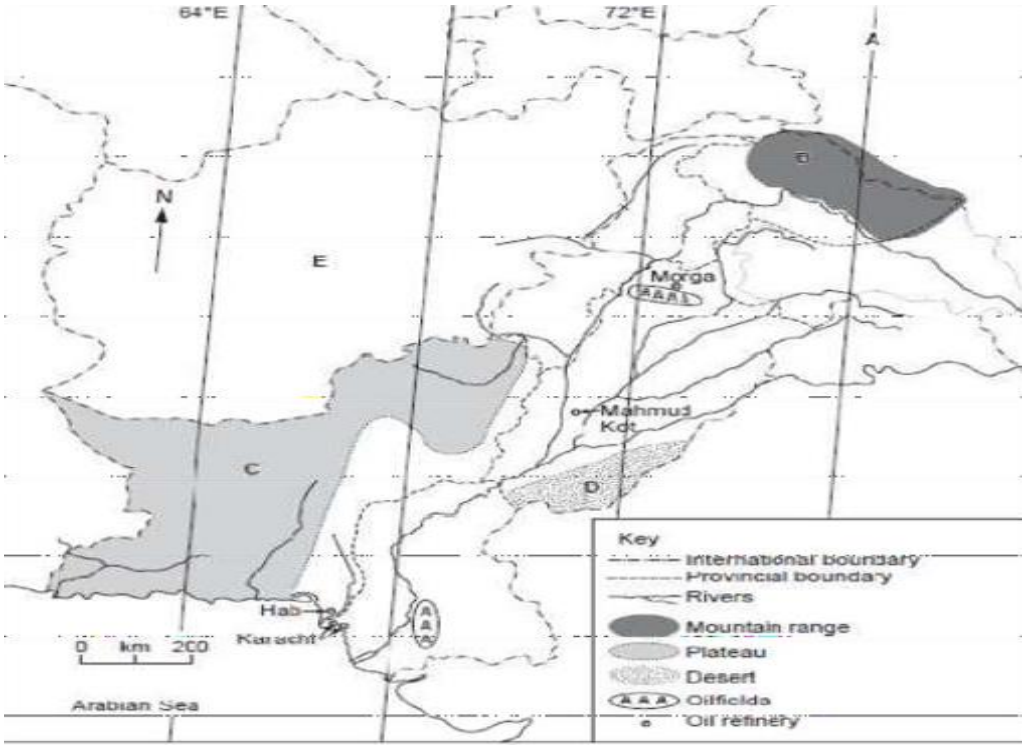
A. …… [3]

B. …… [3]

C. …… [2]

D. …… [2]

c. Study Fig. 2.1



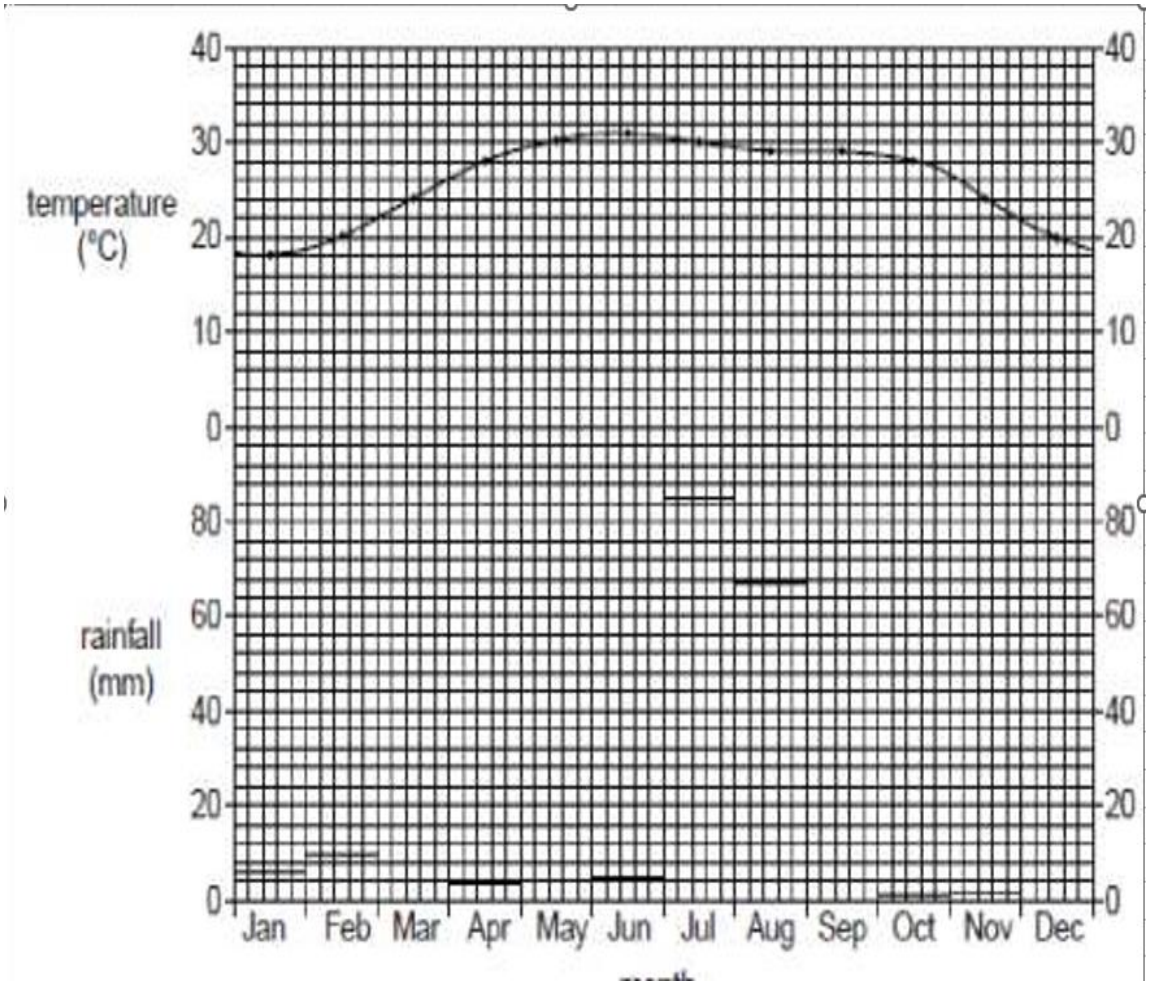
On your answer paper,
i) state the number of degrees East of longitude A, [1]
ii) name the mountain range B, b
[1]
iii) name the plateau C, [1]
iv) name the desert D [1]
d. Evaluate the extent to which the natural topography of Pakistan's mountain regions is a greater challenge for economic development than the natural topography of the plateau regions. Give reasons support your judgement and refer to example you have studied. You should consider different points of view in your answer.

[6]

St Anthony's High School Faisal Town Lahore
Assessments No:2 (Summer Vacations 25.)
CLASS:9C

Subject: Geography Unit:2. **Timings: 30mins**

Q. a. Study Fig. 3 which shows the climate of Karachi.



.

i. By how much does the temperature rise from January to May? [1]

ii. Describe the pattern of rainfall during the winter season from October to March. [2]

iii. With reference to Fig. 3 only, describe the climate of the months from June to September. [4]

b. Explain the causes of the monsoon at Karachi. [4]

c. i. Name the violent storms that form over the sea and that may affect Karachi. [1]

ii, In which months may these occur? [1]

iii. Explain how storms such as these may affect industry and communications in urban areas. [6]

d. Read the article below.

The continuing power cuts and load shedding in the expanding commercial city of Karachi must be addressed. The port city lies on the shores of the Arabian Sea, and has a windy and sunny climate.
The huge population and many industries generate a huge amount of waste that needs to be disposed of.

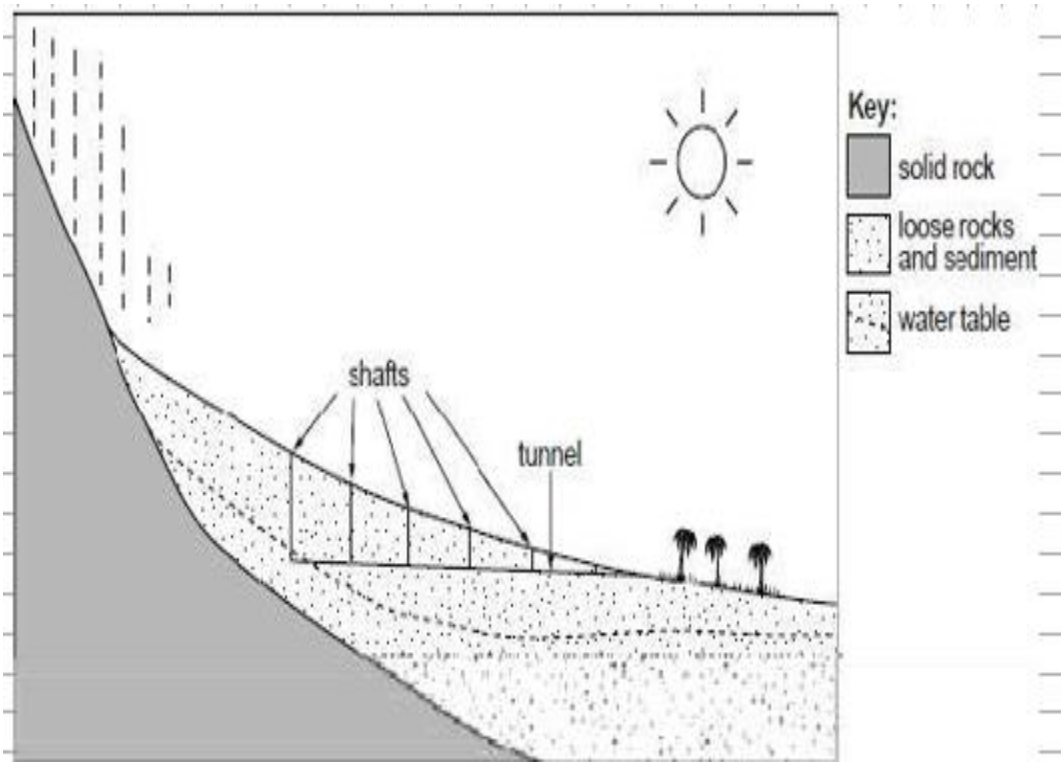
Assess the possibilities and problems for electricity generation other than by fossil fuels at Karachi.

[6]

St Anthony's High School Faisal Town Lahore
Assessments No:3(Summer Vacations 25.)
CLASS:9C

Subject: Geography Unit:3. **Timings: 30mins**

Q;. a. Study Fig. 4 which shows an irrigation system.



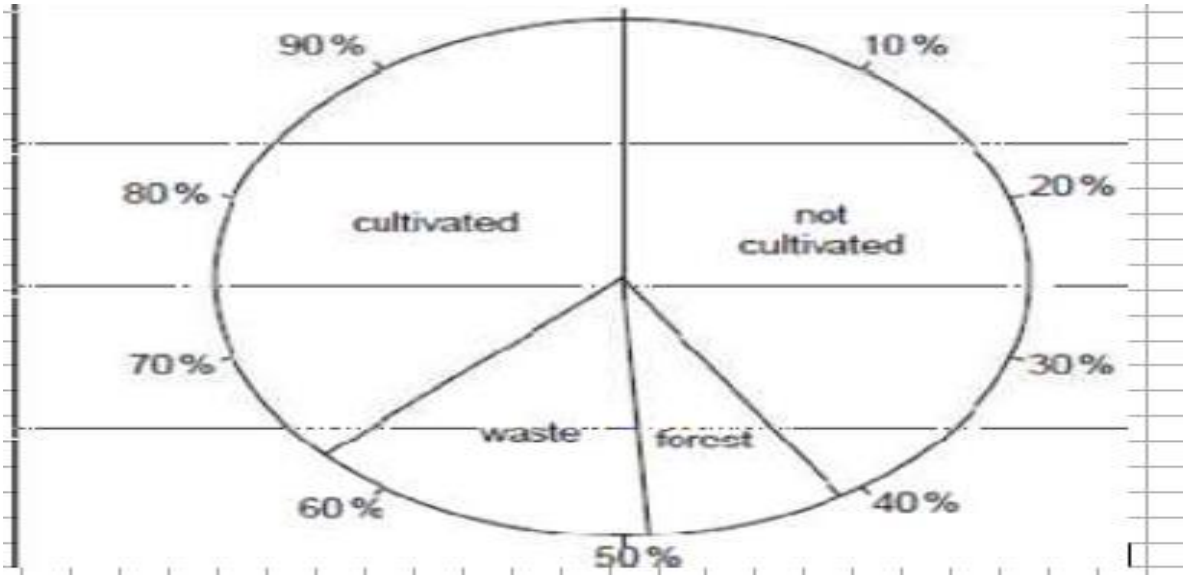
i. Name the irrigation system shown in Fig. 4. [1]

ii. Name an area of Pakistan where it is used.
[2]

iii. Explain how this system provides water for agriculture in this area.
[4]

iv. Name a fruit crop grown in this area.
[1]

b. i. Study Fig. 5 which shows the results of a land-use survey in Pakistan in 2008.



i. What percentage of land is cultivated? [1]

ii. What percentage of land is waste?
[1]

iii. Explain how soils are damaged by water-logging and salinity.
[4]

iv. Explain three reasons, other than by water-logging and salinity, why over halfthe land was not cultivated when the survey was made.
[5]

c. To what extent could government action increase agricultural production in Pakistan?
[6]

St Anthony's High School Faisal Town Lahore
Assessments No:4 (Summer Vacations 25.)
CLASS:9C

Subject: Geography Unit:4. **Timings: 30mins**

Q: a Study the fig no:1

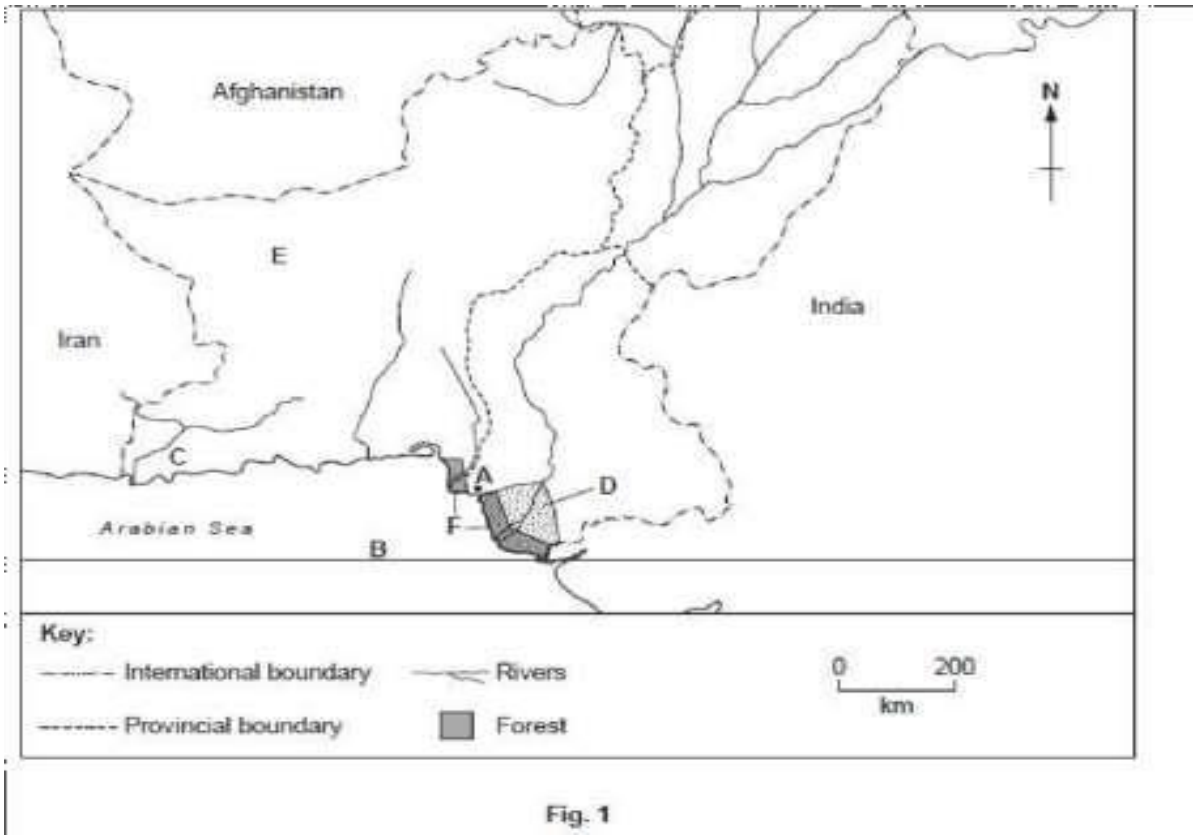
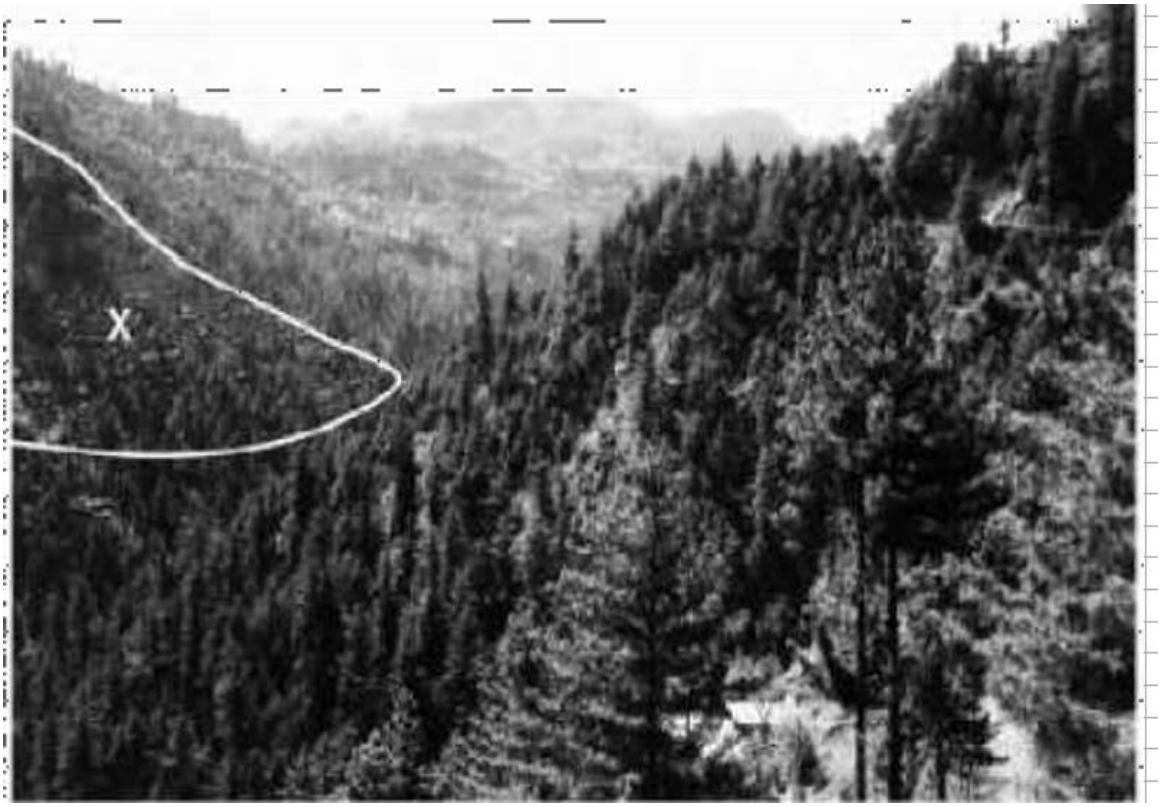


Fig. 1

i. What type of forest grows in the area F on Fig. 1
[1] ii. Why is this type of forest only found in this area?
[1] iii. The area of this forest has decreased in size in recent years. How and why has this affected the local fisheries?
[2]

b. Study Photograph A of an area in the Shangla District of NWFP.



i. Describe in not more than two words the topography (relief) shown in the photograph. [1]

ii. What type of trees are shown in the photograph? [1]

iii. At what altitude do these trees grow in NWFP? [1]

c. i. Trees have been cut down in area X. What effects may this have on the soil there? [2]

ii. How can deforestation affect water supplies? [3]

iii. State and explain one way in which the effects of deforestation can be reduced. [3]

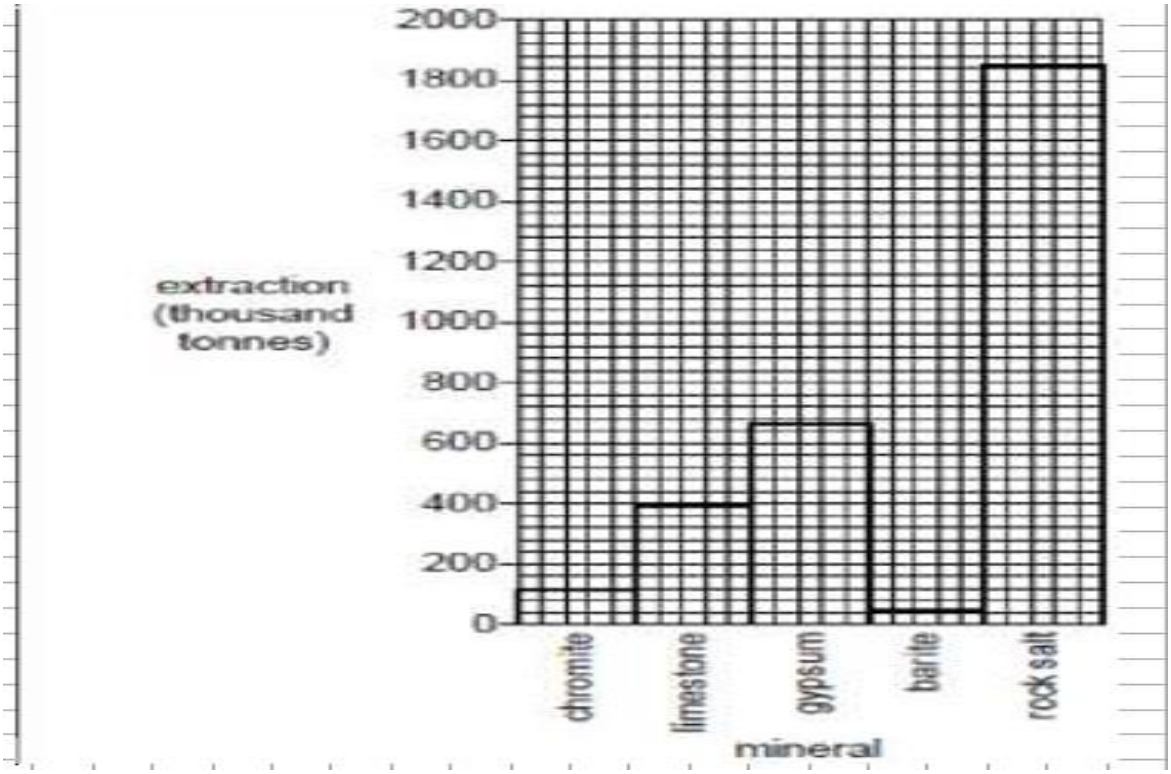
iv. Why are there irrigated plantations of trees in the Indus Plain? [4]

d. Explain the advantages and disadvantages of developing more irrigated plantations of trees in lowland areas of Punjab and Sindh. [6]

St Anthony's High School Faisal Town Lahore
Assessments No:5 (Summer Vacations 25.)
CLASS:9C

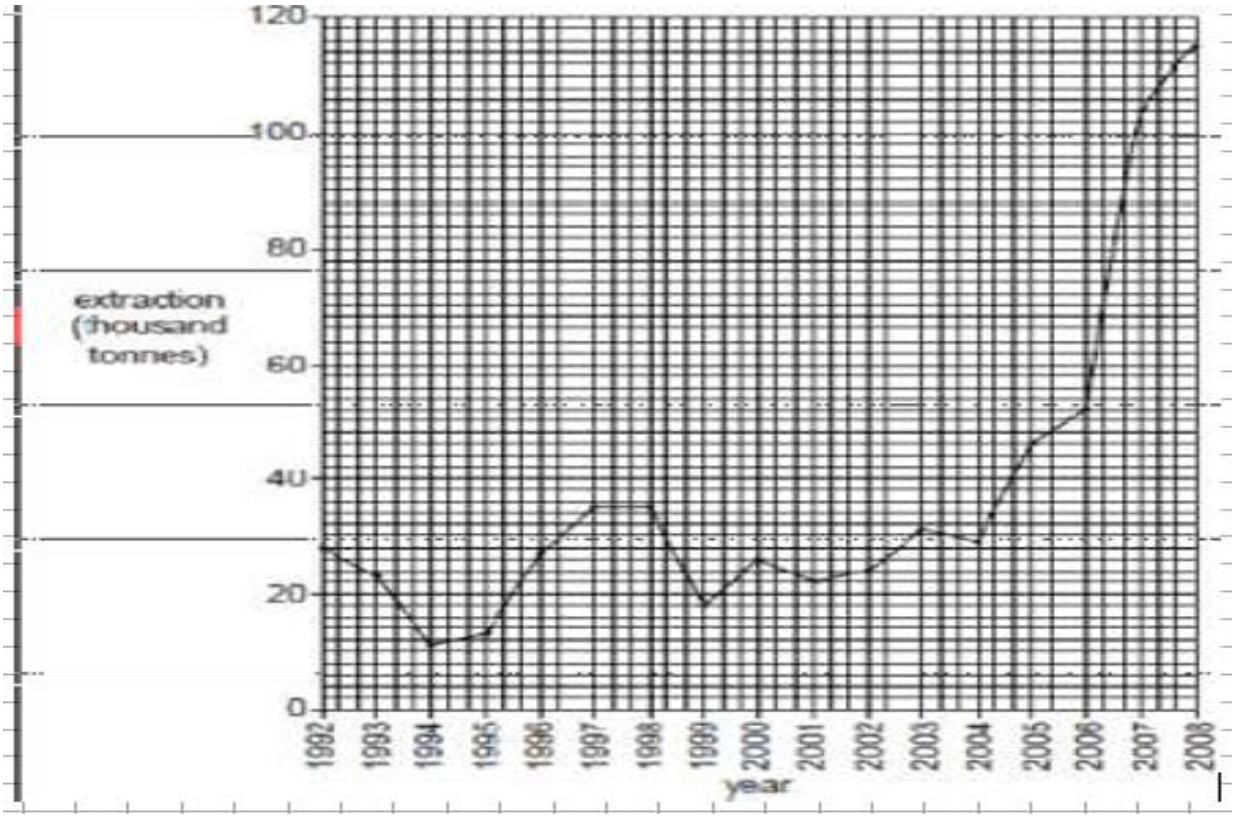
Subject: Geography Unit:5. **Timings: 30mins**

Q: a. Study Fig. 1 which shows mineral extraction in 2008 in Pakistan.



i. Name two minerals shown on Fig. 1 that are used to make cement.
[2]
ii. State two uses of rock salt. [2]
iii. State the amount of gypsum extracted.
[1]

b. Study Fig. 2 which shows chromite extraction in Pakistan.



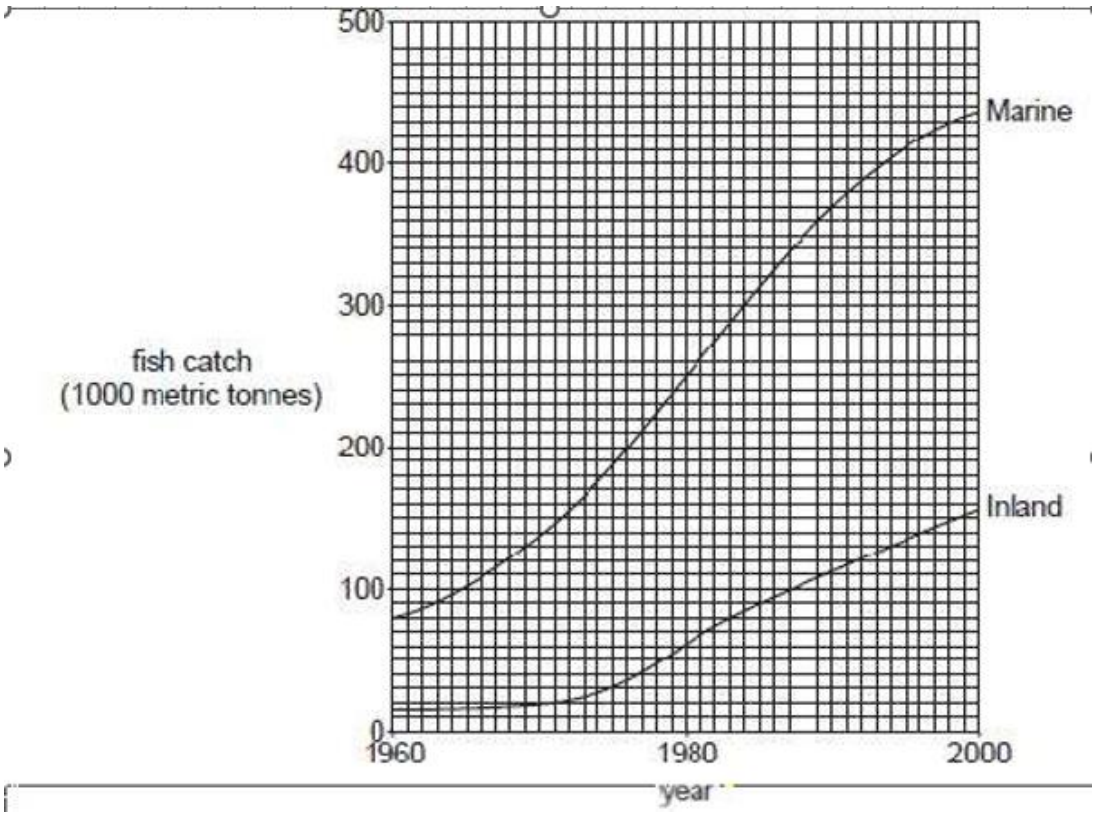
i. Describe the changes in extraction from 1992 to 2008. [3]
ii. Suggest why the extraction of minerals, such as chromite, varies from year to year. [3]
c. i. Name three ways by which coal is mined. [3]
ii. Why is coal produced in Pakistan described as low quality? [3]
iii. Name any two kinds of coal find in Pakistan. [2]

d. To what extent can more extraction of mineral resources help to increase development in Pakistan? [6]

St Anthony's High School Faisal Town Lahore
Assessments No:6
CLASS:9C

Subject: Geography Unit:6. **Timings: 30mins**

Q:1. a. Study Fig. 3, a graph comparing the production of marine and inland fisheries in Pakistan.



i. Compare the changes shown in the graph. [3]
ii. Explain why more people are employed in inland fisheries than marine fishing. [3]
b. i. Why is fish farming of growing importance in Pakistan? Credit will be given if you name a species of fresh water fish reared on fish farms. [4]
ii. Name two fishing ports on the coast of Baluchistan. [2]
iii. Describe subsistence fishing methods. Describe subsistence fishing methods. [3]
c. How does the poor infrastructure of Baluchistan make development of the fishing industry difficult? [4]

d. study Fig. 3.1

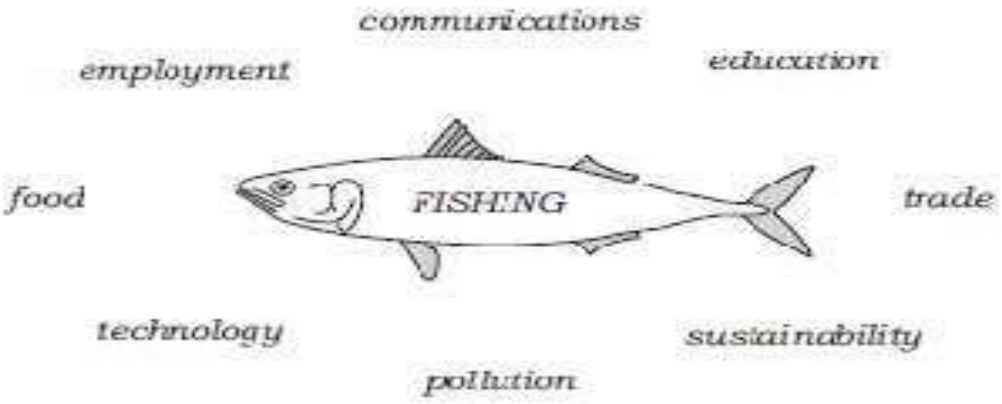


Fig. 3

With reference to Fig. 3.1 explain the advantages and disadvantages of developing the fishing industry in Pakistan. [6]

Worksheet 1

Question 1

Source A

"The Mughal dynasty was notable for its more than two centuries of effective rule over much of India; for the ability of its rulers, who through seven generations maintained a record of unusual talent; and for its administrative organisation. A further distinction was the attempt of the Mughals was to integrate Hindus and Muslims into a united Indian state."

An excerpt from Encyclopaedia Britanica,

Source B

Answer the following question.

Study the sources carefully and then answer the questions which follow.

a) **According to Source A what do we learn about the Mughal rule in India? [3]**
b) **With reference to Source B, describe the Mughal rule in India. [5]**
c) **Briefly explain three reasons for the decline of the Mughal Empire. [7]**
d) **Were the policies of Aurangzeb the main reason for the decline of the Mughal Empire? Explain your answer. [10]**

Question 2

a) **Who were the Mughals? [4]**
b) **Explain why the Mughal Empire declined following the reign of Aurangzeb. [7]**
c) **Was the in-fighting between Aurangzeb's successors the most important reason for the breakup of the Mughal Empire? Explain your answer. [14]**

Question 3

a) **Who was Ahmad Shah Durrani? [4]**
b) **Explain why the successors of Aurangzeb failed to prevent the decline of the Mughal Empire. [7]**
c) **Were the invasions by the Persians and Afghans the main reason for the decline of the Mughal Empire? Explain your answer. [14]**

Question 4

a) **Who was Ranjit Singh? [4]**
b) **Explain why the Mughal Empire declined following the death of Aurangzeb. [7]**
c) **'The spread of Marathan power was the main reason for the decline of the Mughal Empire.' Do you agree or disagree? Give reasons for your answer. [14]**

Worksheet 2

Question 1

Source A

"In 1615, Thomas Roe finally arrived in Ajmer, bringing presents of hunting dogs, some Mannerist paintings and many crates of red wine for which Jahangir had a fondness. Roe, nevertheless, had a series of difficult interviews by Jahangir. Roe wanted immediately to raise the subject of trade, but the emperor could barely cancel his boredom at such conversations."

An excerpt from

Source B

or

A painting showing a British diplomat, Thomas Roe, appearing before the Mughal emperor Jahangir

Answer the following question.

Study the sources carefully and then answer the questions which follow.

a) **According to Source A describe what Thomas Roe observed in Jahangir's court. [3]**
b) **From Source B, what do we learn about the interaction between the Mughal emperor and the British diplomat? [5]**
c) **Why were Marathas defeated after the Mughal decline? [7]**
d) **Were the weak and greedy characteristics of Aurangzeb's successors the most important reasons for the collapse of the Mughal Empire? Explain your answer. [14]**

Question 2

a) **Describe what the Marathas did. [4]**
b) **Why were the British able to replace the Mughals as the dominant force in the Sub Continent by 1850? [7]**
c) **'The spread of Marathan power was the main reason for the decline of the Mughal Empire.' Do you agree or disagree? Give reasons for your answer. [14]**

Question 3

a) **Who was Shivaji? [4]**
b) **Explain why the Mughal Empire declined following the death of Aurangzeb. [7]**
c) **Was British expansion in India the most important reason for the decline of the Mughal Empire? Explain your answer. (14)**

Question 4

a) **What was the East India Company? [4**
b) **Explain why the successors of Aurangzeb failed to prevent the decline of the Mughal Empire. [7]**
   a) **'The policies of Aurangzeb were the main reason for the decline of the Mughal Empire'. Do you agree or disagree? Give reasons for your answer. [14]**

Worksheet 3

Question 1

Source A

In May 1876, Benjamin Disraeli, the Conservative Prime Minister, made Queen Victoria Empress of India. He said this would link the monarchy more closely with India and would underline Britain's position as a world power. The Queen was pleased with this arrangement and saw India as a jewel in the crown of her empire, a place full of vibrant colours, gems, fruits and spices. As such Queen Victoria viewed India as a land to be governed by British order and justice so that protection could be given to the Indian people against war, rebellion, famine and illiteracy.

Adapted from a history website

Source B

An image portraying a legend about Tipu Sultan, ruler of Mysore (artist unknown)

Answer the following question.

This question is about the British in India during the eighteenth and nineteenth centuries.

Study the sources carefully and then answer the questions which follow.

a) **According to Source A, why was Queen Victoria made Empress of India? [3]**
b) **What can we learn from Source B about Tipu Sultan, ruler of Mysore? [5]**
c) **Explain the impact of railways on the lives of Indian people in the nineteenth century. [7]**
d) **To what extent were the different aims of Indian groups in 1857 the main reason why the War of Independence was short-lived? Explain your answer. [10]**

[Total: 25]

Question 2

a) **What were Aurangzeb's religious policies? [4]**
b) **How did the successors of Aurangzeb contribute to the downfall of the Mughal Empire? [7]**
c) **"Aurangzeb's successors failed to live up to his courageous and determined personality". Was this the most important reasons for the decline of the Mughal Empire? Give reasons for your answer. [14]**

Question 3

a) **Describe the Mughal Rule. [4]**
b) **Explain why the Mughal Empire declined following the reign of Aurangzeb. [7]**
c) **Was the infighting between Aurangzeb's successors the most important reason for the collapse of the Mughal Empire? Explain your answer. [14]**

Question 4

a) **Who was Tipu Sultan? [4]**
b) **Why did the Indian sub-continent attract European traders in the late sixteenth and early seventeenth centuries? [7]**
c) **'The coming of the British was the main reason for the decline of the Mughal Empire'. Do you agree or disagree? Give reasons for your answer. [14]**

Source A:

In 1756 the French encouraged the Nawab of Bengal, Siraj-ud-Daulah to attack the East India Company's base at Calcutta. He captured the city but was unable to keep control of it. Robert Clive decided to go to the city with a force of soldiers to re-take it. This led to the battle of Plassey.

Source B

A new look at the Plassey conspiracy.

a) **Describe the battle of Plassey. [3]**
b) **Describe from source B, that the loss at Plassey opened the doors of India to the British who became rulers from traders. [5]**
c) **Explain why the East India Company got involved in the sub-continent during the seventeenth century. [7]**
d) **"The coming of the British was the main reason for the decline of the Mughal Empire", do you agree or disagree? Give reasons for your answer. [10]**

St Anthony's High School Faisal Town Lahore

Name …… Admission No…….

Subject: Islamiyat. **Summer Vacation Worksheet 1 2025** **Class 8 C**

Q1: (a) Describe how the four sources of Islamic Law work with each other in law making.
(b) To what extent is the use of ijma and qiyas more important today than in the past?

Q2. (a) 2 (a) Give an account of the compilation of Hadiths during the period of the Successors of the Successors, referred to as the golden age of Hadith compilation.

(b) How did the preservation of the Hadiths help Islam develop?

Q3. (a) Choose three events from the Prophet's life that demonstrate his moral character, and write in detail about them.

(b) Which of these events do you think is the most relevant as a lesson for Muslims today?

St Anthony's High School Faisal Town Lahore

Name …… Admission No…….

Subject: Islamiyat. **Summer Vacation Worksheet 2 2025** **Class 8 C**

Q1: (a) Describe the different ways that the Prophet (pbuh) received revelation from God.

(b) Why do you think that the revelation was sent to someone who could not read or write?

Q2. (a) Describe the method used to make a judgement by analogy (qiyas) using the Qur'an and Hadith. Give examples to support your answer.

(b) Why do you think the Prophet (pbuh) encouraged the use of personal reasoning amongst his Companions?

Q3(a) Write an account of:

- the reasons given by scholars for compiling Hadith collections, and;
- the checks made to confirm their authenticity.

(b) What is the purpose of having false Hadiths in Hadith collections?

St Anthony's High School Faisal Town Lahore

Name …… Admission No…….

Subject: Islamiyat. **Summer Vacation Worksheet 3 2025** **Class 8C**

Q1: (a) Give an account of how the Quran developed into book form?

(b) What is the significance to Muslims today of having the Quran in the form of Book or digitally available in phones

Q2. (a) Write the significance of the Quran as basis of though and action in Islam..

(b) The Quran should not have been compiled in written form because it did not take place during the Prophet's lifetime. Agree or disagree with this statement ,giving reasons for your answer.

Q3. (a) Describe with the help of examples how Quran provides guidance about the fundamental Laws of Islam.

(b) Explain the significance of the Quran being revealed to humankind.

St Anthony's High School Faisal Town Lahore

Name …… Admission No…….

Subject: Islamiyat. **Summer Vacation Worksheet 4 2025** **Class 8C**

Q1: (a) The Sunnah is often used with the Quran as a primary source of Islamic Law. Describe the ways in which they are used together.
(b) "The Quran is not relevant to Muslims now as it was 1400 years ago." Give your 4 reasons to agree or disagree with this statement.

Q2. (a) What is Ijma and Qiyas according to Quran and how useful are Ijma and Qiyas when dealing with the modern issues?

(b) Why do you think some scholars do not favour the use of Qiyas?.

Q3.Research on this Quran passage.

(a) What is the main theme of Sura 41:37 ?

(b) Why is this theme important for Muslims today?

1)Among his signs are the night and the day, and the sun and the moon. Adore not the sun and the moon, but adore Allah, who created them, if it is Him you wish to serve.

St Anthony's High School Faisal Town Lahore

Name …… Admission No…….

Subject: Islamiyat. **Summer Vacation Worksheet 5 2025** **Class 8 C**

Q1: (a) Briefly describe the main theme(s) in passage.
(b) Briefly explain the importance of the themes in a Muslim's life today.
Sura 2.21-22

> 21 O people! Adore your Guardian-Lord, who created you and those who came before you, so that you may have the chance to learn righteousness, 22. Who has made the earth your couch, and the heavens your canopy, and sent down rain from the heavens, and by it brought forth fruits for your sustenance, then do not set up rivals to Allah, when you know.

Q2. (a) From passages you have studied from the Quran , write about Allah's relationship with mankind.

(b) Explain the significance of the Quran being revealed to humankind..

Q3. (a) Describe the main theme in passage .

(b) Briefly explain the importance of the themes in a Muslim's life today.

Allah's relationship with the created world

Sura: 1

1 in the name of Allah, most gracious, most merciful. 2. Praise be to Allah, the cherisher and sustainer of the worlds, 3. Most gracious, most merciful, 4. Master of the day of judgment. 5 You we worship, and your aid we seek 6. Show us the straight way. 7 The way of those to whom You have given your grace, not those who earn your anger, nor those who go astray

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Name …… Admission No…….

Subject: Islamiyat. **Summer Vacation Worksheet 6 2025** **Class 8 C**

Q1: Research on the following Hadith:

(a) Describe teaching about what Muslims believe

(b) Explain how Muslims can put these teachings into action.

(1)Whosoever of you sees an evil action, let him change it with his hand, and if he is not able to do so then with his tongue, and if he is not able to do so then with his heart, and that is the weakest of faith

2) It was said: O Messenger of Allah, who is the most excellent of men? The Messenger of Allah (may Allah bless him and give him peace) said 'The believer who strives hard in the way of Allah with his person and his property.

Q2. (a) What are the different types of hadiths? How is each Hadith classified into the different types?

(b) Explain the importance of hadith-i-Qudsi?

Q3. (a) Give an account of how the Prophet's Hadiths have been a source of guidance to Muslims in putting their faith into practice. .

(b) Why do the Prophet's Hadiths link belief and action so closely?

Worksheet 1

Topic: Holy Spirit as guide

Here are some exam-style questions based on Acts 2:1-41.

Section A: Short Answer Questions

1. What event was taking place when the Holy Spirit came upon the apostles? [1]
2. Describe the signs that accompanied the coming of the Holy Spirit. [3]
3. Why were the people in Jerusalem amazed by the apostles? [2]
4. How did some people mock the apostles' experience? [2]
5. Which Old Testament prophet did Peter quote in his speech? [1]
6. What did Peter say about Jesus' resurrection? [4]
7. How many people were baptized after Peter's sermon? [1]

Section B: Contextual and Exegetical Questions

8. Explain the significance of Pentecost in Jewish tradition and its connection to the coming of the Holy Spirit. [6]
9. Analyze the meaning of Peter's statement: "Everyone who calls on the name of the Lord shall be saved." [6]
10. How does Peter use King David's prophecy to support his argument about Jesus? [8]

Section C: Essay Questions

11. Discuss the role of the Holy Spirit in Acts 2 and its impact on the early Christian church. [6]
12. What does Peter's speech in Acts 2 reveal about the identity of Jesus? [6]
13. How does Acts 2 demonstrate the fulfillment of Old Testament prophecies? [6]
14. Evaluate the significance of baptism in the early Christian community as described in Acts 2:38-41. [8]
15. Compare and contrast the speaking in tongues at Pentecost (Acts 2) with Paul's discussion of tongues in 1 Corinthians 14. How do these passages inform our understanding of spiritual gifts? [6]
16. Evaluate the rhetorical structure of Peter's sermon in Acts 2:14-36. How does he use Jewish scripture and logical argumentation to persuade his audience? [6]
17. Discuss the role of divine sovereignty and human responsibility in Peter's statement: "This man was handed over to you by God's deliberate plan and foreknowledge; and you, with the help of wicked men, put him to death" (Acts 2:23). [8]

Worksheet 2

Comparative and Interpretive Questions:

18. **How does the description of the Holy Spirit's outpouring in Acts 2 compare with similar events in Acts chapter 10? [6]**
19. **How does the description of the Holy Spirit's outpouring in Acts 2 compare with similar events in the Old Testament, such as Numbers 11:24-30 and Joel 2:28-32? [8]**
20. **Examine the phrase "Repent and be baptized... and you will receive the gift of the Holy Spirit" (Acts 2:38). How does this verse contribute to theological debates on baptism and salvation? [8]**
21. **Assess the impact of Acts 2 on the development of Christian ecclesiology. What does this passage teach about the nature and mission of the church? [8]**
22. **How does Acts 2 portray the reversal of the Tower of Babel narrative (Genesis 11)? What theological implications does this have for the universal nature of the gospel? [8]**

Worksheet 3

Question 1

a) ***Read the following passage and then answer the questions:***

Acts 8:31 (NRSV)

"*How can I, unless someone guides me?"*

i. Who said this and in what context? [2]
ii. What scripture was being read at the time? [2]
iii. How did Philip respond to this situation? [2]

b) Describe the events that led to Peter's speech. [6]

c) 'The conversion of Cornelius was a turning point for the Christian Church.' Discuss. [8]

[Total: 20]

Question 2

a) Describe what happened in the account in Genesis when the Lord could not find a helper for the man. [6]

b) Explain why this passage might not be taken literally by some Christians. [6]

c) Assess the view that Genesis has nothing to teach Christians about the creation of humanity. [8]

[Total: 20]

Question 3

a) Outline the description of Goliath in 1 Samuel. [6]
b) Explain how Christians might apply the story of David and Goliath in their lives today. [6]
c) 'A king is nothing more than a representative of God on earth.' Discuss. [8]
[Total: 20]

[Total: 20]

Question 4

a) Outline the vision of Cornelius in Acts, including Cornelius's reaction. [6]
b) Explain the importance of this vision in the development of the early church. [6]
c) To what extent should Christians always wait for God's guidance before making a big decision? [8]

[Total: 20]

Worksheet 4

Question 1

a) Read the following passage and then answer the questions:(a)1

Genesis 3:6, NRSVA

So when the woman saw that the tree was good for food, and that it was a delight to the eyes, and that the tree was to be desired to make one wise, she took of its fruit and ate; and she also gave some to her husband, who was with her, and he ate.

i. State who persuaded the woman to eat the fruit. [1]
ii. Outline how the woman was persuaded to eat the fruit. [2]
iii. State three punishments that God gave as a result of this event. [3]

b) Explain what this passage might teach Christians about God's relationship with humanity. [6]
c) Assess the view that the story of the fall has no relevance to Christians today. [8]

[Total: 20]

Question 2

a) Read the following passage and then answer the questions:(a)2

1 Samuel 16:6, NRSVA

When they came, he looked on Eliab and thought, 'Surely the LORD's anointed is now before the LORD.'

i. Explain why the Lord did not choose Eliab. [2]
ii. State where David was when Samuel asked to meet him. [1]
iii. State how David is described when he was sent for and brought in to Samuel. [3]

b) Explain the importance for Christians of the appointing of David. [6]
c) Those who are specially chosen by God should set a better example than others in the world. Discuss. [8]

[Total: 20]

Question 3

a) Outline God's test of Abraham, up until the angel speaks for the first time. [6]
b) Explain different Christian views about whether God tests his people today. [6]
c) To what extent does the story of God's test of Abraham help Christians in their lives today? [8]

[Total: 20]

Question 4

a) Describe what happened each time Moses stretched his hand out over the sea. [6](
b) Contrast different views about what this event might teach Christians about the nature of God. [6]
c) Assess the view that God no longer acts in the world through miracles. [8]

[Total: 20]

Question 5

a) Describe the coming of the Holy Spirit on the day of Pentecost, not including Peter's speech. [6]
b) Explain the relevance of this passage for Christian practice today. [6]
c) 'Sending the Holy Spirit is the most important part of God's plan for humanity.' Discuss. [8]

[Total: 20]