

**Subject : Science and Technology** 

SET A

**M.M.**: 30

Time: 1 hr. 20 min. General Instructions:-

Q.No.	Questions	Marks
1	Identify the type of combustion that take place when sodium is burnt.	1
	(a) Slow combustion (b) Rapid combustion	
	(c) Spontaneous combustion (d) Explosive combustion	
2	The plastic which is used in making electrical switches is:	1
	(a) Bakelite (b) Nylon (c)Teflon (d) Melamine	
3	The product which is used in making drug is	1
	(a) Coal tar (b)Coke (c) Petroleum (d) Hydrocarbon	
4	In the oil wells, petrol and natural gas floats over water because:	1
	(a)Oil and gas are heavier than water.	
	(b) Water is lighter than gas and oil.	
	(c)Water is heavier than oil and gas.	
	(d)Oil and water have a strong force of attraction.	
5	The coal which is used in making coke is:	1
	(a)Peat (b) Lignite (c) Anthracite (d) Bituminous	
	For question number 6, two statements are given- one labeled Assertion (A) and the	1
	other labeled Reason (R). Select the correct answer to these questions from the codes	
	(i), (ii), (iii) and (iv) as given below:	
	(i)Both A and R are true and R is the correct explanation of A.	
	(ii)Both A and R are true but R is not the correct explanation of A.	
	(iii)A is true but R is false.	
	(iv) A is false but R is true.	
6	Assertion (A): Burning candle goes off when we blow over it.	
O	Reason (R): Carbon di oxide in our breath act as supporter of combustion.	
7	Seema felt suffocation while angeethi was burning in her room. Name the gas released	1+1=2
	during burning of angeethi. Also write the type of combustion.	
8	A fuel is burnt completely to produce energy of 480000 KJ. Calorific value of fuel is	2
	30000KJ/Kg. Calculate the amount of fuel burnt.	
9	Give reason:	1+1=2
	(i)Clothes made from synthetic fibre are not advisable to wear in kitchen	
	(ii)Rayon is not fully synthetic fibre.	
10	Name the following –	3
	(a) A fuel used in vehicles	
	(b) A fuel used for making roads	
	(c) A fuel used in generators	
11	Explain why-	2+1=3
	(a) Paper containing water doesn't not catch fire when put over flame.	
	(b) Potassium is stored under water.	
	(c) Matchstick can be lighted by striking with rough surface.	
12	(a)Write the full form of PVC	
	(b)Nylon is used in making military applications. Give reason.	3

	(c)State two disadvantages of synthetic fibres.	
13	(a) Define the term 'calorific value' of a fuel. State its units. When the calorific value of	5
	a fuel increases, does the efficiency of the fuel go up or down?	
	(b) (i) Name the products that are formed by the complete combustion of wax vapours	
	and carbon particles in the outermost zone of a candle flame.	
	(ii) 'Gaseous fuels are better than other fuels.' Give any two advantages of gaseous	
	fuels.	
14	Read the passage and give answers of any four questions.	4
	Ankita is a keen and observant student of Science. She felt concerned when she	
	noticed that the lady, who had joined their household for working in their kitchen was	
	wearing the clothes made up of acrylon. She told her mother about the danger of using	
	such clothes in the kitchen. Her mother immediately bought wool clothes for that lady	
	and politely advised her to wear them only while working in the kitchen.	
	(a) Acrylon is which kind of fibre?	
	(b) About what harm Ankita is talking about?	
	(c) Why she purchased woolen clothes instead of any other fabric?	
	(d) What are advantages of fibres like acrylon?	
	(e) Differentiate between woollen and acrylon fibres.	



**Subject : Science and Technology** 

SET B

**M.M.**: 30

Time: 1 hr. 20 min. General Instructions:-

Q.No.	Questions	Marks
1	Identify the type of combustion that take place when cow dung cakes are burnt.	1
	(a) Slow combustion (b) Rapid combustion	
	(c) Spontaneous combustion (d) Explosive combustion	
2	The plastic which is used in making cooking utensils is:	1
	(a) Bakelite (b) Nylon (c)Teflon (d) Melamine	
3	The product which is used in making perfume is	1
	(a) Coal gas (b)Coke (c) Petroleum (d) Hydrocarbon	
4	In the oil wells, petrol and natural gas floats over water because:	1
	(a)Oil and gas are heavier than water.	
	(b) Water is lighter than gas and oil.	
	(c)Water is heavier than oil and gas.	
	(d)Oil and water have a strong force of attraction.	
5	The lowest grade coal is	1
	(a)Peat (b) Lignite (c) Anthracite (d) Bituminous	
	For question number 6, two statements are given- one labeled Assertion (A) and the	1
	other labeled Reason (R). Select the correct answer to these questions from the codes	
	(i), (ii), (iii) and (iv) as given below:	
	(i)Both A and R are true and R is the correct explanation of A.	
	(ii)Both A and R are true but R is not the correct explanation of A.	
	(iii)A is true but R is false.	
	(iv) A is false but R is true.	
6	<b>Assertion</b> (A): Burning candle goes off when we blow over it.	
6	Reason (R): Carbon di oxide in our breath act as supporter of combustion.	
7	Write any two products obtained from destructive distillation of coal. Also write one	1+1=2
,	use of each.	1 1 2
8	A fuel is burnt completely to produce energy of 240000 KJ. Calorific value of fuel is	2
O	30000KJ/Kg. Calculate the amount of fuel burnt.	
9	Give reason:	1+1=2
	(i)Clothes made from synthetic fibre are not advisable to wear in kitchen	
	(ii)Rayon is not fully synthetic fibre.	
10	Name the following –	3
- 0	(a) A fuel used in lanterns	
	(b) A fuel used for dry cleaning cloth.	
	(c) A fuel used in making candles	
11	Explain why-	2+1=3
	(a) Paper containing water doesn't not catch fire when put over flame.	
	(b) Sodium is stored under kerosene.	
12	(c) Matchstick can be lighted by striking with rough surface.  (a) Write the full form of PET	

	(c)State two advantages of synthetic fibres.	
13	(a) "Plastic is harmful for environment." State two points in support of this statement.	5
	(b) List two measures to control damage caused by plastic waste.	
	(c) Differentiate between Bakelite and polyethene on the basis of:	
	(i) arrangement of monomers in them	
	(ii) effect of heat on them.	
14	Read the passage and give answers of any four questions.	4
	Ankita is a keen and observant student of Science. She felt concerned when she	
	noticed that the lady, who had joined their household for working in their kitchen was	
	wearing the clothes made up of acrylon. She told her mother about the danger of using	
	such clothes in the kitchen. Her mother immediately bought wool clothes for that lady	
	and politely advised her to wear them only while working in the kitchen.	
	(a) Acrylon is which kind of fibre?	
	(b) About what harm Ankita is talking about?	
	(c) Why she purchased woolen clothes instead of any other fabric?	
	(d) What are advantages of fibres like acrylon?	
	(e) Differentiate between woolen and acrylon fibres.	



**Subject : Science and Technology** 

SET B

Time: 1 hr. 20 min. M.M.: 30

## **General Instructions:-**

Q.No.	Questions	Marks
1	Identify the type of combustion that take place when cow dung cakes are burnt.	1
	(a) Slow combustion (b) Rapid combustion	
	(c) Spontaneous combustion (d) Explosive combustion	
2	The plastic which is used in making handles of cooking utensils is:	1
	(a) Bakelite (b) Nylon (c)Teflon (d) Melamine	
3	The product which is used in making water gas is	1
	(a) Coal gas (b) Coke (c) Petroleum (d) Hydrocarbon	
4	In the oil wells, petrol and natural gas floats over water because:	1
	(a)Oil and gas are heavier than water.	
	(b) Water is lighter than gas and oil.	
	(c) Water is heavier than oil and gas.	
	(d)Oil and water have a strong force of attraction.	
5	The lowest grade coal is	1
	(a)Peat (b) Lignite (c) Anthracite (d) Bituminous	
	For question number 6, two statements are given- one labeled Assertion (A) and the	1
	other labeled Reason (R). Select the correct answer to these questions from the codes	
	(i), (ii), (iii) and (iv) as given below:	
	(i)Both A and R are true and R is the correct explanation of A.	
	(ii)Both A and R are true but R is not the correct explanation of A.	
	(iii) A is true but R is false.	
	(iv) A is false but R is true.	
6	Assertion (A): Burning candle goes off when we blow over it.	
	<b>Reason</b> (R): Carbon di oxide in our breath act as supporter of combustion.	
7	Write any two products obtained from destructive distillation of coal. Also write one	1+1=2
	use of each.	
	Coke Extraction of metal/ Making Water gas	
	Coal tar Drugs/Perfume/Dyes/Roads	
	Coal gas Domestic and industrial fuel	
8	A fuel is burnt completely to produce energy of 240000 KJ. Calorific value of fuel is	2
	30000KJ/Kg. Calculate the amount of fuel burnt.	
	Calorific value = amount of heat/ Amount of fuel	
	Amount of fuel = 240000/30000 = 8Kg	
9	Give reason:	1+1=2
	(i)Clothes made from synthetic fibre are not advisable to wear in kitchen	
	They have low melting point/ Form sticky beads at high temperature.	
	(ii)Rayon is not fully synthetic fibre.	
	Its raw material is natural.	
10	Name the following –	3
	(a) A fuel used in lanterns <b>Kerosene</b>	
	(b) A fuel used for dry cleaning cloth. <b>Petrol</b>	

	(c) A fuel used in making candles <b>Paraffin wax</b>	
11	Explain why-	2+1=3
	(a) (a) Paper cup containing water doesn't not catch fire when put over flame.	
	Heat is absorbed by water therefore ignition temperature is not achieved. Paper	
	cup containing water doesn't not catch fire when put over flame.	
	(b) Sodium is stored under kerosene. Sodium catches fire spontaneously on coming	
	in contact with air or water	
	(c) Matchstick can be lighted by striking with rough surface. <b>Heat produced by</b>	
	friction is enough	
12	(a)Write the full form of PET Polyethylene Terephthalate	
	(b) Melamine is used in making clothes of fireman. Give reason. It is fire resistant	3
	and don't catch fire.	
	(c)State two advantages of synthetic fibres. They are wrinkle free/moth resistant/	
	dry quickly( Any other relevant point)	
13	(a) "Plastic is harmful for environment." State two points in support of this	5
	statement	
	It is non biodegradable/ on burning cause pollution.	
	(b) List two measures to control damage caused by plastic waste.	
	Use paper bags/ Use 5 R principle	
	(c) Differentiate between Bakelite and polyethene on the basis of:	
	(i) arrangement of monomers in them linear in polyethene and crosslinked in	
	bakelite	
	(ii) effect of heat on them. <b>Deform on heating in polyethene/ Can't deform on</b>	
	heating in bakelite	
14	Read the passage and give answers of any four questions.	4
	Ankita is a keen and observant student of Science. She felt concerned when she	
	noticed that the lady, who had joined their household for working in their kitchen was	
	wearing the clothes made up of acrylon. She told her mother about the danger of using	
	such clothes in the kitchen. Her mother immediately bought wool clothes for that lady	
	and politely advised her to wear them only while working in the kitchen.	
	(a) Acrylon is which kind of fibre? Synthetic fibre	
	(b) About what harm Ankita is talking about? It has low melting point and form	
	sticky beads on skin.	
	(c) Why she purchased woolen clothes instead of any other fabric? It cause harm	
	to environment/ Humans	
	(d) What are advantages of fibres like acrylon? Wide variety of colours/ Easy to	
	handle/ Wrinkle free	
	(e) Differentiate between woollen and acrylon fibres.	
	(f) Woollen clothes are natural while acrylon is synthetic.	



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Q.No.	Questions	Marks
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3	The product which is used in making drug is	1
	(a) Coal tar (b)Coke (c) Petroleum (d) Hydrocarbon	
4	In the oil wells, petrol and natural gas floats over water because:	1
	(a)Oil and gas are heavier than water.	
	(b) Water is lighter than gas and oil.	
	(c) Water is heavier than oil and gas.	
	(d)Oil and water have a strong force of attraction.	
5	The coal which is used in making coke is:	1
	(a)Peat (b) Lignite (c) Anthracite (d) Bituminous	
	For question number 6, two statements are given- one labeled Assertion (A) and the	1
	other labeled Reason (R). Select the correct answer to these questions from the codes	
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6	<b>Assertion</b> (A): Burning candle goes off when we blow over it.	
	<b>Reason</b> (R): Carbon di oxide in our breath act as supporter of combustion.	
7	Seema felt suffocation while angeethi was burning in her room. Name the gas released	1+1=2
	during burning of angeethi. Also write the type of combustion.	
	Carbon Monoxide, Slow/Incomplete Combustion	
8	A fuel is burnt completely to produce energy of 480000 KJ. Calorific value of fuel is	2
	30000KJ/Kg. Calculate the amount of fuel burnt.	
	Calorific value = Amount of Heat/Amount of Fuel	
0	Amount of fuel = 480000/30000 = 16Kg	1 1 2
9	Give reason:	1+1=2
	(i)Clothes made from synthetic fibre are not advisable to wear in kitchen	
	They have low melting point/ Form sticky beads at high temperature.	
	(ii)Rayon is not fully synthetic fibre.	
10	Its raw material is natural.	2
10	Name the following –	3
	(a) A fuel used in vehicles <b>Diesel/ Petrol</b> (b) A fuel used for making roads Asphalt	
	(b) A fuel used for making roads <b>Asphalt</b>	
11	(c) A fuel used in generators <b>Diesel</b>	2+1-2
11	Explain why-	2+1=3

	(a) Paper cup containing water doesn't not catch fire when put over flame.	
	Heat is absorbed by water therefore ignition temperature is not achieved.	
	(b) Phosphorus is stored under water. It's ignition temperature is lower than	
	room temperature in summer	
	(c) Matchstick can be lighted by striking with rough surface. <b>Heat produced by</b>	
	friction is enough to ignite matchstick	
12	(a)Write the full form of PVC Poly vinyl chloride	
12	(b)Nylon is used in making military applications. Give reason.	3
	1 ' ' '	3
	It has high tensile strength and durability. (c)State two disadvantages of synthetic fibres.	
	` '	
12	It causes environment pollution/Has low melting point.	
13	(a) Define the term 'calorific value' of a fuel. State its units. When the calorific	5
	value of a fuel increases, does the efficiency of the fuel go up or down?	
	Amount of heat produced on burning one Kg of fuel in pure oxygen.	
	SI Unit KJ/Kg. The efficiency of fuel goes up.	
	(b) (i) Name the products that are formed by the complete combustion of wax vapours	
	and carbon particles in the outermost zone of a candle flame. Carbon dioxide, Water	
	vapours	
	(ii) 'Gaseous fuels are better than other fuels.' Give any two advantages of gaseous	
	fuels.	
	Have high calorific value/ Easy to transport( Any other relevant point)	
14	Read the passage and give answers of any four questions.	4
	Ankita is a keen and observant student of Science. She felt concerned when she	
	noticed that the lady, who had joined their household for working in their kitchen was	
	wearing the clothes made up of acrylon. She told her mother about the danger of using	
	such clothes in the kitchen. Her mother immediately bought wool clothes for that lady	
	and politely advised her to wear them only while working in the kitchen.	
	(a) Acrylon is which kind of fibre? <b>Synthetic fibre</b>	
	(b) About what harm Ankita is talking about? It has low melting point and form	
	sticky beads on skin.	
	(c) Why she purchased woolen clothes instead of any other fabric? It cause harm	
	to environment/ Humans	
	(d) What are advantages of fibres like acrylon? Wide variety of colours/ Easy to	
	handle/ Wrinkle free	
	(e) Differentiate between woollen and acrylon fibres.	
	Woollen clothes are natural while acrylon is synthetic.	
	vi concil cioches are natural while acryion is synthetic.	